The
Assam Factories Rules, 1950

THE ASSAM FACTORIES RULES, 1950

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NOTIFICATION

GOVERNMENT OE ASSAM
LABOUR AND EMPLOYMENT DEPARTMENT
ORDERS BY THE GOVERNOR

[Dated Dispur, the 9th June, 2004]

No. **GLR. 173/2001/14** : In excercise of the powers conferred by sub-section (1) of Section 85 of the Factories Act, 1948 (LXIII of 1948) the Governor of Assam is pleased to declare that all the provisions of the said Act and the rules made there under shall apply to any place in the State of Assam wherein any manufacturing process specified in Schedule X annexed hereto is carried on with or without the aid of power notwithstanding that.

(1) The number of persons employed therein is less than ten if working with the aid of power and less than twenty working without the aid of power and.

(2) The persons working therein are not employed by the owner, but are working with the permission of or under aggreement with such owner.

Provided that nothing in this notification shall apply to any place wherein manufacturing process is carried on by the owner only with the aid of his family and no other persons ever employed therein.

SCHEDULE

1. Sawing of timber.
2. Manufacturing of ice and ice candy.
3. Manufacturing of oil.
4. Flour milling and grinding, breaking and crushing of any other cereal or material.
5. Rice Milling.
6. Dal Milling.
7. Petrol Pumps.
8. Manufacturing of plastic and plastic products.
9. Canning and preservation of food materials, fruits and vegetable.
10. Filling bottles with aerated water or drinks and processes initiated thereto.
11. Manufacturing of backery products such as Breads, Biscuits, Bhujia, Papad etc.
12. Manufacturing of any electrical equipment, apparatus, appliances or devices.

13. Fabrication of steel furniture, manufacturing of wooden furnitures, Wire neeting and drawing.
14. Manufacturing of fireworks, detonators, cattroids or any other components there of.
15. Automobile Garrages.
16. Spinning, Weaving, Knitting of finishing (including dyeing) of any textile material including hosiery and carding and breaking of cotton.
17. Brick Manufacturing.

Sd/- B.B. Hagjer, IAS
Commissioner & Secy, to the Govt. of Assam,
Labour & Employment Deptt.

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NOTIFICATION

GOVERNMENT OF ASSAM
LABOUR AND EMPLOYMENT DEPARTMENT
ORDERS BY THE GOVERNOR

[Dated Dispur, the 9th June, 2004]

No. GLR. 173/2001/15 : In excercise of the powers conferred by sub-section (1) of Section 85 of the Factories Act, 1948 (LXIII of 1948) the Governor of Assam is pleased to declare that all the provisions of the said Act and the rules made there under, shall apply to any place in the state of Assam wherein the manufacturing process specified in the Schedule annexed hereto in carried on without the aid of power and wherein 20 or more persons generally work notwithstanding that any or all persons working therein are not employed by the owner thereof but are working with the permission of or under aggreement with such owner.

Provided that nothing in this notification shall apply to any place wherein a manufacturing process is carried on by the owner himself or only with the aid of his family and no other person is ever employed therein.

SCHEDULE

Manufacturing of Bidi.

Sd/-B.B. Hagjer,IAS
Commissioner & Secy, to the Govt. of Assam,
Labour & Employment Deptt.

THE ASSAM FACTORIES, RULES, 1950

The 7th October, 1950

No. GGN. 95/47 :- ln exercise of the powers conferred by Section 112 of the Factories Act, 1948 (Act LXII1 of 1948), the Governor of Assam is pleased to make the following Rules, the same having been previously published as required by Section 115 of the said Act.

CHAPTER I
Preliminary

1. Short title, extent and commencement— (1) These rules may be cited as *the Assam Factories Rules, 1950.*

(2) These Rules shall come into force at once except the Rules 29 to 33, 53, 62, 64 to 75 and 94 which shall come into force on such dates as are specified therein.

2. Definitions — In these Rules unless there is anything repugnant in the subject or context —

(a) "Act" *means* the Factories Act, 1948.

(b) "Appendix" *means* an appendix appended to these Rules.

(c) "Artificial humidification" *means* the introduction of moisture into the air of a room by any artificial *means* whatsoever, except the unavoidable escape of steam or water vapour into the atmosphere directly due to a manufacturing process:

Provided that the introduction of air directly from outside through moistened mats or screens placed in openings at the time when the temperature of the room is 80 degrees or more, shall not be deemed to be artificial humidification.

(d) "Belt" includes any driving strap or rope.

(e) "Degrees" (of temperature) *means* degrees on the Fahrenheit scale.

(f) "District Magistrate" includes such other official as may be appointed by the State Government in that behalf.

(g) "Fume" includes gas or vapour.

(h) "Health officer" *means* the Municipal Health Officer or District Health Officer or such other official as may be appointed by the State Government in that behalf.

(i) "Hygrometer" *means* an accurate wet and dry bulb hygrometer conforming to the prescribed conditions as regard constructions and maintenance.

(j) "Inspector" *means* an officer appointed under S. 8 of the Act, and includes "Chief Inspector".

(k) "Maintained" *means* maintained in an efficient state, in efficient working order and in good repair.

(I) "Manager" *means* the person responsible to the occupier for the working of the factory for the purposes of the Act.

Enforced vide notification No. GLR327/88/474 Dated 30/12/92

2A. ***Competent Person*** — (1) The Chief Inspector may recognise any person as a competent person' within such area and for such period as may be specified for the purpose of carrying out test; examinations, inspections and certification for such buildings, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure plant, confined spaces, ventilation system and such other process or plan and equipment as stipulated in the Act and the Rules made thereunder, located in a factory if such a person possesses the qualifications, experience and other requirements as set out in the Schedule in Annexure -1 of this Rules and in the form in Annexure - II:

Provided that the Chief Inspector may relax the requirements of qualification in respect of competent person if such a person is exceptionally experienced and knowledgeable, but not the requirements in respect of the facilities at his command:

Provided further that where it is proposed to recognise a person under Rule 2A-sub-rule (1) or a person employed under the Chief Inspector as a competent person concurrence of the State Government shall be taken and such a person after being so recognised, shall not have power of an 'Inspector:

Provided further that the 'competent person' recognised under this provision shall not be above the age of 62 and shall be physically fit for the purpose of carrying out the tests, examination and inspection and a certificate of such fitness from a Dist. Health and Family Welfare Officer or sub-divisional Medical Officer must be obtained prior to his recognition.

(2) The Chief Inspector may recognise an institution of repute, situated within

the State having persons possessing qualification and experiences as set out in the Schedule Annexed to sub-rule (1) for the purpose of carrying out tests, examinations, inspections and certification for buildings, dangerous machinery, hoists and lifts, lifting machines, and lifting tackles, pressure plant confined space, ventilation system and such other process or plant and equipment as stipulated in the Act and the Rules made thereunder, as a 'competent person' within such area and for such period as may be specified.

(3) The Chief Inspector on receipt of an application in the prescribed form given in Annexure - III of these rules from a person or an institution intending to be recognised as a 'competent person' for the purposes of this Act and the Rules made thereunder shall register such application and within a period of sixty days of the date of receipt of applications, either after having satisfied himself as regards competence and facilities available at the disposal of the applicant recognise the applicant as a 'competent person' and issue a certificate of competency in the prescribed form or reject the application specifying the reasons therefor and such certificate must be countersigned by the Secretary, to the Govt of Assam, Labour & Employment Department:

Provided that the Chief Inspector shall publish in the Official Gazette a notice in two local news papers of the State inviting application in the prescribed form such person or institution giving there in the qualification, age and other terms & conditions required for such a person or institution for selection as competent person or institution before the applicants are registered in the aforsaid manner.

4. The Chief Inspector may, after giving an opportunity to the competent person of being heard, revoke the certificate of competency with approval of the State Government and the counter signature of the secretary to the Government of Assam, Labour and Employment Department :

(i) If he has reason to believe that a competent person.

(a) has violated any condition stipulated in the certificate of competency, or

(b) has carried out a test, examination and inspection or has acted in a manner inconsistent with the intents for the purpose of this Act or the Rules made thereunder or has omitted to as required under the Act and the Rules made thereunder, or

(ii) for any other reason to be recorded in writing

Explanation, For the purpose of this Rule. institution includes an organization.

(5) The Chief Inspector may, for reasons to be recorded in writing, require re-certification of lifting machines, lifting tackles, pressure plant or ventilation system,

as the case may be which has been certified by a competent person

(Annexure-I, II, III & IV)

Rules 3 to 11 Prescribed under sub-section (1) of section - 6.

3. ***Submission of plan*** — The State Government or the Chief Inspector of Factories may require for the purposes of the Act, submission of plans of any factory which was either in existence on the date of commencement of the Act or which has not been constructed or extended since then. Such plans shall be drawn to the scale showing —

(a) the site of the factory and immediate surrounding including adjacent building and other structures, roads, drains, etc.;

(b) the plan elevation and necessary cross Section of the factory buildings indicating all relevant details relating to natural lighting, ventilation and *means* of escape in case of fire and the position of the plant and machinery, aisles and passage ways;

(c) such other particulars as the State Government or the Chief Inspector of Factories as the case may be, may require."]

Inserted vide notification No. GLR (RC) 72/82/124 Dt. January 85

"3-A. Approval of plans— (1) No site shall be used for the location of a factory or no building in a factory be constructed/ extended or taken into use as a factory unless previous permission in writing is obtained from the State Government or the Chief Inspector of Factories. The previous permission of the Chief Inspector of Factories shall also be obtained for the installation of additional machinery or for the installation of prime movers exceeding the horsepower already installed in the factory.

Application for such permission shall be made in Form I which shall be accompanied by the following documents —

(a) A flow chart of the manufacturing process supplemented by a brief description of the process in its various stages;

(b) Plans in duplicate drawn to scale showing —

(i) the site of the factory and immediate surroundings including adjacent buildings and other structures, roads, drains, etc.; and

(ii) the plan, elevation and necessary cross-section of the various buildings, indicating all relevant details relating to natural lighting, ventilation and means of escape in case of fire. The plan shall also clearly indicate the position of the plant

and machinery, aisles and passage ways; and

(c) Such other Particulars as the Chief Inspector may require.

Provided that for a site for construction of a factory or construction of a new factory within a Municipality or other than a municipality or a notified area, the applicant shall, while submitting the application to the Chief Inspector of Factories, Assam, simultaneously apply with intimation to the Chief Inspector of Factories, to the Chairman, Municipal Board/Town Committee or President Gaon Panchayat for approval. If the above authorities neglect or omit for two months after the receipt of such an application to sanction or refuge permission they shall be deemed to have sanctioned the proposed site for construction of a factory or construction of a factory absolutely and the Chief Inspector of Factories, Assam may proceed with the consideration of the application forthwith.

(2) If the Chief Inspector is satisfied that the plans are in consonance with the requirements of the Act, he shall, subject to such conditions as he may specify approve them by signing and returning to the applicant one copy of each plan, or he may call for such other particulars as he may require to enable him to give such apprval.

(3) No deviation of any kind from approved plans shall be made without the written permission of the Chief Inspector.

Inserted vide notification No. GLR (RC) 72/82/ 124 Dt. January 85

3-B. ***Certificate of stability*** — No manufacturing process shall be carried on in any building of a factory constructed, reconstructed or extended or in any building which has been taken into use as factory or part of a factory until a certificate of stability in respect of that building in the form given below has been sent by the occupier or Manager of the factory to the Chief Inspector and accepted by him.

FORM OF CERTIFICATE OF STABILITY

1. Name of factory _____
2. Village, town and district in which the factory is situated _____
3. Full postal address of the factory _____
4. Name of occupier of the factory _____
5. Nature of manufacturing process to be carried on in the factory _____
6. Number of floors on which workers will be employed _____

Certified that I have inspected the building/buildings the plans of which have been approved by the Chief Inspector in his letter No. _____ dated _____ and examined the various Parts including the foundation with special reference to the machinery, plant etc. that have been installed, I am of the opinion that the building/ buildings which has/have been constructed/reconstructed/extended taken into use is/are in accordance with the plans approved by the Chief Inspector in his letter mentioned above, that it/they is/are structurally sound, that its/their stability will not be endangered by its/their use as a factory/part of a factory for the manufacture of _____ for which the machinery, plant. etc. installed are intended.

Signature _____.

Qualification _____.

Address _____.

Date_____.

1. If employed by a Company, association, name and address of the Company or association.
2. The Certificate of stability refered to the sub-rule (1) shall be signed by competent person."]

4. ***Application for registration and grant or renewal of licence and notice of occupation*** — The occupier of every factory, whether in existence at the date of the commencement of the Act or coming for the first time within the scope of the Act, shall submit to the Chief Inspector an application in Form 2 in triplicate prescribed under Sections 6 and 7; provided that the occupier of premises in use as a factory on date of commencement of the Act, shall submit such application within 30 days from the date of commencement of the Rules.

5. ***Grant of licence*** — (1) A licence for a factory shall be granted by the Chief Inspector in Form No. 4 prescribed for the purpose and on payment of the fees specified in the Schedule hereto.

(2) Every licence granted or renewed under this Chapter shall remain in force up to the 31st of December of the year for which the licence is granted or renewed.

THE SCHEDULE "A"

Scale of fees payable for licence and Annual Renewal (Rule - 5) of licence fee all factories (other than power generating stations and Electrical substations)

Total H.P. installed inclusive of mobile equipment	**Maximum number of persons to be employed on any day during** the year									
	20	50	100	250	500	750	1000	2000	5000	above 5000
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Nil H.P-——	135.00	270.00	405.00	810.00	1688.00	2700.00	5400.00	8100.00	10800.00	13500.00
Up to 10 H.P.—	270.00	405.00	540.00	1080.00	2025.00	4050.00	8100.00	10800.00	18500.00	16200.00
Above 10 H.P-	450.00	540.00	810.00	1688.00	2700.00	5400.00	10800.00	13500.00	16200.00	18900.00
Up to 50 H.P-										
Above 50 H.P .-	788.00	1012.00	1350.00	2700.00	4050.00	8100.00	13500.00	16200.00	18900.00	21600.00
Up to 100 H.P										
Above 100 H.P	1080.00	1350.00	2025.00	3600.00	5400.00	10800.00	16200.00	18900.00	21600.00	24300.00
Up to 250 H.P-										
Above 250 H.P	1350.00	2025.00	2700.00	5400.00	8100.00	13500.00	18900.00	21600.00	24300.00	27000.00
Up to 500 H.P-										
Above 500 H.P	1688.00	2700.00	5400.00	8100.00	10800.00	16200.00	21600.00	24300.00	27000.00	30375.00
Up to 750 *H.P*-										
Above 750 H.P-	2700.00	5400.00	8100.00	10800.00	13500.00	18900.00	24300.00	27000.00	30375.00	33750.00
Up to 1000 H.P-										
Above 1000 H.P	5400.00	8100.00	10800.00	13500.00	18900.00	24300.00	27000.00	30375.00	33750.00	37125.00
Up to 2000 H.P-										
Above 2000 H.P	8100.00	10800.00	13500.00	18900.00	24300.00	27000.00	30375.00	33750.00	37125.00	40500.00
Up to 5000 H.P										
Above 5000 H.P	10800.00	13500.00	18900.00	24300.00	27000.00	30375.00	33750.00	37125.00	40500.00	45000.00
Up to 10000 H.P										
Above 10000 H.P.	13500.00	18900.00	24300.00	27000.00	30375.00	33750.00	37125.00	40500.00	45000.00	49500.00

SCHEDULE"B"

Scale of fees payable for licence and Annual Renewal of Licence by Power Generating Stations

Generating Capacity in Kilowatts (1)	**Up to 100** (2) Rs.	**From 101 to 250** (3) Rs.	**From 251 to 500** (4) Rs.	**Over 500** (5) Rs.
Up to 500KW	1350.00	1800.00	2250.00	2700.00
Above 500 KW & Up to 1000 KW	2700.00	3750.00	4800.00	6000.00
Above 1000 KW & Up to 5000 KW	6750.00	7500.00	8250.00	9000.00
Above 5000 KW & Up to 10000 KW	9000.00	9750.00	10500.00	11250.00
Above 10000 KW & Up to 20000 KW	11250.00	12000.00	12750.00	13500.00
Above 20000 KW & Up to 30000 KW	14250.00	15000.00	15750.00	16500.00
Above 30000 KW & Up to 50000 KW	18000.00	18750.00	19500.00	20250.00
Above 50000 KW & Up to 75000 KW	22500.00	23250.00	24000.00	24750.00
Above 75000 KW & Up to 100000 KW	25500.00	26250.00	27000.00	27750.00
Above 100000 KW & Up to 200000 KW	31500.00	32250.00	33000.00	33750.00
Above 200000 KW& Up to 400000 KW	37500.00	38250.00	39000.00	39750.00
Above 400000 KW & Up to 1000000 KW	42750.00	43500.00	44250.00	45000.00
Above 1000000 KW			.00	49500.00

[redacted]

SCHEDULE "C"][5]

Scale of fees payable for licence and Annual Renewal of Licence by Electrical Substation etc.

Capacity in Kilowatts (1)					More than 9 workers (2) Rs.
Upto	300 KW	....	.....		750.00
Above	500 KW	&	Up to	1000 KW.	1500.00
Above	1000 KW	&	Up to	5000 KW.	3000.00
Above	5000 KW	&	Up to	10000 KW.	4500.00
Above	10000 KW	&	Up to	20000 KW.	7500.00
Above	20000 KW	&	Up to	30000 KW.	9000.00
Above	30000 KW	&	Up to	50000 KW	12000.00
Above	50000 KW	&	Up to	75000 KW.	13500.00
Above	75000KW	&	Up to	100000 KW.	15000.00
Above	100000 KW	&	Up to	200000 KW.	18000.00
Above	200000 KW	&	Up to	400000 KW.	21000.00
Above	400000 KW	&	Upto	1000000 KW	24000.00
Above	1000000 KW.....				27000.00

5. Substituted for the existing "Schedule to Rule 5" *vide* Notification No. GLR (RC) 72/89/pt/18, dated the 23rd September, 2003 (w.e.f. 14.10.2003).

6. ***Amendment of licence*** — (1) A licensee of a factory shall get his licence amended in case the factory exceeded the limits specified in regard to horse power or the number of men employed.

(2) A licence granted under Rule 5 may be amended by Chief Inspector.

(3) A licensee who desires to have his licence amended shall submit it to the Chief Inspector with an application stating the nature of the amendment and reasons therefor.

(4) The fee for the amendment of a licence shall be [hundred rupees] plus the amount (if any) by which the fee that would have been payable if the licence had originally been issued in the amended form exceeds the fee originally paid for the licence.

7. ***Renewal of licence***— (1) A licence may be renewed by the Chief Inspector.

(2) The occupier of every factory shall apply to the Chief Inspector for renewal of his licence not less than 30 days before the date of expiry of the licence and shall not continue any manufacturing process after that date unless the application for renewal of his licence is duly made.

(3) Every application for the renewal of a licence shall be accompanied by the notice of occupation in the prescribed Form No. 2 in triplicate and shall be made not less than 30 days before the date on which the licence expires and if the application is so made, the premises shall be held to be duly licensed until such date as the Chief Inspector renews the licence.

(4) The same fee shall be charged for the renewal of a licence as for the grant thereof:

Provided that if the application for renewal is not received within the time specified in sub-rule (2), the licence shall be renewed only on payment of a fee "25" percent in excess of the fee ordinarily payable for the licence.

8. ***Transfer of licence***— (1) The holder of a licence may, at any time before the expiry of the licence, apply for permission to transfer his licence to another person.

(2) Such application shall be made to the Chief Inspector who shall, if he approves of the transfer, enter upon the licence under his signature, an endorsement to the effect that the licence has been transferred to the person named.

(3) A fee of [hundred rupees] shall be charged on each such application.

9. ***Procedure on death or disability of licensee*** — If a licensee dies or becomes

insolvent, the person carrying on the business of such licensee shall not be liable to any penalty under the Act for exercising the powers granted to the licensee by the license during such time as may reasonably be required to allow him to make an application for the amendment of the licence under Rules 6 in his own name for the unexpired portion of the original licence.

10. ***Loss of licence*** — Where a licence granted under these Rules is lost or accidentally destroyed, a duplicate may be granted on payment of a fee of [rupees hundred].

11. ***Payment of fees***— (1) Every application under these Rules shall be accompanied by a treasury receipt showing that the appropriate fee has been paid into the local treasury under the head of account 0230 Labour & Employment 104 Fees under the Factories Act, 1948".

(2) If an application for the grant, renewal or amendment of a licence is rejected, or the fee is paid in excess of the prescribed rate such fee or excess fee paid shall be refunded to the applicant, on a pay order issued by the Chief Inspector of Factories on the district treasury office.

Enforced vide notification No GLR 327/88/474 Dated 30/12/92

12. ***Guidelines, instructions and records***— (1) Without prejudice to the general responsibility of the occupier to comply with the provisions of Section 7(A) the Chief Inspector may, from time to time, issue guidelines and instructions regarding the general duties of the occupier relating to health, safety and welfare of all workers while they are at work in the factory.

(2) The occupier shall maintain such records, as may be prescribed by the Chief Inspector, in respect of monitoring of working environment in the factory."

CHAPTER II
The Inspecting Staff

Rule Prescribed under section 9

13. ***Powers of Inspector***— An Inspector shall, for the purpose of the execution of the Act, have power to do all or any of the following things, that is to say —

(a) to photograph any worker, to inspect, examine, measure, copy, photograph, sketch or test, as the case may be, any building or room, any plant, machinery, appliance or apparatus, any register or document or anything provided for the purpose of securing the health, safety or welfare of the workers employed in a factory;

(b) in the case of an Inspector who is duly qualified medical practitioner, to carry out such medical examinations as may be necessary for the purposes of his duties under the Act;

(c) to prosecute, conduct or defend before a court any complaint or other proceeding arising under the Act or in discharge of his duties as an Inspector:

Provided that the powers of the District Magistrate and such other public officers as are appointed to be additional Inspectors shall be limited to the inspection of the factories in respect of the following matters, namely–

Cleanliness	(Section 11),
Overcrowding	(Section 16),
Lighting	(Section 17),
Drinking water	(Section 18),
Latrines and urinals	(Section 19),
Spittoons	(Section 20),
Precautions in the case of fire	(Section 38),
Welfare	(Chapter V),
Working hours of adults	(Chapter VI - except the power of exemption under theproviso to Section 62),
Employment of young persons	(Chapter VII),
Leave with wages	(Chapter VIII) and
Display of notice	(Section 108):

Provided further that —

(i) the District Magistrate shall not pass any original orders or remarks under Section 11,17 and 38 of the Act but shall limit and confine his orders or remarks under these Sections to the points to which the full time Inspector of Factories has already directed the attention of Manager or occupier of the factory as the case may be;

(ii) all additional Inspectors except District Magistrates shall report the defects found and remedies suggested for enforcing compliance with requirements of Sections referred to above, to the Chief Inspector who shall pass final orders in each case.

13-A. ***Qualification of an Inspector*** — No persons shall be appointed as an Inspector for the purposes of the Act unless he possesses the qualifications hereunder —

(a) he must not be less than 23 years or more than 35 years of age;

(b) he must have —

(i) had a good general education up to Intermediate standard of a recognised university;

(ii) secured a degree, or diploma equivalent to a degree of recognised university, in any branch of Engineering, Technology or Medicine and preferably with practical experience of at least two years in a workshop or a manufacturing concern of good standing and in the case of Medical Inspector an experience of at least two years in a public hospital or factory, medical department or alternatively a diploma in industrial medicine;

(c) where for a particular post, special knowledge to deal with special problems is required, the Government may, in addition to the basic qualifications, prescribe appropriate qualifications for such a post.

Rule Prescribed under sub-section (4) of section 10.

14. ***Duties of Certifying Surgeons*** — (1) For purposes of the examination and certification of young persons who wish to obtain certificates of fitness, the Certifying Surgeon shall arrange a suitable time and place for the attendance of such persons and shall give previous notice in writing of such arrangements to the managers of factories situated within the local limits assigned to him. As far as possible, such examination shall be carried out at the factories concerned.

(2) The Certifying Surgeon shall issue his certificates in Form No. 5. The foil and counterfoil shall be filled in and the left thumb mark of the person in whose name the certificate is granted shall be taken on them. On being satisfied as to the correctness of the entries made therein and of the fitness of the person examined, he shall sign the foil and initial the counterfoil and shall deliver the foil to the person in whose name the certificate is granted. The foil so delivered shall be the certificate of fitness granted under Section 69. All counterfoils shall be kept by the Certifying Surgeon for a period of at least two years after the issue of the certificate.

(3) The Certifying Surgeon shall, upon request by the Chief Inspector, carry out such examination and furnish him with such report as he may indicate, for any factory or class or description of factories where —

(a) cases of illness have occurred which it is reasonable to believe are due to the nature of the manufacturing process carried on, or other conditions of work prevailing therein, or

(b) by reason of any change in the manufacturing process carried on, or in the substances used therein, or by reason of the adoption of any new manufacturing process or of any new substance for use in a manufacturing process, there is a likelihood of injury to the health of workers employed in that manufacturing process, or

(c) young persons are, or are about to be, employed in any work which is likely to cause injury to their health.

(4) For the purpose of the examination of persons employed in processes covered by the rules relating to Dangerous Operations, the Certifying Surgeon shall visit the factories within the local limits assigned to him at such intervals as are prescribed by the Rules relating to such dangerous operations.

(5) At such visits the Certifying Surgeon shall examine the persons employed in such processes and shall record the results of his examination in a Register known as the Health Register (Form No. 17) which shall be kept by the factory manager and produced to the Certifying Surgeon at each visit.

(6) If the Certifying Surgeon finds as a result of his examination that any person employed in such process is no longer fit for medical reasons to work in that process, he shall suspend such person from working in that process for such time as he may think fit and no person after suspension shall be employed in that

process without the written sanction of the Certifying Surgeon in the Health Register.

(7) The manager of a factory shall afford to the Certifying Surgeon facilities to inspect any process in which any person is employed or is likely to be employed.

(8) The manager of a factory shall provide for the purpose of any medical examination which the Certifying Surgeon wishes to conduct at the factory (for his exclusive use on the occasion of an examination) a room which shall be properly cleaned and adequately ventilated and lighted and furnished with a screen, a table (with writing materials) and chairs.

CHAPTER III
Health

Exemption under sub-section (2) of section- 11

15. ***Cleanliness of walls and ceilings*** — (1) Clause *(d)* of sub-section (1) of Section 11 of the Act shall not apply to the class or description of factories or parts of factories specified in the Schedule hereto :

Provided that they are kept in a clean state by washing, sweeping, brushing, dusting, vacuum-cleaning or other effective means :

Provided further that the said clause *(d)* shall continue to apply —

(i) as respects factories or parts of factories specified in Part A of the said Schedule, to work-rooms in which the amount of cubic space allowed for every person employed in the room is less than 500 cubic feet;

(ii) as respects factories or parts of factories specified in Part B of the said Schedule, to work-rooms in which the amount of cubic space allowed for every person employed in the room is less than 2,500 cubic feet;

(iii) to engine houses, fitting shops, lunch-rooms, canteens, shelters, creches, clock-room, rest-rooms and wash-places; and

(iv) to such parts of walls, sides and tops of passages and staircases as are less than 20 feet above the floor or stair.

(2) If it appears to the Chief Inspector that any part of a factory, to which by virtue of sub-rule (1) any of the provisions of the said clause *(d)* do not apply, or apply as varied by sub-rule (1), is not being kept in a clean state, he may by written notice require the occupier to white-wash or colour-wash, wash, paint or

varnish the same, and in the event of the occupier failing to comply with such requisition within two months from the date of the notice, sub-rule (1) shall cease to apply to such part of a factory, unless the Chief Inspector otherwise determines.

SCHEDULE
PART-A

Blast furnaces.

Brick and tile works in which unglazed brick or tiles are made.

Cement works.

Chemical works.

Copper mills.

Gas works.

Iron and steel mills.

Stone, slate and marble works.

The following parts of factories : Rooms used only for the storage of articles.

Rooms in which the walls or ceilings consist of galvanised iron, glazed bricks, glass, slate, asbestos, bamboo, thatch.

Parts in which dense steam is continously evolved in the process.

Parts in which pitch, tar or like material is manufactured or is used to a substantial extent, except in brush works.

The parts of a glass factory known as the glass house.

Rooms in which graphite is manufactured or is used to a substantial extent in any process.

Parts in which coal, coke, oxide or iron, ochre, lime or stone is crushed or ground.

Parts of walls, partitions, ceilings or tops of rooms which are at least 20 feet above the floor.

Ceilings or tops of rooms in print works, bleach works or dye works, with the exception of finishing rooms or warehouses.

Inside walls of oil mills below a height of 5 feet from the ground floor level.

Inside walls in tanneries below a height of 5 feet from the ground floor level where a wet process is carried on.

PART-B

Coach and motor body works.

Electric generating or transforming stations.

Engineering works.
Factories in which sugar is refined or manufactured.
Foundries other than foundries in which brass casting is carried on.
Gun factories.
Ship building works.
Those parts of factories where unpainted or unvarnished wood is manufactured,

Register Prescribed under subsection (I) of section 11

16. *Record of white-washing,* *etc.* — The record of dates on which white-washing, colour washing, varnishing etc., are carried out shall be entered in a Register maintained in Form No. 7.

Rule Prescribed under sub-section (2) of section 12

17. *Disposal of trade-wastes and effluents* — (1) In the case of a factory where the drainage systems is proposed to be connected to the public sewerage system, prior approval of the arrangements made shall be obtained from the local authority.

(2) In the case of a factory situated in a place where no public sewerage system exists, prior approval of the arrangements made for the disposal of trade-wastes and effluents shall be obtained from the Public Health authorities or such authority as the State Government may appoint in this behalf.

Rule 18 to 28 Prescribed under sub-section (I) of section 15

18. *When artificial humidification not allowed* — There shall be no artificial humidification in any room of a cotton spinning or weaving factory—

(a) by the use of steam during any period when the dry bulb temperature of that room exceeds 85 degrees;

(b) at any time when the wet bulb reading of the hygrometer is higher than that specified in the following Schedule in relation to the dry bulb reading of the hygrometer at that time, or as regards a dry bulb readings intermediate between any two dry bulbs reading indicated consecutively in the Schedule when dry bulb reading does not exceed the wet bulb reading to the extent indicated in relation to the lower of these two dry bulb readings :

SCHEDULE

Dry Bulb	Wet bulb	Dry Bulb	Wet bulb	Dry Bulb	Wet bulb
(1)	(2)	(3)	(4)	(5)	(6)
60.0	58.0	77.0	75.0	94.0	86.0

61.0	59.0	78.0	76.0	95.0	87.0
62.0	60.0	79.0	77.0	96.0	87.5
63.0	61.0	80.0	78.0	97.0	88.0
64.0	62.0	81.0	79.0	98.0	88.5
65.0	63.0	82.0	80.0	99.0	89.0
66.0	64.0	83.0	80.5	100.0	89.5
67.0	65.0	84.0	81.0	101.0	90.0
68.0	66.0	85.0	82.0	102.0	90.0
69.0	67.0	86.0	82.5	103.0	90.5
70.0	68.0	87.0	83.0	104.0	90.5
71.0	69.0	88.0	83.5	105.0	91.0
72.0	70.0	89.0	84.0	106.0	91.0
73.0	71.0	90.0	84.5	107.0	91.5
74.0	72.0	91.0	85.0	108.0	91.5
75.0	73.0	92.0	85.5	109.0	92.0
76.0	74.0	93.0	86.0	110.0	92.0

Provided, however, that clause *(b)* shall not apply when the difference between the wet bulb temperature as indicated by the hygrometer in the department concerned and the wet bulb temperature taken with a hygrometer outside in the shade is less than 3.5 degrees.

19. *Provision of hygrometer*— In all departments of cotton spinning and weaving mills wherein artificial humidification is adopted, hygrometers shall be provided and maintained in such positions as are approved by the Inspector. The number of hygrometers shall be regulated according to the following scale —

(a) Weaving department — One hygrometer for departments with less than 500 looms, and one additional hygrometer for every 500 or part of 500 looms in excess of 500;

(b) Other departments — One hygrometer for each room of less than 300,000 cubic feet capacity and one extra hygrometer for each 200,000 cubic feet or part thereof, in excess of this;

(c) One additional hygrometer shall be provided and maintained outside each cotton spinning and weaving factory wherein artificial humidification is adopted, and in a position approved by the Inspector for taking hygrometer shade readings.

20. ***Exemption from maintenance of hygrometers*** **—** When the Inspector is satisfied that the limits of humidity allowed by the Schedule to Rule 18 are never exceeded, he may, for any department other than the weaving department, grant exemption from the maintenance of the hygrometer. The Inspector shall record such exemption in writing.

21. ***Copy of Schedule to Rule 18 to be affixed near every hygrometer-***

A legible copy of the Schedule to Rule 18 shall be affixed near each hygrometer.

22. ***Temperature to be recorded at each hygrometer*** **—** At each hygrometer maintained in accordance with Rule 19, correct wet and dry bulb temperatures shall be recorded thrice daily during each working day by the competent persons nominated by the Manager and approved by the Inspector. The temperature shall be taken between 7 a.m. and 9 a.m. between 11 a.m. and 2 p.m. (but not in the rest interval) and between 4 p.m. and 5.30 p.m. In exceptional circumstances, such additional readings and between such hours, as the Inspector may specify shall be taken. The temperatures shall be entered in a Humidity Register in the prescribed Form No. 6, maintained in the factory. At the end of each month the persons who have taken the readings shall sign the Register and certify the correctness of the entries. The Register shall always be available for inspection by the Inspector.

23. ***Specifications of hygrometer*** — (1) Each hygrometer shall comprise two mercurial thermometers of wet bulb and dry bulb of similar construction and equal in dimensions, scale and divisions of scale. They shall be mounted on a frame with a suitable reservoir containing water.

(2) The wet bulb shall be closely covered with a single layer of muslin, kept wet by means of a wick attached to it and dropping into the water in the reservoir. The muslin covering and the wick shall be suitable for the purpose, clean and free from size or grease.

(3) No part of the wet bulb shall be within 3 inches from the dry bulb or less than 1 inch from the surface of the water in the reservoir and the water reservoir shall be below it, on the side of it away from the dry bulb.

(4) The bulb shall be spherical and of suitable dimensions and shall be freely exposed on all sides to the air of the room.

(5) The bores of the stems shall be such that the position of the top of the mercury column shall be readily distinguishable at a distance of 2 feet.

(6) Each thermometer shall be graduated so that accurate readings may be taken between 50 and 120 degrees.

(7) Every degree from 50 degrees up to 120 degrees shall be clearly marked by horizontal lines on the stem, each fifth and tenth degree shall be marked by longer marks than the intermediate degrees and the temperature marked opposite each tenth degree, i. *e.,* 50,60,70,80,90,100,110 and 120.

. (8) The marking as above shall be accurate, that is to say, at no temperature between 50 and 120 degrees shall the indicated readings, be in error by more than two-tenths of a degree.

(9) A distinctive number shall be indelibly marked upon the thermometer.

(10) The accuracy of each thermometer shall be certified by the National Physical Laboratory, London or some competent authority appointed by the Chief Inspector and such certificate shall be attached to the Humidity Register.

24. ***Thermometers to be maintained in efficient order*** **—** Each thermometer shall be maintained at all time during the period of employment in efficient working order, so as to give accurate indications and in particulars—

(a) the wick and the muslin covering of the wet bulb shall be renewed once a week;

(b) the reservoir shall be filled with water shall be completely renewed once a day. The Chief Inspector may direct the use of distilled water or pure rain water in any particular mill or mills in certain localities;

(c) no water shall be applied directly to the wick or covering during the period of employment.

25. ***An inaccurate thermometer not to be used without fresh certificate*** — If an Inspector gives notice in writing that a thermometer is not accurate it shall not, after one month from the date of such notice, be deemed to be accurate unless and until it has been re-examined as prescribed and a fresh certificate obtained which certificate shall be kept attached to the Humidity Register.

26. ***Hygrometer not to be affixed to wall, etc., unless protected by wood***— (1) No hygrometer shall be affixed to a wall, pillar, or other surface unless protected therefrom by wood or other non-conducting material at least half an inch in thickness and distant at least one inch from the bulb of each thermometer.

(2) No hygrometer shall be fixed at a height of more than 5 feet 6 inches from

the floor to the top thermometer stem or in the direct draughts from fan, window, or ventilating opening.

27. ***No reading to be taken within 15 minutes of renewal of water*** **-** No reading shall be taken for record on any hygrometer within 15 minutes of the renewal of water in the reservior.

28. ***How to introduce steam for humidification*** **—** In any room in which steam pipe is used for the introduction of steam for the purpose of artificial humidification of the air the following provisions shall apply —

(a) the diameter of such pipes shall not exceed two inches and in the case of pipes installed after 1st day of November, 1950 the diameter shall not exceed one inch;

(b) such pipes shall be as short as is reasonably practicable;

(c) all hangers supporting such pipes shall be separated from the bare pipes by an efficient insulator not less than half an inch in thickness;

(d) no uncovered jet from such pipe shall project more than $4\frac{1}{2}$ inches beyond the outer surface of any cover;

(e) the steam pressure shall be as low as practicable and shall not exceed 70 Ibs. per square inch.

(f) the pipe employed for the introduction of steam into the air in a department shall be effectively covered with such non-conducting material, as may be approved by the Inspector in order to minimise the amount of heat radiated by them into the department.

Rule 29 to 33 Prescribed under sub section (4) of section 17.

29. ***Lighting—Application and commencement*** — (1) Subject as in these rules provided, Rules 29 to 33 shall apply to factories in which persons are being regularly employed in a manufacturing process or processes for more than 48 hours a week or in shifts, provided that nothing in these Rules shall be deemed to require the provision of lighting of a specified standard in any building or structure so constructed that, in the opinion of the Chief Inspector it would not be reasonably practicable to comply with such requirement.

(2) Rules 29 to 33 shall come into force in respect of any class or description

of factories, on such dates as the State Government may, by notification in the official *Gazette,* appoint in this behalf.

30. ***Lighting of interior parts*** — (1) The general illumination over those interior parts of a factory of where persons are regularly employed shall not be less than 6 foot-candles measured in the horizontal plane at a level of 3 feet above the floor.

Provided that in any such parts in which the mounting height of the light source for general illumination necessarily exceeds 25 feet measured from the floor or where the structure of the room or the position or construction of the fixed machinery or plant prevents the uniform attainment of this standard, the general illumination at the said level shall be not less than 2 feet-candle and where work is actually being done the illumination shall be not less than 6 feet candles.

(2) The illumination over all other interior parts of the factory over which persons employed pass shall, when and where a person is passing, be not less than 0.5 foot- candles at floor level.

(3) The standard specified in this rule shall be without prejudice to the provision of any additional illumination required to render the lighting sufficient and suitable for the nature of the work.

31. ***Prevention of glare*** — (1) Where any source of artificial light in the factory is less than 16 feet above floor level, no part of the light source or of the lighting fitting having a brightness greater than 10 candles per square inch shall be visible to persons whilst normally employed within 100 feet of the source, except where the angle of elevation from the eye to the source or part of the fitting, as the case may be, exceeds 20 degree.

(2) Any local light, that is to say an artificial light designed to illuminate particularly the area or part of the area of work of single operative or small group of operatives working near each other, shall be provided with a suitable shade of opaque metarial to prevent glare or with other effective means by which the light source is completely screened from the eyes of every person employed at a normal working place, or shall be so placed that part no such person is exposed to glare therefrom.

32. ***Power of Chief Inspector to exempt***— Where the Chief Inspector is satisfied in respect of any particular factory or part thereof or in respect of any

description of work-room or process that any requirement of Rules 29 to 31 is inappropriate or is not reasonably practicable he may, by order in writing, exempt the factory or part thereof, or description of work-room or process from such requirement to such extent and subject to such condition as he may specify.

33. ***Exemption from Rule 30*** — (1) Nothing in Rule 30 shall apply to the parts of factories specified in Part I of the Schedule annexed hereto.

(2) Nothing in sub-rule (1) of Rule 30 shall apply to the factories or part of factories respectively specified in Part II of the said Schedule.

SCHEDULE
PART I

Parts of factories in which light sensitive photographic materials are made or used in exposed condition.

PART II

Cement works.
Works for the crushing and grinding of lime-stone.
Gas work.
Coke oven works.
Electrical stations.
Flour Mills.
Meltings and breweries
Parts of factories in which the following processes are carried on :
Concrete or artificial stone making
Conversion of iron into steel.
Smelting of iron ore.
Iron or steel rolling.
Hot rolling or forging, tempering or anealing of metals.
Glass blowing and other working in molten glass.
Tar distilling
Petroleum refining and blending.

Rule 34 to 39 prescribed under sub-section (4) of section 18.

34. ***Quantity of drinking water*** — The quantity of drinking water to be provided for the workers in every factory shall be at least as many gallons a day as there are workers employed in the factory and such drinking water shall be readily available at all times during working hours.

35. ***Source of supply*** — The water provided for drinking shall be supplied—

(a) from the taps connected with public water supply system; or

(b) from any other source approved in writing by the Health Officer.

36. ***Storage of water***—If drinking water is not supplied from tap connected with a public water supply system it shall be kept in suitable vessels and renewed at least daily. All practicable steps shall be taken to preserve the water and vessels from contamination and to keep the vessels scrupulously clean.

37. ***Cleanliness of well or reservior*** — (1) Drinking water shall not be supplied from any open well or reservior unless it is so constructed, situated, protected and maintained as to be free from the possibility of pollution by chemical or bacterial and extraneous impurities.

(2) Where drinking water is supplied from such well or reservior the water in it shall be sterilised once a week or more frequently if the Inspector by written order so required, and the date on which sterilising is carried out shall be recorded:

Provided that this requirement shall not apply to any such well or reservior if water therein is filtered and treated to the satisfaction of the Health Officer before it is supplied for consumption.

38. ***Report from Health Officer*** — The Inspector may by order in writing direct the manager to obtain at such time or at such intervals as he may direct, a report from the Health Officer as to the fitness for human consumption of the water supplied to the workers, and in every case to submit to the Inspector a copy of such report as soon as it is received from the Health Officer.

39. ***Cooling of water*** — In every factory wherein more than two hundred and fifty workers are ordinarily employed —

(a) the drinking water supplied to the workers shall from the 15th April to the 15th September in every year, be cooled by ice or other effective method:

Provided that if ice is placed in the drinking water, the ice shall be clean and wholesome and shall be obtained only from a source approved in writing by Health Officer;

(b) the cooled drinking water shall be supplied in every canteen, lunch-room and rest-room and also at conveniently accessible points throughout the factory which for the purpose of these Rules shall be called “Water Centres”;

(c) the water centres shall be sheltered from the weather and adequately

drained;

(d) the number of water centres to be provided shall be one "centre" for every 150 persons employed at any one time in the factory :

Provided that in the case of a factory where the number of persons employed exceeds 500 it shall be sufficient if there is one such "centre" as aforesaid for every 150 persons up to the first 500 and one for every 500 persons thereafter;

(e) every "water centre" shall be maintained in clean and orderly condition;

(f) every water centre shall be in charge of a suitable person who shall distribute the water. Such person should be provided with clean cloths while on duty.

Clause *(f)* shall not apply to any factory in which suitable mechanically operated drinking water refrigerating units are installed to the satisfaction of the Chief Inspector.

Rule 40 to 49 prescribed under sub-section 3 of section 19

40. ***Latrine accommodation***— Latrine accommodation shall be provided in every factory on the following scale :

(a) where females are employed, there shall be at least one latrine for every 25 females;

(b) where males are employed, there shall be at least one latrine for every 25 males:

Provided that, where number of males employed exceeds 100, it shall be sufficient if there is one latrine for every 25 males up to the first 100, and one for every 50 thereafter.

In calculating the number of latrines required under this rule any odd number of workers less than 25 or 50, as the case may be, shall be reckoned as 25 or 50.

41. ***Latrine to conform to Public Health requirements*****—**Latrines, other than those connected with an efficient water-borne sewage system, shall comply with the requirements of the Public Health Authorities.

42. ***Privacy of latrines*** — Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings,

43. ***Sign-boards to be displayed*** — Where workers of both sexes are employed, there shall be displayed outside each latrine block a notice in the language understood by the majority of the workers "For men Only" or "For Women Only"

as the case may be. The notice shall also bear the figure of a man or a woman as the case may be.

44. ***Urinal accommodation*** — Urinal accommodation shall be provided for the use of male workers and shall not be less than 2 feet in length for every 50 males; provided that where the number of males employed exceeds 500, it shall be sufficient if there is one urinal for every 50 males up to the first 500 employed, and one for every 100 thereafter.

In calculating the urinal accommodation required under this rule any odd number of workers less than 50 or 100, as the case may be, shall be reckoned as 50 or 100.

45. ***Urinals to conform to Public Health requirements*** — Urinals, other than those connected with an efficient water-borne sewage system and urinals in a factory wherein more than two hundred and fifty workers are ordinarily employed shall comply with the requirements of the Public Health Authorities.

46. ***Certain latrines and urinals to be connected to sewerage system—***

When any general system of underground sewerage with an assured water supply for any particular locality is provided in a municipality, all latrines and urinals of a factory situated in such locality shall, if the factory is situated within 100 feet of existing sewer, be connected with that sewerage system.

47. ***White-washing, colour-washing of latrines and urinals*** **—** The walls, ceilling and partitions of every latrine and urinal shall be white-washed or colour-washed and the white-washing and colour-washing shall be repeated at least once in every period of four months. The dates on which the whitewashing or colour-washing is carried out shall be entered in prescribed Register (Form No. 7):

Provided that this rule shall not apply to latrines and urinals, the walls ceillings for partitions of which are laid in glazed tiles or otherwise finished to provide a smooth, polished impervious surface and that they are washed with suitable detergents and disinfectants at least once in every period of four months.

48. ***Construction and maintenance of drains*** — All drains carrying waste or sullage water shall be constructed in masonary or other impermeable material and shall be regularly flushed and the effluent disposed of by connecting such drains with a suitable drainage line :

Provided that, where there is no such drainage line, the effluent shall be deodorized and rendered innocuous and then disposed off in a suitable manner to the satisfaction of the Health Officer. .

49. ***Water taps in latrines***—(1) Where piped water supply is available a sufficient number of water taps, conveniently accessible shall be provided in or near such latrine accommodation.

(2) If piped water supply is not available, sufficient quantity of water shall be kept stored in suitable receptacles near the latrines.

Rules 50 to 52 prescribed under sub-section (2) of section 20

50. Number and location of spittoons **—** The number and location of the spittoons to be provided shall be to the satisfaction of the Inspector.

51. Type of spittoons—The spittoons shall be of either of the following types —

(a) a galvanised iron container with a conical funnel-shaped cover. A layer of suitable disinfectant liquid shall always be maintained in the container;

(b) a container filled with dry cleaned sand, and covered with layer of bleaching powder;

(c) any other type approved by the Chief Inspector.

52. ***Cleaning of spittoons*** **—** The spittoons mentioned in clause *(a)* of Rule 51 shall be emptied, cleaned and disinfected at least once every day and the spittoon mentioned in clause *(b)* of Rule 51 shall be cleaned by scraping out the top layer of sand as often as necessary or at least once every day.

CHAPTER IV
Safety

Further precautions prescribed under sub-section (2) of section 21

53. Further safety precaution **—** (1) Without prejudice to the provisions of sub-section (1) of Section 21 in regard to the fencing of machines, the further precautions specified in the Schedules annexed hereto shall apply to the machines noted in each Schedule,

(2) This rule shall come into force, in respect of any class or description of factories, where machines noted in the said Schedules are in use, on such dates as the State Government may, by notification in the Official *Gazette,* appoint in this behalf.

[SCHEDULE —I
TEXTILE MACHINERY EXCEPT MACHINERY USED IN JUTE MILLS

Enforced vide notification No.GLR (RC) 43/86/241 Dt. 5/5/93

1. ***Application*** — The requirements of this Schedule shall apply to machinery in factories engaged in the manufacture or processing of textiles other than jute textiles. The Schedule would not apply to machinery in factories engaged exclusively in the manufacture of synthetic fibres.

2. ***Definitions*** — For the purposes of this Schedule, —

(a) "calender" means a set of heavy rollers mounted on vertical side frames and arranged to pass cloth between them. Calenders may have two to ten rollers, or bowls, some of which can be heated;

(b) "card" means a machine consisting of cylinders of or more rolls, one of which is engraved for producing figure effects of various kinds on a fabric;

(c) "care" means a machine consisting of cylinders of various sizes -and in certain cases flates - covered with card clothing and set in relation to each other so that fibres in staple form may be separated into individual relationship. The speed of the cylinders and their direction of rotation varies. The finished product is delivered as a silver. Cards of different types are, the revolving flat card, the roller and clearer card *etc*;

(d) "card clothing" means the material with which the surfaces of the cylinder, differ, flates, etc., of a-card are covered and consists of a thick foundation material made of either textile fabrics through which are pressed many fine closely spaced, specially bent wires or mounted saw toothed wire;

(e) "comber" means a machine for combing fibres of cotton, wool, *etc.* The essential parts are device for feeding forward a fringe of fibres at regular intervals and an arrangement of combs or pins, which at the right time pass through the fringe. All tangled fibres, short fibres and nips are removed and the long fibres are laid parallel;

(f) "combing machinery" means a general classification of machinery including combers, silver lap machines, ribbon lap machines, and gill boxes but excluding cards;

(g) "rotary staple cutter" means a machine consisting of one or more rotary blades used for the purpose of cutting textile fibres into staple lengths;

(h) "garnett machine" means any of a number of types of machines for opening hard twisted waste of wool, cotton, silk, etc. Essentially such machines consist of a licker — in one or more cylinders, each having a competent worker and stripper rools; and a fancy roll and doffer. The action of such machines is somewhat like that a wool card, but it is much more severe in that the various rolls are covered with garnett wire instead of card clothing;

(i) "gill box" means a machine used in the worsted system of manufacturing yarns. Its function is to arrange fibres in parallel order. Essentially, it consists of a pair of feed rolls and a series of followers where the followers move at a faster surface speed and perform a combing action;

(j) "in running rolls" means any pair of roll's or drums between which there is a "nip";

(k) "interlocking arrangement" means a device that prevents the setting in motion of a dangerous part of a machine or the machine itself while the guard cover or door provided to safeguard against danger is open or unlocked, and which will also held the guard, cover or door closed and locked while the machine or the dangerous part is motion;

(I) "kier" means a large metal vat, usually a pressure type, in which fabrics may be boiled out, bleached *etc* ;

(m) "ribbon lapper" means a machine or a part of a machine used to prepare laps for feeding a cotton comb; its purpose is to provide a uniform lap in which the fibre have been straightened as much as possible;

(n) "silver lapper" means a machine or a part of a machine in which a number of parallel card silvers are drafted slightly, laid side by side in a compact sheet, and wound into a cylinderical package;

(o) "loom" means a machine for effecting the interloking of two series of yarns crossing one another at right angles. The warp yarns are wound on a warp beam and pass through headles and reeds. The filling is shot across in a shuttle and settled in place by reads and sley, and the fabric is wound on a cloth beam;

(p) "strach mangle" means a mangle that is used specifically for starching cotton goods. It commonly consists of two large rolls and a shallow open vat with several immersion rolls. The vat contains the starch solution;

(q) "water mangle" means a calender having two or more rolls used for squeezing water from fabrics before drying. Water mangles also may be used in other ways during the finishing of various fabrics;

(r) "mule" means a type of spinning frame having a head stock and a carriage as its two main sections. The head stock is stationery. The carriage is movable and it carries the spindles which draft and spin the roving into yarn. The carriage extends over the whole width of the machine and moves slowly toward and away from the head stock during the spinning operation;

(s) "nip" is the danger zone between two rolls or drums which by virtue of their positioning and movement create a nipping hazard;

(t) "openers and pickers" means a general classification of machinery which includes breake pickers, intermediate pickers, finisher pickers, single process pickers,.multiple process pickers, thread extractors, shredding machines, roving waste openers, snoddy pickers bale breakers, feeders, vertical opener, lattice cleaners, horizontal cleaners, and any similar machinery equipped with either cylinders, screen section, calender section, rolls or beaters used for the preparation of stock for further processing;

(u) "paddler" means a trough for a solution and two or more sqeeze rolls between which cloth passes after being passed through a moddant or dye bath;

(v) "plainting machine" means a machine used tay cloth is to folds of regular length for convenience of subsequent process or use;

(w) "roller printing machine" means a machine consisting of a large central cylinder, or pressure bowl, around the lower part of the perimeter of which is placed a series of engraved color rollers (each having a color through), a furnisher roller, doctor blades, *etc.* The machine is used for printing fabrics;

(x) "continuous bleaching range" means a machine for bleaching of cloth in rope or open-width form with the following arrangement. The cloth, after wetting out pass through a squeeze roll into a saturator containing a solution of caustic soda and then to an enclosed J-Box. A V-Shaped arrangement is attached to the front part of the J. box for uniform and rapid saturation of the cloth with steam before it is packed down in the J. box. The cloth in a single strand rope form, passes over a guide roll down the first arm of the "V" and up the second. Steam is injected into the "V" at the upper end of the second arm so that the cloth is rapidly saturated with steam at this point. The J- box capacity is such that cloth

will remain hot for a sufficient time to complete the scouring action. It then passes a series of washers with a squeeze roll in between. The cloth then passes through a second set of saturator, J-box and washer where it is treated with the peroxide solution. By slight modification of the form of the unit, the same process can be applied to open width cloth;

(y) "mercerizing range" means a 3-bowl mangle, a tender frame and a number of boxes for washing and scouring. The whole set up is in a straight line and all parts operate continuously. The combination is used to saturate the cloth with sodium hydroxide, stretch it while saturated and washing out most of the caustic before releasing tension;

(z) "sanforizing machine" means a machine consisting a large steam-heated cylinder, and endless, thick, woolen felt blanket which is in close contact with the cylinder for most of its perimeter, and an electrically heated shoe which presses the cloth against the blanket while the latter is in a strectched condition as it curves around feed-in roll;

(aa) "shearing machine" means a machine used for shearing cloth. Cutting action is provided by a number of steel blades sprially mounted on a roller. The roller rotates in close contact with a fixed ledger blade. There may be from one to six such rollers on a machine.

(bb) "singeing machine" means a machine which comprises of a heated roller, plate, or an open gas flame. The cloth or yarn is rapidly passed over the roller of the plate or through the open gas flame to remove fuzz or hairiness by burning;

(cc) "slesher" means a machine used for applying a size mixture to warp yarns. Essentially, it consists of a stard for holding section beams, a size box, one or more cylindrical dryers or an enclosed hot air dryer, and a beaming and for winding the yarn on the loom beams;

(dd) "tenter frame" means a machine for drying cloth under tension. It essentially consists of a pair of endless traveling chains fitted with clips of fine pins and carried on tracks. The clolth is firmly held at the selvages by the two chains which diverge as they move forward so that the cloth is brought to the desired width;

(ee) warper means a machine for preparing and arranging the yarns intended for the warp of a fabric, specially, a beam warper.

3. ***General safety requirements*****—** (1) Every textile machine shall be provided with individual machinical or electrical means for starting and stopping such machines. Belt shifter on machines driven by belts and shafting should be provided with a belt shifter, lock of an equivalent positive locking device.

(2) Stopping and starting handles or other controls shall be such design and so positioned as to prevent the operators hand or fingers from striking against any moving part or any other part of the machine.

(3) All belts, pulleys, gears, chains, sprocket wheels and other dangerous moving parts of machinery which either form part of the machinery or are used in association with it, shall be securely guarded.

4. ***Openers and pickers*** **—** (1) In all opening or picker machinery, beaters and other dangerous parts shall be securely fenced by suitable guards so as to prevent contact with them. Such guards and doors or covers or openings giving access to any dangerous part of the machinery shall be provided with interlocking arrangement:

Provided that in the case of doors or covers of openings giving access to any dangerous part, other than beater covers, instead of the interlocking arrangement, such openings may be so fenced by guards which prevent access to any such dangerous part and which is either kept positively locked in position or fixed in such a manner that it cannot be removed without the use of hand tools.

(2) The feed rolls on all opening and picking machine shall be covered with a guard designed to prevent the operator from reaching the nip while the machinery is in operation.

(3) The lap forming rollers shall be fitted with a guard or cover which shall prevent access to the nip at the intake of the lap roller and fluted roller as long as the weighted rack is down. The guard or cover shall be so locked that it cannot be raised until the machine is stopped, and the machine cannot be started until the cover or guard is closed:

Provided that the foregoing provision shall not apply to the machines equipped with the automatic lap forming device; provided further that any such machine equipped with an automatic lap forming device shall not be used unless the automatic lap forming device in efficient working order.

5. ***Cotton cards*** **—** (1) All cylinder doors shall be secured by an interlocking

arrangement which shall prevent the door being opened until the cylinder has ceased to revolve and shall render it impossible to restart the machine until the door has been closed:

Provided that the latter requirement in respect of the automatic locking device shall not apply while stripping or grinding operations are carried out:

Provided further that stripping or grinding operations shall be carried out only by specially trained adult workers wearing tight fitting clothing whose names have been recorded in the register prescribed in this behalf as required in sub-section (1) of Section 22.

(2) The licker-in shall be guarded so as to prevent access to the dangerous parts.

(3) Every card shall be equipped with an arrangement that would enable the card cylinder to be driven by power during stripping grinding operations without having the either shift the main belt to the fast pulley of the machine or to dismantle the interlocking machanism. Such an arrangement shall be used only for stripping or grinding operations.

6. ***Garnett machines*** — (1) Garnett licker-ins shall be enclosed—

(2) Garnett fancy rolls shall be enclosed by guards. These shall be installed in a way that keeps worker rolls reasonably accessible for removal adjustment.

(3) The underside of the garnett shall be guarded by a screen mesh or other form of enclosures to prevent access,

7. ***Gill boxes*** — (1) The feed end shall be guarded so as to prevent fingers being caught in the pins of the intersecting failers.

(2) All nips of in-running rolls shall be guarded by suitable nip guards conforming to the following specifications.

Any opening which the guard may permit when fitted in position shall be so restricted with respect to the distance of the opening from any nip point through that opening and in any circumstances the maximum width of the opening shall not exceed the following :

Distance of opening from nip point		**maximum width of opening:**
0	to 34mm	6mm
39	to 63 mm	10mm

64	to 88mm	13mm
89	to 140mm	15mm
141	to 165 mm	19mm
166	to 190mm	22mm
191	to 215mm	32mm

8. ***Silver and ribbon 'lappers (cotton)***— The calender drums and the lap spool shall be provided with a guard to prevent access to the nip between the in-running rolls.

9. ***Speed frames*** — Jack box wheels at the head stock shall be guarded and the guard shall have interlocking arrangement.

10. ***Spinning mules*** — Wheels on spinning mule carriages shall be provided with substantial wheel guards, extending to within 6 mm of the rails.

11. ***Warpers*** — Swiveled double-bar gates shall be installed on all warpers operating in excess of 410 meters/min. These gates shall have interlocking arrangement, except for the purpose of inching or jogging:

Provided that the top and bottom bars of the gate shall be at least 1.05 and 0.53 meters high from the floor or working platform, and the gate shall be located 28 mm from the vertical tangement to the beam head.

12. ***Slashers***— (1) Cylinder dryers —

(a) All open nips of in-running rolls shall be guarded by nip guards conforming to the requirements in paragraph 7.

(b) When slashers are operated by control levers, these levers shall be connected to a horizontal bar or treadle located not more than 170 cm above the floor to control the operation from any point.

(c) Slashers operated by push button control shall have stop and start buttons located at each end of the machine, and additional buttons located on both sides of the machine at the size box and delivery end. If calender rolls are used, additional buttons shall be provided at both sides of the machine at points near the nips, except when slashers are equipped with an enclosed dryer as in paragraph *(b)*.

(2) ***Enclosed hot air dryer*** — *(a)* All open nips of the top squeezing rollers shall be guarded by nip guards conforming to the requirements in paragraph 7 (2);

(b) When slashers are operated by control levers, these levers shall be connected to a horizontal bar or treadle located not more than 170 cm, above the floor to control the operation from any point;

(c) Slashers operated by push-button control shall have stop and start buttons located at each end of the machine and additional stop and start buttons located no both sides of the machines at intervals spaced not more than 1.83 meters on centres.

13. ***Looms*** — (I) Each looms shall be equipped with suitable guards designed to minimise the danger from flying shuttles.

(II) Beam weights for tension in beam shall be of such construction so as to prevent it falling during its adjustment.

14. ***Valves of kiers, tanks, and other containers*** **—** (1) Each valve controlling the flow of steam, injurious gases or liquids into a kier or any other tank or container into which a person is likely to enter in connection with a process, operation, maintenance or for any other purpose, shall be provided with a suitable locking arrangement to enable the said persons to lock the valve securely in the closed position and retain the key with him before entering the kier, tank or container.

(2) Wherever boiler tanks, caustic tasks and any other containers from which liquids which are hot, corrosive or toxic may over flow or slush, are so located that the operator cannot see the contents from the floor or working area emergency shut off valves which can be controlled from a point not subject to danger of splash shall be provided to prevent danger.

15. ***Shearing machines*** **—** All revolving blades on shearing machines shall be guarded so that the opening between the cloth surface and the button of the guard will not exceed 100 mm.

16. ***Continous bleaching range (cotton and rayon)*** — The nip of all in running rolls on open-width bleaching machine rolls shall be protected with a guard to prevent the worker from being caught at the nip. The guard shall extend across the entire length of the nip.

17. ***Mercerizing range (Piece goods)*** — (1) A Stopping device shall be provided at each and of the machine.

(2) A guard shall be provided at each end of the frame between the in running

chain and the clip opener.

(3) A nip guard shall be provided for the in-running rolls of the mangle and washers and the guard shall conform to the requirements in paragraph 7 (2),

18. ***Tendet frames*** — (1) A stopping device shall be provided at each end of the machine.

(2) A guard shall be provided at each end of the machine frame at the in running chain and clip opener.

19. ***Paddlers*****—** Suitable nip guards conforming to the requirement in paragraph 7 (2) shall be provided to all dangerous in running rolls.

20. ***Centrifugal extractors*** — (1) Each extractor shall be provided with a guard for the basket, and the guard shall have interlocking arrangement.

(2) Each extractor shall be equipped with a mechanically or electrically operated brake to quickly stop the basket when the power driving the basket is shut off.

21. Squeezer or wringer extractor, water mangle, starch mangle, back washer, (worsted yarn) crabbing machines and decating machines. All in -running rolls shall be guarded with nip guards conforming to the requirements in paragraph 7(2).

22. ***Sanforizing and palmer machine*** — (1) Nip guards shall be provided on all accessible in running rolls and these shall conform to the requirements in paragraph 7(2)

(2) Access from the sides to the nips of in-running rolls should be fenced by suitable side guards.

(3) A safety trip rod, cable or wire centre cord shall be provided across the front and back of all palmer cylinders extending the length of the face of the cylinder. It shall operate readily whether pushed or pulled. The safety trip shall not be more than 170 cm. above the level at which the operator stands and shall be readily accessible.

23. ***Rope washers*** **—** (1) Splash guards shall be installed on all rope washers unless the machine is so designed as to prevent the water or liquid from splashing the operator, the floor, or working surface.

(2) A safety trip rod, cable or wire centre cord shall be provided across the front and back of all rope washers extending the length of the face of the washer.

It shall operate readily whether pushed or pulled. This safety trip shall be not more than 170 cm. above the level on which the operator stands and shall be readily accessible.

24. ***Laundry washer tumbler or shaker*** — (1) Each drying tumbler, each double cylinder shaker or clothes tumbler and each washing machine shall be equipped with an inter-locking arrangement which will prevent the power operation of the inside cylinder when the outer door on the case or shell is open and which will also prevent the outer door on the case or shell from being opened without shutting off the power and the cylinder coming to a stop. This should not prevent the movement of the inner cylinder by means of a hand operated mechanism or an inching device.

(2) Each close barrel shall also be equipped with adequate means for holding open the doors or covers of the inner and outer cylinders or shells while it is being loaded or unloaded.

25. ***Printing machine (roller type)*** — (1) All in-running rolls shall be guarded by nip guards conforming to the requirement in paragraph 7 (2).

(2) The angraved rollergears and the large crown wheel shall be guarded.

26. ***Calenders*** — The nip at the in-running side of the rolls shall be provided with a guard extending across the entire length of the nip and arranged to prevent the fingers of the workers from being pulled in between the rools or between the guard and the rolls, and so constructed that the cloth can be fed into the rolls safely.

27. ***Rotary staple cutters*** — The cutter shall be protected by a guard to prevent hands reaching the cutting zone.

28. ***Plaiting machines*** — Access to the trap between the knife and card bar shall be prevented by a guard.

29. ***Hand bailing machine*** — An angle iron handle-stop guard shall be installed at right angle to the frame of the machine. The stop guard shall be so desingned and so located that it will prevent the handle from travelling beyond the vertical position should the handle slip from the operator's hand when the pawl has been released from the teeth of the take-up gear.

30. ***Flat-work ironer-Each flat*** — Work or collar ironer shall be equipped with a safety bar or other guard across the entire front of the feed or first pressure

rolls, so arranged that the striking of the bar or guard by the hand of the operator or other person will stop the machine. The guard shall be such that the operator or other person cannot reach into the rolls without removing the guard. This way be either a vertical guard on all sides or a complete cover. If a vertical guard is used, the distance from the floor or working platform to the top of guard shall be not less than 1.83 meters".]

SCHEDULE —II
COTTON GINNING

Line Shaft — The line shaft or second motion in cotton ginning factories, when below floor level, shall be completely enclosed by a continuous wall or unclimable fencing with only so many openings as are necessary for access to the shaft for removing cotton seed cleaning and oiling, and such openings shall be provided with gates or doors which shall be kept closed and locked.

SCHEDULE —III
WOOD WORKING MACHINERY

1. ***Definitions*** — For the purposes of this Schedule —

(a) Wood-working machine means a circular saw, band saw, planing machine, chain mortising machine or vertical spindle moulding machine operating on wood or cork;

(b) Circular saw means a circular saw working in a bench (including a rack bench) but does not include a pendulum or similar saw which is moved towards the wood for the purpose of cutting operations;

(c) Band saw means a Band saw, the cutting portion of which runs in a vertical direction but does not include a log saw or band re-sawing machine;

(d) Planing machine means a machine for overhand planing or for thicknessing or for both operations.

2. ***Stopping and starting device*** — An efficient stopping and starting device shall be provided on every wood-working machine. The control of this device shall be in such a position as to be readily and conveniently operated by the person in charge of the machine.

3. ***Space around machines*** — The space surrounding every woodworking machine in motion shall be kept free from obstruction.

4. ***Floors*** -The floor surrounding every wood-working machine shall be maintained in good and level condition, and shall not be allowed to become slippery as far as practicable shall be kept free from chips or other material.

5. ***Training and Supervision*** — (I) No person shall be employed at a wood-working machine unless he has been sufficiently trained to work that class of machine, or unless he works under the adequate supervision of a person who has a thorough knowledge of the working of the machine.

(2) A person who is being trained to work a wood-working machine shall be fully and carefully instructed as to the dangers of the machine and the precaution to be observed to secure safe working of the machine.

6. ***Circular saws*** — Every circular saw shall be fenced as follows —

(a) Behind and in direct line with the saw there shall be a riving knife, which shall have a smooth surface, shall be strong, rigid and easily adjustable, and shall also conform to the following conditions;

(i) The edge of the knife nearer the saw shall form an arc of circle having a radius not exceeding radius of the largest saw used on the bench;

(ii) The knife shall be maintained as close as practicable to the saw, having regard to the nature of the work being done at the time, and at the level of the bench table, the distance between the front edge of the knife and the teeth of the saw shall not exceed half an inch;

(iii) For a saw of a diameter of less than 24 inches, the knife shall extend upwards from the bench table to within one inch of top of the saw and for a saw of a diameter of 24 inches or over shall extend upwards from the bench table to a height of at least nine inches;

(b) The top of the saw shall be covered by a strong and easily adjustable guard, with a flange at the side of the saw farthest from the fence. The guard shall be kept so adjusted that the said flange shall extend below the roots of the teeth of the saw. The guard shall extend from the top of the riving knife to a point as low as practicable at the cutting edge of the saw;

(c) The part of the saw below the bench table shall be protected by two plates of metal or other suitable material one on each side of the saw; such plate shall not be more than six inches apart, and shall extend from the axis of the saw outward to a distance of not less than two inches beyond the teeth of the saw. Metal plates, if not beaded, shall be of a thickness of at least $^{1}/_{10}$th inch, or if

beaded be of a thickness of at least $^{1}/_{20}$th inch.

7. ***Push Stick*** — A push stick or other suitable appliance shall be provided for use at every circular saw and at every vertical spindle moulding machine to enable the work to be done without unnecessary risk.

8. ***Band Saws*** — Every band saw shall be guarded as follows —

(a) Both sides of the bottom pulley shall be completely encased by sheet or expanded metal or other suitable material;

(b) The front of the top pulley shall be covered with sheet or expanded metal or other suitable material;

(c) All portions of the blade shall be enclosed or otherwise securely guarded except the portion of the blade between the bench table and the top guide.

9. ***Planing Machines*** — (1) A planing machine (other than a planing machine which is mechanically fed) shall not be used for overhand planing unless it is fitted with a cylindrical cutter block.

(2) Every planing machine used for overhand planing shall be provided with a 'Bridge' guard capable of covering the full length and breadth of the cutting slot in the bench, and so constructed as to be easily adjusted both in a vertical and horizontal direction.

(3) The feed roller of every planing machine used for thicknessing, except the combined machine for overhand planing and thicknessing shall be provided with an efficient guard.

10. ***Vertical spindle moulding machines*** — (1) The cutter of every vertical spindle moulding machine shall be guarded by the most efficient guard having regard to the nature of the work being performed.

(2) The word being moulded at a vertical spindle moulding machine shall, if practicable, be held in a jig or holder of such construction as to reduce as far as possible the risk of accident to the worker.

11. ***Chain mortising machines*** — The chain of every chain mortising machine shall be provided with a guard which shall enclose the cutters as far as practicable.

12. ***Adjustment and maintenance of guards*** — The guards and other appliances required under this Schedule shall be —

(a) maintained in an efficient state;

(b) constantly kept in position while the machinery is in motion; and

(c) so adjusted as to enable the work to be done without unnecessary risk.

13. ***Exemptions*** — Paragraphs 6, 8, 9 and 10 shall not apply to any wood-working machine in respect of which it can be proved that other safeguards are provided, maintained and used which render the machine as safe as it would be if guarded in the manner prescribed in this Schedule.

SCHEDULE —IV
RUBBER MILLS

1. ***Installation of machines*** — Mills for breaking down, cracking, grating, mixing, refining and worming rubber or rubber compounds shall be so installed that the top of the front roll is not less than forty-six inches above the floor or working level. Provided that in existing installations where the top of the front roll is below this height a strong rigid distance bar guard shall be fitted across the front of the machine in such position that the operator cannot reach the nip of the rolls.

2. ***Safety devices*** — (1) Rubber mills shall be equipped with —

(a) hoppers so constructed or guarded that it is impossible for the operators to come into contact in any manner with the nip of the rolls;

(b) horizontal safety-trip rods or tight wire cables across both front and rear, which will, when punished or pulled, operate instantly to disconnect the power and apply the brakes, or to reverse the rolls.

(2) Safety-trip rods or tight wire cables on rubber mill shall extend across the entire length of the face of the rolls and shall be located not more than sixty-nine inches above the floor or working level.

(3) Safety-trip rods and tight wire cables on all rubber mills shall be examined and tested daily in the presence of the Manager or other responsible person and if any defect is disclosed by such examination and test, the mill shall not be used until such defect has been remedied.

SCHEDULE—V
CENTRIFUGAL MACHINES

1. ***Definitions*** — "Centrifugal machines" include centrifugal extractors, separators and driers, every part of centrifugal machine shall be —

(a) of good design and construction and of adequate strength;

(b) properly maintained; and

(c) examined thoroughly by a competent person at regular intervals.

2. ***Interlocking guard for drum or basket*** — (1) The cage housing the rotating drum or basket of every centrifugal machine shall be provided with a strong lid. The design and construction of the cage as well as the lid should be such that no access is possible to the drum of basket when the lid is closed.

(2) Every centrifugal machine shall be provided with an efficient interlocking device that will effectively prevent the lid referred to in sub-paragraph (1) from being opened while the drum or basket is in motion and prevent the drum or basket being set in motion while the lid is in the open position.

3. ***Braking arrangement*** — Every centrifugal machine shall be provided with an effective braking arrangement capable of bringing the drum or basket to rest within as short a period of time as reasonably practicable after the power is cut off.

4. ***Operating speed*** — No centrifugal machine shall be Operated at a speed in excess of the manufacturer's rating which shall be legibly stamped at easily visible places both on the inside of the basket and on the outside of the machine casing.

5. ***Exceptions***— Sub-paragraph (2) of paragraph 3, paragraphs 4 and 5 shall not apply in case of top lung machines or similar machines used in the sugar manufacturing industry.

SCHEDULE —VI
POWER PRESS

1. ***Application*** — The Schedule shall apply to all types of power presses including press brakes, except when used for working hot metal.

2. ***Definitions*** — For the purpose of this Schedule —

(a) "approved" means approved by the Chief Inspector;

(b) "fixed fencing" means fencing provided for the tools of a power press being fencing which has no moving part associated with or dependent upon the machinism of a power press and includes that part of a closed tool which acts as a guard;

(c) "power press" means a machine used in metal or other industries for molding pressing, blanking, raising drawing and similar purpose;

(d) "safety device" means the fencing and other safeguard provided for the

tools of a power press.

3. ***Starting and stopping mechanism*** — The starting and stopping mechanism shall be provided with a safety stop so as to prevent over running of the press or descent of the ram during tool setting *etc.*

4. ***Protection of tool and die*** — (1) Each press shall be provided with a fixed guard with a slip plate on the underside enclosing the front and all sides of the tool.

(2) Each die shall be provided with a fixed guard surrounding its front and sides, and extending to the back in the form of a tunnel through which the pressed article falls to the rear of the press.

(3) The design, construction and mutual position of the guards referred to in (1) and (2) shall be such as to preclude the possibility of the workers hand or fingers reaching the danger zone.

(4) The machine shall be fed through a small aperture at the bottom of the die guard, but a wider aperture may be permitted for second or subsequent operations if feeding is done through a chute.

(5) Notwithstanding anything contained in sub-clause (1) and (2) an automatic or an inter-locked guard may be used in place of a fixed guard, but where such guards are used they shall be maintained in an efficient working condition and if any guard develops a defect, the power press shall not be operated unless the defect of the guard is removed.

5. ***Appointment of persons to prepare power presses for use*****—** (1) Except as provided in sub-paragraph (4), no person shall set, reset, adjust or try out the tools on a power press or install or adjust any safety device thereon, being or installation or adjustment preparatory to production of die proving, or carry out an inspection and set of any safety device thereon required by paragraph 8 unless be —

(a) has attained the age of eighteen;

(b) has been trained in accordance with the sub-paragraph (2) and

(c) has been appointed by the occupier of the factory to carry out those duties in respect of the class or description of power press or the class or description of safety device to which the power press or the safety device (as the case may be) belongs; and the name of every such person shall be entered in a register in Form 9.

(2) The training shall include suitable and sufficient practical instruction in the matters in relation to each type of power press and safety device in respect of which it is proposed to appoint the person being trained.

6. ***Examination and testing of power presses and safety devices*****—** (1)

No power press or safety device shall be taken into use in any factory for the first time in that factory, or in case of a safety device for the first time on any power press, unless it has been thoroughly examined and tested, in the case of a power press, after installation in the factory, or in the case of a safety device, when in position on the power press in connection with which it is to be used.

(2) No power press shall be used unless it has been thoroughly examined and tested by a comptent person within the immediately preceding period of twelve months.

(3) No power press shall be used unless every safety device (other than fixed fencing) thereon has within the immediately preceding period of six months when in position on that power press, been thoroughly examined and tested by a competent person.

(4) The competent person carrying out an examination and test under the foregoing provisions shall make a report of the examination and test containing the following particulars and every such report shall be kept readily available for inspection —

(a) name of the occupier of the factory;

(b) address of the factory;

(c) identification number or mark sufficient to identify the power press or the safety device;

(d) date on which the power press or the safety device was first taken into use in the factory;

(e) the date of each periodical thorough examination carried out as per requirements of sub-paragraph (2) above;

(f) particulars of any defects effecting the safety working of the power press or the safety device found at any such thorough examination and steps taken to remedy such defects.

7. ***Defects disclosed during a thorough examination and tests*****— (1)** Where any defect is disclosed in any power press or in any safety device by an

examination and test under paragraph 6 and in the opinion of the competent person carrying out the examination and test either —

(a) the said defect is a cause of danger to workers and in consequence the power press or safety device (as the case may be) ought not to be used until the said defect has been remedied; or

(b) the said defect may become a cause of danger to workers and in consequence the power press or the safety device (as the case may be) ought not to be used after the expiration of a specified period unless the said defect has been remedied, such defect shall, as soon as possible after the completion of the examination and test, be notified in writing by the competent person to the occupier of the factory and in the case of a defect falling within clause *(b)* of this sub-paragraph such notification shall include the period within which, in the opinion of the competent person, the defect ought to be remedied.

(2) In every case where notification has been given under this paragraph, a copy of the report made under paragraph 6 (4) shall be sent by the competent person to the inspector for the area within fourteen days of the completion of the examination and test.

(3) Where any such defect is notified to the occupier in accordance with the foregoing provisions of this paragraph the said defect shall not be used—

(a) in the case of a defect falling within clause *(a)* of sub-paragraph (1) until the said defect has been remedied; and

(b) in the case of defect falling within clause *(b)* of sub-paragraph (1) after the expiration of the said defect has been remedied.

(4) As soon as is practicable after any defect of which notification has been given under sub-paragraph (1) has been remedied, a record shall be made by or on behalf of the occupier stating the measures by which and the date on which the defect was remedied.

8. ***Inspection and test of safety devices***— (1) No power press shall be used after the setting, resetting or adjustment of the tools thereon unless a person appointed or authorised for the purpose under paragraph 5 has inspected and tested every safety device thereon while it is in position on the said power press:

Provided that an inspection, test and certificate as aforesaid shall not be required where any adjustment of the tools has not caused or resulted in any alteration to or disturbance of any safety device on the power press and if, after the adjustment

of the tools, the safety devices remain, in the opinion of such a person as aforesaid, in efficient working order.

(2) Every power press any every safety device there on while it is in position on the said power press shall be inspected and tested by a trained person every day.

9. ***Defects disclosed during an inspection and test***—(1) Where it appears to any person as a result of any inspection and test carried but by him under paragraph 8 that any necessary safety device is not in position or is not properly in position on a power press or that any safety device which is in position on a power press is not in his opinion suitable, he shall notify the manager forthwith,

(2) Except as provided in sub-paragraph (3) where any defect is disclosed in a safety device by any inspection and test under paragraph 8, the person carrying out the inspection and test shall notify the manager forthwith.

(3) Where any defect in a safety device in the subject of a notification in writing under paragraph 7 by virtue of which the use of the safety device may be continued during a specified period without the said defect having been remedied, the requirement in sub-paragraph (2) of this paragraph shall not apply the said defect until the said period has expired.

10. ***Idenfication of power presses and safety devices*** — For the purpose of identification every power press and every safety device provided for the same shall be distinctively and plainly marked.

11. ***Training and instructions to operators*** — The operators shall be trained and instructed in the safe method of work before starting work on any power press.

Exemptions — (1) If in respect of any factory the Chief Inspector is satisfied that owing to the circumstances or infrequency of the processes or for any other reason all or any of the provisions of this Schedule are not necessary for the protection of the workers employed on any power press or any class or description of power press or in the factory, the Chief Inspector may by a certificate in writing (which he may in his descretion revoke at any time), exempt such factory from all or any of such provisions subject to such conditions, if any as he may specify therein.

(2) Where such exemption is granted, a legible copy of the certificate, showing the conditions (if any) subject to which it has been granted, shall be kept posted in the factory in a position where it may be conveniently read by the persons employed.

SCHEDULE VII
SHEARS, SLITTERS AND GUILLOTINE MACHINES

1. Definitions — For the purpose of this Schedule —

(a) ***"guillotion"*** means a machine ordinarily equipped with straight, bevel-edged blade operating vertically against a stationery resisting edge and used for cutting metallic or non-mettalic substances;

(b) ***"shears"*** **or** ***"shearing machine"*** means a machine ordinarily equipped with straight, bevel-edged blades operating vertically against resisting edges, or with rotary overlapping cutting wheels, and used for shearing metals or non-metalic substance;

(c) ***"slitter"*** **or** ***"slitting machine"*** means a machine ordinarily equipped with circular disc-type knives, and used for trimming or cutting into metal or non-metalic substances or for slitting them into narrow strips; for the purpose of this Schedule, this term includes bread or other food slicers equipped with rotary knives or cutting discs.

2. Guilloting and Shears — (1) Where practicable, a barrier metal guard of adequate strength shall be provided at the front of the knife, fastened to the machine frame and shall be so fixed as would prevent any part of the operator's body to reach the desending blade from above below or through the barirer guard or from the sides;

Provided that in case of machines used in the paper printing and allied industries, where a fixed barrier metal guard is not suitable on account of the height and volume of the material being fed, there shall be provided suitable starting devices which require simultaneous action of both the hands of the operator or an automaitc device which will remove both the hands of the operator from the danger zone at every descent of the blade.

(2) At the back end of such machines, an inclined guard shall be provided over which the slit pieces would slide and be collected at a safe distance in a manner as would prevent a person at the back from reaching the descending blade.

(3) ***Power*** — drive guillotine cutters, except continius feed trimmers, shall be equipped with —

(a) starting devices which require the simultaneous action of both bands it

start the cutting motion and of at least one hand on a control during the complete stroke of the knife; or

(b) an automatic guard which will remove the hands of the operator from the danger zone at every descent of the blade, used in conjunction with one-hand starting devices which require two distinct movements of the device to start the cutting motion, and so designed as to return positively to the non-starting position after each complete cycle of the knife.

(4) Where two or more workers are employed at the same time on the same power-driven guillotine cutter equipped with two-hand control, the device whall be so arranged that each worker shall be required to use both hands simultaneously on the safety trip to start the cutting motion, and at least one hand on a control to complete the cut,

(5) Power-driven guillotine cutters, other than continous trimmer, shall provided, in addition to the brake or other stopping mechanism, with an emergency device which will prevent the machine from operating in the event of failure of the brake when the starting mechanism is in the non-starting position.

3. ***Slitting Machines*** — (1) Circular disc-type knives on machines for cutting metal and leather, paper, rubber, textiles or other non-metalic substances shall, if within reach of operators standing on the floor or working level, be provided with guards enclosing the knife edges at all times as near as practicable to the surface of the material, and which may either—

(a) automatically adjust themsleves to the thickness of the material; or

(b) be fixed or manually adjusted so that the space between the bottom of the guard and the material will no exceed 6 mm (1/4 in.) at any time.

(2) Portion of blades underneath the tables or benches of slitting machines shall be covered by guards.

4. ***Index cutters and vertical paper slotters*** — Index cutters, and other machines for cutting strips from the ends of books, and for similar operations, shall be provided with fixed guards, so arranged that the fingures of the operators cannot come between the blades and the tables.

5. ***Corner cutters*** — Corner cutters, used in the manufacture of paper boxes, shall be equipped with —

(a) suitable guard, fastened to the machines in front of the knives and

provided with slots or perforations to afford visibility of the operations; or

(b) other guards equally efficient for the protection of the fingers of the workers,

6. ***Band knives*** — Band wheels on band knives, and all portions of the blades except the working side between the sliding guide and the table on vertical machines, or between the wheel guards on horizontal machines, shall be completely enclosed with hinged guards of sheet metal not less than 1 mm (0.04 in.) in thickness or of other material of equal strength']

Rules prescribed under sub-section (2) of section 23

54. ***Employment of young persons on dangerous machines*** **—** The following machines shall be deemed to be of such dangerous character that young persons shall not work at them unless the provisions of Sec. 23 (1) are complied with—

Power presses other than hydraulic presses;
Milling machines used in the metal trades;
Guillotine machines;
Circular saws;
Platen printing machines.

Rules prescribed under section 28

55. ***Exemption of certain hoists and lifts*** **—** (1) A register shall be opened with the following columns to record particulars of examinations of hoists and lifts —

(i) Date of examination;
(ii) Number of hoists and lifts, if more than one;
(m) Details of tests made;
(iv) Signature of examiner;
(v) Designation and qualifications of the examiner.

(2) In pursuance of the provisions of sub-section (4) of Section 28, in respect of any class or description of hoists or lift specified in the first column of the following Schedule, the requirements of Section 28 specified in the Second column of the said Schedule and set opposite to that class or description of hoist or lift shall not apply.

SCHEDULE

Class or description of hoist or lift	Requirements which shall not apply
Hoists or lifts mainly used for raising materials for charging blast furnances or lime kilns.	Sub-section (1)(b) in so far as it requires a gate at the bottom landing; sub-section (1)(d); sub-section (l)(e).
Hoists not connected with mechanical power and which are not used for carrying persons.	Sub-section (l)(b) in so far as it requires the hoistway or liftway enclosure to be so constructed as to prevent any person or thing from being trapped between any part of the hoist or lift and any fixed structure or moving part; sub-section (l)(e).

55-A. (1) No lifting machine and no chain, rope or lifting tackle except a fibre rope or fibre rope sling, shall be taken into use in any factory for the first time in that factory unless it has been tested and all parts have been thoroughly examined by a competent person and a certificate of such a test and examination specifying the safe working load or loads and signed by the person making the test and the examination, has been obtained and is kept available for inspection.

(2) *(a)* Every jib-crane so constructed that the safe working load may be varied by the raising or lowering of the jib, shall have attached thereto either an automatic indicator or safe working loads or an automatic jib angle indicator and a table indicating the safe working loads at corresponding inclinations of the jib or corresponding radii of the load.

(b) A table showing the safe working loads for every kind and size of chain, rope or lifting tackle in use, and in the case of a multiple sling, the safe working loads at different angles of the legs shall be posted in the store in which the chains, ropes or lifting tackles are kept and in prominent positions on the premises, and no chain, rope or lifting tackle not shown in the table shall be used. The foregoing provisions of this paragraph shall not apply in respect of any lifting tackle if the safe, working load at different angles of the legs is plainly marked upon it.

(3) Particulars of register to be maintained under clause *(a)* (iii) of subsection (1) of Section 29 of the Act shall be —

(i) Name of occupier of factory;

(ii) Address of the factory;

(iii) Distinguishing number or mark, if any, and description sufficient to identify the lifting machine, chain, rope or the lifting tackle;

(iv) Date when the lifting machine, chain, rope or lifting tackle was first taken into use in the factory;

(v) Date and number of the certificate relating to any test and examination made under sub-rule (1) and (7) together with the name and address of the person who issued the certificate;

(vi) Date of each periodical thorough examination made under clause *(a) (iii)* of sub-section (1) of Section 29 of the Act and sub-rule (6) and by whom it was carried out;

(vii) Date of annealing or other heat treatement of the chain and other lifting tackle made under sub-rule (5) and by whom it was carried out;

(viii) Particular of any defects affecting the safe working load found at any such thorough examination or after annealing and of the steps taken to remedy such defects.

The register shall be kept readily available for inspection.

(4) All rails on which a travelling crane moves and every track on which the carriage of a transporter or runway moves shall be of proper size and adequate strength and have an even running surface and every such rail or track shall be properly laid adequately supported and properly maintained.

(5) All chains and lifting tackle, except a rope sling shall, unless they have been subjected to such other heat treatment as may be approved by Chief Inspector of Factories be effectively annealed under the supervision of a competent person at the following intervals —

(i) all chains, slings, rings, hooks, shackles and swivels used in connection with molten metal or molten slag or when they are made of half inch bar or smaller, once at least in every six months;

(ii) all other chains, rings, hooks, shackles and swivels in general use once at least in every twelve months :

Provided that chains and lifting tackle not in frenquent use shall, subject to the Chief Inspector's approval, be annealed only when necessary. Particulars of such annealing shall be entered in a register prescribed under sub-rule (3).

(6) Nothing in the foregoing sub-rule (5) shall apply to the following classes of chains and lifting tackle —

(i) chains made of malleable cast iron;

(ii) plate link chains;

(iii) chains, rings, hooks, shackles and swivels made of steel or of any non-ferrous metal;

(iv) pitched chains, working on sprockets or pocketed wheels;

(*v)* rings, hooks, shackles and swivels permanently attached to pitched chains, pulley blocks or weighing machines;

(vi) hooks and swivels having screw threaded parts or ball bearing or other case hardened parts;

(vii) sockets shackles secured to wire ropes by white-metal capping;

(viii) bordauz connections.

Such chains and lifting tackle be thoroughly examined by a competent person once at least in every twelve months and particulars entered in the register kept in accordance with sub-rule (3).

(7) All lifting machines, chains, ropes and lifting tackle, except a fibre rope or fibre rope sling, which have been lengthened, altered or repaired by welding or otherwise, shall before being again taken into use be adequately retested and re-examined by a competent person and a certificate of such test and examination be obtained, and particulars entered in the register kept in accordance with sub-rule (3).

(8) No person under 18 years of age and no person who is not sufficiently competent and reliable shall be employed as driver of a lifting machine whether driven by mechanical power or otherwise, or to give signals to a driver.

Inserted vide notification No. GLR (RC)72/82/124 dt. Jan,1983

Rules framed under sub-section 2 of section 31

56. *Pressure vessels or plant*— (1) *Interpretation.*— In this rule —

(a) "design pressure" means the maximum pressure that a pressure vessels or plant is designed to withstand safety when operating normally;

(b) "maximum permissible working pressure" means the maximum pressure at which a pressure vessel or plant is

permitted to be operated or used under this rule and is determined by the technical requirements of the process;

(c) "plant" means system of piping that is connected to a pressure vessel and is used to contain a gas vapour or liquid under pressure greater than the atmospheric pressure and includes the pressure vessel;

(d) "pressure vessel" means an unfired vessel that may be used for containing storing distributing; transferring distilling, processing or otherwise handling any gas vapour or liquid under pressure greater than the atmospheric pressure and includes any pipeline fitting or other equipment attached thereto or used in connection therewith; and

(e) "competent person" means a person who is in the opinion of the Chief Inspector capable by virtue of his qualification training and experience of conducting a thorough examination and pressure tests as required on a pressure vessel or plant, and of making a full report on its condition.

(2) ***Exceptions*** — Nothing in this rule shall apply to —

(a) vessels made of ferrous materials having an internal operating pressure not exceeding 1 Kilogram per square centimetre;

(b) steam boilers, steam and feed pipes and their fitting coming under the purview of Indian Boilers Act, 1923;

(c) metal bottles or cylinders used for storage or transport of compressed gases or liquified or dissolved gases under pressure covered by the Gas Cylinder Rules, 1940 framed under the Indian Explosives Act, 1884;

(d) vessel in which internal pressure is due solely to the static head of liquid;

(e) vessels with a nominal water capacity not exceeding 500 litres connected in a water pumping system containing air that is compressed to serve as a cushion;

(f) vessels for nuclear energy application;

(g) refrigeration plant having a capacity of 3 tons or less of refrigeration in 24 hours; and

(h) working cylinders of steam engines or prime movers, feed pumps and steam traps, turbine casing compressor cylinders, steam separators or dryers, steam strainer, steam desuper heaters, oil separators, air receivers for fire sprinkler

installations; air receivers of monotype machines, provided the maximum working pressure of the air receiver does not exceed 1.33 Kilograms per square centimetre and the capacity 85 litres, air receivers of electrical circuit breakers; air receivers of electrical relays; air vessels on pumps pipe, coils, accessories of instruments and appliances such as cylinders and piston assesmblies used for operating relays and interlicking type of guards, vessels with liquids subjected to static head only and hydraulically operating cylinders other than any cylinder communicating with an air loaded accumulator.

(3) ***Design and construction*** — Every pressure vessel or plant used in a factory —

(a) shall be properly designed on sound engineering practice;

(b) shall be of good construction sound materials adequate strength and free from any patent defects; and

(c) shall be properly maintained in a safe condition :

.Provided that the pressure vessel or plant in respect of the design and construction of which there is an Indian standard or a standard of the country of manufacture or any other law or regulation in force shall be designed and constructed in accordance with the said standard, law or regulation, as the case may be, and a certificate thereof shall be obtained from the manufacturer or from the competent person which shall be kept and produced on demand by an Inspector.

(4) ***Safety devices*** — Every pressure vessel shall be fitted with —

(a) a suitable safety valve or other effective pressure relieving devices of adequate capacity to ensure that the maximum permissible working pressure of the pressure vessel shall not be exceeded. It shall be set to operate at a pressure not exceeding the maximum permissible working pressure and when more than one protective device is provided only one of the devices need be set to operate at the maximum permissible working pressure and the additional device shall be set to discharge at a pressure not more than 5 percent in excess of the maximum permissible working pressure;

(b) a suitable pressure gauge with a dial range not less than 1.3 times the maximum permissible working pressure easily visible and designed to show at

all times the correct internal pressure and marked with a prominent red mark at the maximum permissible working pressure of the vessel;

(c) a suitable nipple and globe valve connected for the exclusive purpose of attaching a test pressure gauge for checking the accuracy of the pressure gauge referred to in clause *(b)* of this sub-rules;

(d) a suitable stop valve or valves by which the pressure vessel may be isolated from other pressure vessels of plant or source of supply of pressure. Such a stop value or valves shall be located as close to the pressure vessel as possible and shall be easily accessible; and

(e) a suitable drain cock or valve at the lowest part of the pressure vessel for the discharge of the liquid or other substances that may collect in the pressure vessel:

Provided that it shall be sufficient for the purpose of this sub-rule if the safety valve or pressure relieving device the pressure gauge and stop value are mounted on a pipeline immediately adjacent to the pressure vessel and where there is a range of two or more similar pressure vessels served by the same pressure lead only one set of such mountings need be fitted on the pressure lead immediately adjacent to the range of pressure vessels provided they cannot be isolated.

(5) ***Pressure reducing devices*** — *(a)* Every pressure vessel which is designed for a working pressure less than the pressure at the source of supply, or less than the pressure which can be obtained in the pipe connected, the pressure vessel with any other source of supply, shall be fitted with a suitable pressure reducing valve or other suitable automatic device to prevent the maximum permissible working pressure of the pressure vessel being exceeded;

(b) to further protect the pressure vessel in the event of failure of the reducing valve or device at least one safety valve having a capacity sufficient to release all the steam vapour or gas without undue pressure rise as determined by the pressure at the source or supply and the size of the pipe connecting the source of supply shall be fitted on the low pressure side of the reducing valve.

(6) ***Pressure vessel or plant being taken into use*** — *(a)* No new pressure vessel or plant shall be taken into use in a factory after coming into force of this rule unless it has been hydrostratically tested by a competent person at a pressure at least 1.3 times the design pressure and no pressure vessel or plant which has been

previously used or has remained isolated or idle for a period exceeding 2 months or which has undergone alterations or repairs shall be taken into use in a factory unless it has been thoroughly examined by a competent person externally and internally, if practicable and has been hydrostatically tested by the competent person at a pressure which shall be 1.5 times the maximum permissible working pressure.

Provided, however, that the pressure vessel or plant which is so designed and constructed that it cannot be safely filled with water or liquid or used in service when even some traces of water cannot be tolerated shall be pneumatically tested at a pressure not less than the design pressure or the maximum permissible working pressure as the case may be :

Provided further that the pressure vessel or plant which is lined with glass shall be tested hydrostatically or pneumatically as required at a pressure not less than the design pressure or maximum permissible working pressure, as the case may be.

Design pressure shall be not less than the maximum permissible working pressure and shall take into account the possible fluctuation of pressure during actual operation.

(b) No pressure vessel or plant shall be used in a factory unless there has been obtained from the maker of the pressure vessel plant or from the competent person a certificate specifying the design pressure or maximum permissible working thereof and stating the nature of tests to which the pressure vessel or plant and its finding (if any) have been subjected, and every pressure vessel or plant so used on a factory shall be marked so as to enable it to be identified as to be the pressure vessel or plant to which the certificate relates and the certificate shall be kept available for persual by the Inspector;

(c) No pressure vessel or plant shall be permitted to be operated or used at a pressure higher than its design pressure or the minimum permissible working pressure as shown in the certificate.

(7) ***In service test and examination —***

(a) every pressure vessel or plant in service shall be thoroughly examined by a competent person;

(i) externally once in every period of six months;

(ii) internally once in every period of twelve months :

Provided that if by reason of the construction of pressure vessel or plant a through internal examination is not possible this examination may be replaced by hydrostatic test which shall be carried out once in every period of two years:

Provided further that for a pressure vessel or plant in continuous process which cannot be frequently opened the period of internal examination may be extended to four years; and

(iii) hydrostatically tested once in every period of four years :

Provided that in respect of a pressure vessel or plant with thin walls, such as sizing cylinder made of copper or any other non-ferrous metal periodic hydrostatic test may be dispensed with subject to the condition that the requirements laid down in sub-rule (8) are fulfilled :

Provided further that when it is impracticable to carry out thorough external examination of any pressure vessel or plant every six months as required in sub-clause (i) of this Clause, or if owning to its construction and use a pressure vessel or plant cannot be hydrostatically tested as required in sub-clauses (ii) and (iii) of this clause, a thorough external examination of the pressure vessel or plant shall be carried out at least once in every period of two years and at least once in every period of four years a thorough systematic non-destructive test like ultrasonic test for metal thickness or other defects of all parts the failure of which might lead to eventual rapture of the pressure vessel or plant shall be carried out.

(b) The pressure for the hydrostatic test to be carried out for the purpose of this sub-rule shall be 1.25 times the design pressure or 1.5 times the maximum permissible working pressure, whichever is less.

(8) ***Thin walled pressure vessel or plant—****(a)* In respect of any pressure vessel or plant of thin walls such as sizing cylinder made of copper or any other non-ferrous metal the maximum permissible working pressure shall be reduced at the rate of 5 percent of the original maximum permissible working pressure for every year of its use after the first five years and no such cylinder shall be allowed to continue to be used for more than twenty years after it was first taken into use.

If any information as to the date of construction thickness of walls or maximum permissible working pressure is not available the age of such pressure vessel or plant shall be determined by the competent person in consultation with the Chief Inspector from the other particulars available with the manager

(c) Every new and second hand pressure vessel or plant of walls to which

repairs likely to effect its strength or safety have carried out shall be tested before use to at least 1.5 times its maximum permissible working pressure.

(9) ***Report by competent person****—(a)* If during any examination any doubt arises as to the ability of the pressure vessel or plant to work safely until the next prescribed examination the competent person shall enter in the prescribed register his observations, findings and conclusions with other relevant remarks with reasons and may authorise the pressure vessel or plant to be used and kept in operation subject to lowering of maximum permissible working pressure or to more frequent or special examination or test, or subject to both of these conditions.

(b) A report of every examination or test carried out shall be completed in Form 8 and shall be signed by the person making the examination or test and shall be kept available for persual by the Inspector at all hours when the factory or any part thereof is working.

(c) Where the report of any examination under this rule specified any conditions for securing the safe working of any pressure vessel or plant the pressure vessel or plant shall not be used unless the specified condition is fulfilled;

(d) The competent person making report of any examination under this rule shall within seven days of the completion of the examination send to the Inspector a copy of the report in every case where the maximum permissible working pressure is reduced or the examination shows that the pressure vessel or plant or any part thereof cannot continue to be used with safety unless certain repairs are carried out or unless any other safety measure is taken.

(10) ***Application of other laws*** *— (a)* The requirements of this rule shall be in addition to and without any prejudice to and not in derogation of the requirements of any other law in force.

(b) Certificates or reports of any examination or test of any pressure vessel or plant to which sub-rule (7) to (9) do not apply conducted or required to be conducted under any law in force and other relevant record relating to such pressure vessel or plant shall be properly maintained as required under the said law and shall be produced on demand by the Inspector.

Rules prescribed under sub-section (2) of section 34.

Enforced vide Notification No. GLR (RC) 72/89/54 dtd. 15-3-93

57. ***Excessive weights*** — (1) No woman or young person shall, unaided by another person, lift, carry or move by hand or on head, any material, article, tool or appliance exceeding the maximum limit in weight set out in the following Schedule :

SCHEDULE

["persons | Maximum Weight of material article tool or appliance

(1)	(2)
(a) Adult male	55 Kilograms.
(b) Adult female	30 Kilograms.
(c) Adolescent male	30 Kilograms.
(d) Adolescent female	20 Kilograms.
(e) Male child	16 Kilograms. ...
(f) Female child	14 Kilograms]"

(2) No woman or young person shall engage, in conjunction with others in lifting, carrying or moving by hand or on head, any material, article, tool or appliance if the weight thereof exceeds the lowest weight fixed by the Schedule to sub-rule (1) for any of the persons engaged, multiplied by the number of the persons engaged,

Rules prescribed under sub-section 35

58. *Protection of eyes* — Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the immediate vicinity of the following processes —

(a) The processes specified in Schedule I annexed hereto, being processes which involve risk of injury to the eyes from particles or fragments thrown off in the course of the process;

(b) The processes specified in Schedule II annexed hereto, being processes which involve risk of injury to the eyes by reason of exposure to excessive light or infrared or ullra-violet radiations.

SCHEDULE I

Dry grinding of metals or articles of metal applied by hand to a revolving wheel or disc driven by mechanical power. Turning (external or internal) of non-ferrous metals or of cast iron, or articles of such metals or such iron, where the work is done dry, other than precision turning where the use of goggles or screen would seriously interfere with the work, or turning by means of hand tools.

Welding or cutting of metals by means of an electric, oxy-acetylene or similar

process.

The following processes when carried on by means of hand tools or other portable tools.

Fettling of metal involving the removal of metal. Cutting out or cutting off cold rivets or bolts from boilers or other plant or from ships. Chipping or scaling of boilers or ships plates. Breaking or dressing of stone, concrete or slag.

SCHEDULE II

1. Welding or cutting of metals by means of an electrical oxy-acetylene of similar process.

2. All work on furnaces where there is risk of exposure to excessive light or infrared radiations.

3. Process such as rolling, casting or forging of metals, where there is risk of exposure to excessive light or infra-red radiations.

4. Any other process, where there is risk of injury to eyes from exposure to excessive light or ultra-violet or infra-red radiations.

Rules prescribed under sub-section 6 of sec. 36

59. *Minimum dimensions of manholes*— Every chamber, tank, vat, pipe, flue or other confined space, which persons may have to enter and which may contain dangerous fumes to such an extent as to involve risk of the persons being overcome thereby, shall, unless there is other effective means of egress, be provided with a manhole which may be rectangular, oval or circular in shape, and which shall —

(a) in case of a rectangular or oval shape, be not less than 16 inches long and 12 inches wide;

(b) in the case of a circular shape, be not less than 16 inches in diameter.

Exemption under sub-section (5) of section 37

60. *Exemptions* — The requirements of sub-section (4) of Section 37 shall not apply to the following processes carried on in any factory —

(a) The operation of repairing a water sealed gas-holder by the electric welding process subject to the following conditions —

(i) the gas-holder shall contain only the following gases, separately or mixed

at a pressure, greater than atmospheric pressure, namely, town gas, or gases, cock-oven gas, producer gas, blast furnance gas or gases other than air, used in their manufacture :

Provided that this exemption shall not apply to any gas-holder containing acetylene or mixture of gases to which acetylene has been added intentionally.

(ii) welding shall only be done by the electric welding process and shall be carried out by the experienced operatives under the constant supervision of a competent person.

(b) The operations of cutting of welding steel or wrought iron gas mains and services by the application of heat, subject to the following conditions—

(i) the main or service shall be situated in the open air, and it shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely, gas cock-oven gas, producer gas, blast furnace gas, or gases other than air used in their manufacture;

(ii) the main or service shall not contain acetylene or any gas or mixture of gases to which acetylene has been added intentionally;

(iii) the operation shall be carried out by an experienced person or persons and at least 2 persons (including those carrying out the operations) experienced in work on gas mains and over 18 years of age shall be present during the operations;

(iv) the site of operation shall be free from any inflammable or explosive gas or vapour;

(v) where acetylene gas is used as a source of heat in connection with an operation, it shall be compressed and contained in a porous substance in a cylinder; and

(vi) prior to the application of any flame to the gas main or service, this shall be pierced or drilled and the escaping gas ignited.

(c) The operation of repairing an on oil tank, on any ship by the electric welding process, subject to the following condition —

(i) the only oil contained in the tank shall have a flash point of not less than 150° F (closed test) and a certificate to this effect shall be obtained from a competent analyst;

(ii) the analyst's certificate shall be kept available for inspection by an

Inspector, or by any person employed or working on the ship;

(iii) the welding operation shall be carried out only on the exterior surface of the tank at place — *(a)* which is free from oil or oil leakage in inflammable quantities; and *(b)* which is not less than one foot below the nearest part of the surface or the oil within the tank; and

(iv) welding shall be done only by the electric welding and shall be carried out by experienced operatives under the constant supervision of a competent person.

Rules prescribed under sub-section (1) of section 38 .

Inserted vide notification No. GLR 327/ 88/474 Dtd. 30.12.92

"61. *Fire protection*— (1) *Processes, equipment, plant, etc. involving serious explosion and serious fire hazards* — *(a)* All processes, storages, equipments, plants, *etc.* involving serious explosion and flash fire hazard shall be located in segregated buildings where the equipment shall be so arranged that only a minimum number of employees are exposed to such hazards at any one time.

(b) All industrial processes involving serious fire hazard should be located in buildings or work places separated from one another by walls of fire resistant construction.

(c) Equipment and plant involving serious fire or flash fire hazard shall, wherever possible, be so constructed and installed that in case of fire, they can be easily isolated.

(d) Ventilation ducts, peoumatic conveyors and similar equipments involving a serious fire risk should be provided with flame-arresting or automatic fire extinguishing appliances, or fire resisting dampers electrically interlocked with heat sensitive/ smoke detectors and the air-conditioning plant system.

(e) In all workplaces having serious fire or flash fire hazards passage between machines, installations or piles of material should be at least 90 cm wide. For storage piles, the clearance between the ceilling and the top of the pile should not be less than 2 m.

(2) ***Access for fire fighting*** —

(a) Buildings and plants shall be so laid out and roads, passageways *etc.* so maintained as to permit unobstructed access for fire fighting.

(b) Doors and window openings shall be located in suitable positions on all external walls of the building to provide easy access to the entire area within the

building for fire fighting.

(3) ***Protection against lightning-Protection from lightning shall be provided for —***

(a) buildings in which explosive or highly flammable substances are manufactured, used, handled or stored;

(b) storage tanks containing oils, paints, or other flammable liquids;

(c) grain elevators;

(d) buildings, tall chimneys or stacks where flammable gasses fumes, dust or lint are likely to be present; and

(e) sub-station buildings and out-door transformers and switch yards.

(4) ***Precaution against ignition-wherever there is danger of fire or explosion from accumulation of flammable or explosive substances in air—***

(a) all electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;

(b) effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;

(c) workers shall wear shoes without iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction;

(d) smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited;

(e) transmission belts with iron fasteners shall not be used; and

(f) all other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as openflammes, frictional sparks, overheated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat.

(5) ***Sponteneous ignition*** — Where materials are likely to induce spontaneous ignition, care shall be taken to avoid formation of air pocket and to ensure adequate ventilation. The material susceptible to spontaneous ignition should be stored in dry condition and should be in heaps of such capacity and separated by such passage which will prevent fire. The material susceptible to ignition and stored in the open shall be at a distance not less than 10 metres away from process or storage buildings.

(6) ***Cylinders containing compressed gas*** — Cylinders containing compressed gas may only be stored in open if they are protected against excessive variation of temperature, direct rays of sun or continuous dampness. Such cylinders shall never be stored near highly flammable substances, furnaces or hot processes. The room where such cylinders are stored shall have adequate ventilation.

(7) ***Storage of flammable liquids*** — *(a)* The quantity of flammable liquids in any work room shall be the minimum required for the process or processes carried on in such room flammable liquids shall be stored in suitable containers with close fitting covers :

Provided that not more than 20 liters of flammable liquids having a flash point of 21°C or less shall be kept or stored in any work room.

(b) Flammable liquids shall be stored in closed containers and in limited quantities in well ventilated rooms of fire resisting construction which are isolated from the remainder of the building by fire walls and self closing fire doors.

(c) Large quantities of such liquids shall be stored in isolated adequately ventilated building of fire resisting construction or in storage tanks, preferably underground and at a distance from any building as required in the petroleum Rules, 1976.

(d) Effective steps shall be taken to prevent leakage of such liquids into basements, sumps or drains and to confine any escaping liquid within safe.

(8) ***Accumulation of flammable dust, gas, fume or vapour in air Flammable waste material on the floors—*** *(a)* Effective steps shall be taken for removal or prevention of the accumulation in the air of flammable dust, gas, fume or vapour to an extent which is likely to be dangerous.

(b) No waste material of a flammable nature shall be permitted to accumulate on the floors and shall be removed at least once in a day or shift, and more often, when possible. Such material shall be placed in suitable metal containers with covers wherever possible.

(9) ***Fire exits*** — *(a)* In these rules —

(i) "horizontal exit" means an arrangement which allows alternative egress from a floor area to another floor at or near the same level in an adjoining building or adjoining part of the same building with adequate separation; and

(ii) "travel distance" means the distance an occupant has to travel to reach an exit.

(b) An exit may be doorway, corridor, passageway to an external stairway or to a verandah or to any internal stairway segregated from the fest of building by fire resisting walls which shall provide continuous and protected means of egress to the exterior of a building or to an exterior open space. An exit may also include a horizontal exit leading to an adjoining building at the same level;

(c) Lifts, escalators and revolving doors shall not be considered as exits for the purpose of this sub-rule;

(d) In every room of a factory exits shall be sufficient to permit safe escape of the occupants in case of fire or other emergency shall be provided which shall be free of any obstruction;

(e) The exits shall be clearly visible and suitably illuminated with suitable arrangement, whatever artificial lighting is to be adopted for this purpose to maintain the required illumination in case of failure of the normal source of electric supply;

(f) The exits shall be marked in a language under stood by the majority of the workers;

(g) Iron rung ladders or spiral staircases shall not be used as exit staircases;

(h) Fire resisting doors or roller shutters shall be provided at appropriate place along the excape routes to prevent spread of fire and smoke, particularly at the entrance of lifts of stairs where funnel or flew effect may be created inducing an upward spread of fire;

(i) All exits shall provide continous means of egress to the exterior of a building or to an exterior open space leading to a street;

(j) Exits shall be so located that the travel distance to reach at least one of them on the floor shall not exceed 30 meters.

(k) In case of those factories where high hazard materials are stored or used, the travel distance to the exit shall not exceed 22.5 meters and there shall be at least two ways of escape from every room, however small except toilet rooms, so located that the points on access thereto are out of or suitably shielded from areas of high hazard.

(l) Wherever more than one exit is required for any room space on floor, exits shall be placed as remote from each other as possible and shall be arranged to provide direct access in separate directions from any point in the area served;

(m) The unit of exit width used to measure capacity of any exit shall be 50 cm, A clear width of 25 cm. shall be counted as an additional half unit. Clear width of less than 25 cm. shall not be counted for exit width;

(n) Occupants per unit width shall be 50 for stairs and 75 for doors;

(o) For determining the exits required, the occupant load shall be reckoned on the basis of actual number of occupant within any floor area or 10 squar metre per person, whichever is more.

(p) There shall not be less than two exits serving every floor area above and below the ground floor, and at least one of them shall be an internal enclosed stairway;

(q) For every building or structure used for storage only, and every Section thereof considered separately shall have access to at least one exit so arranged and located as to provide a suitable means of escape for any person employed therein, and any, such room wherein more than 10 persons may be normally present at least two separate means of exit shall be available, as remote from each others as praticable;

(r) Every storage area shall have access to at least one means of exit which can be readily opened;

(s) Every exist doorway shall open into an enclosed stairway, a horizontal exit on a corridor or passageway providing continuous and protected means of egress;

(t) No exit doorway shall be less than 100 cm. in width. Doorways shall be not less than 200cm. in height.

(u) Exit doorways shall open outwards, that is, away from the room but shall not obstruct the travel along any exit. No door when opened, shall reduce the required width of stairway or landing to less than 90 cm. Over head or sliding doors shall not be installed for this purpose;

(*v)* An exit door shall not open immediately upon a flight of stairs. A landing at least 1.5 m x 1.5 m in size shall be provided in the stairway at each doorway. The level of landing shall be the same as that of the floor which it serves;

(w) The exit doorways shall be openable from the side which they serve without the use of a key;

(x) Exit corridors and passageways shall be of a width not less than the aggregate required width of exit doorways leading from there in the direction of

travel to the exterior;

(y) Where stairways discharge through corridors and passageways, the height of the corridors and passageways shall not be less than 2.4 meters;

(aa) A staircase shall not be arranged round a lift shaft unless the latter is totally enclosed by a material having a fire-resistance rating not lower than that of the type of construction of the former;

(bb) Hollow combustible construction shall not be permitted.

(cc) The minimum width of an internal staircase shall be 100 cm;

(dd) The minimum width of treads without nosing shall be 25 cm. for an internal staircase. The treads shall be constructed and maintained in a manner to prevent slipping;

(ee) The maximum height of a riser shall be 19 cm. and the number of risers shall be limited to 12 per flight;

(ff) Hand rails shall be provided with a minimum height of 100 cm. and shall be firmly supported;

(gg) The use of spiral staircase shall be limited to low occupant load and to a building of height of 9 meters, unless these are connected to platforms such as balconies and terraces to allow escapees to pause. A spiral staircase shall be not less than 300 cm. in diameter and have adequate head room;

(hh) The width of a horizontal exit shall be same as for the exit doorways;

(ii) The horizontal exit shall be equipped with at least one fire door of self closing type;

(jj) The floor area on the opposite or refuge side of a horizontal exit shall be sufficient to accommodate occupants of the floor areas served, allowing not less than 0.3 souare meter per person. The refuge area shall be provided with exits adequate to meet the requirements of this sub-rule. At least one of the exit shall lead directly to the exterior or street;

(kk) Where there is difference in level between connected areas for horizontal exit, ramps not more than 1 in 8 slope shall be provided. For this purpose steps shall not be used;

(II) Doors in horizontal exits shall openable at all times;

(mm) Rams with a slope of not more than 1 in 10 may be substituted for the

requirements of staircase. For all slopes exceeding 1 in 10 and wherever the use is such as to involve danger of slipping, the ramp shall be surfaced with non-slipping material;

(nn) In any building not provided with automatic fire alarm a manual fire alarm system shall be provided if the total capacity of the building is over 500 persons, or if more than 25 persons are employed above or below the ground floor, except that no manual fire alarm shall be required in one-storey buildings where the entire area is undivided and all parts thereof are clearly visible to all occupants.

(10) ***First-aid fire fighting arrangements***— *(a)* In every factory there shall be provided and maintained adequate and suitable fire fighting equipment for fighting fires in the early stages, those being referred to as first-aid fire fighting equipment in this rule.

(b) The types of first-aid fire fighting equipment to be provided shall be deter mined by considering the different types of fire risks which are classified as follows—

(i) ***"Class A fire"***— Fire due to combustible materials such as wood, textiles, paper, rubbish and the like.

1. ***"Light hazard"***—Occupancies like offices, assembly halls, canteens, rest-rooms, ambulance rooms and the like;

2. ***"Ordinary hazard"*** — Occupancies like saw mills, carpentry shop, small timber yards, book binding shops engineering workshop and the like;

3. ***"Extra hazard"*** — Occupancies like large timber yeards godown storing fibrous materials, flour mills, cotton mills, jute mills, large wood working factories and the like.

(ii) ***"Class B fire"*** — Fire in flammable liquide like oil, petroleum products, solvents, grease, paint, *etc;*

(iii) ***"Class C fire"***— Fire arising out of gaseous substances;

(iv) ***"Class D fire"***— Fire from reactive chemicals, active metals and the like;

(v) ***"Class E fire"***— Fire involving electrical equipment and delicate machinery and the like.

(c) The number and types of first-aid fire fighting equipment to be provided

for "light hazard" occupancy shall be as given in Schedule I. For "ordinary hazard or extra hazard" occupancies equipment as given in paragraph 12 shall be provided in addition to that given in Schedule I;

(d) The first-aid fire fighting equipment shall conform to the relevant Indian standards;

(e) As far as possible the first-aid fire fighting equipment shall all be similar in shape and appearance and shall have the same method of operation;

(f) All first-aid fire fighting equipment shall be placed in a conspicuous position and shall be readily and easily accessible for immediate use. Generally, those equipment shall be placed as near as possible to the exits or stair landing or normal routes of escape;

(g) All water buckets and bucket pump type extinguishers shall be filled with clean water. All sand buckets shall be filled with clean, dry and fine sand;

(k) All other extinguishers shall be charged appropriately in accordance with the instructions of the manufacturer;

(i) Each first-aid fire fighting equipment shall be allotted a serial number by which it shall be referred to in the records. The following details shall be painted with white paint on the body of each equipment;

1. Serial number;
2. Date of last refilling; and
3. Date of last inspection.

(j) First-aid fire fighting equipment shall be placed on platforms or in cabinets in such a way that their bottom is 750 mm above the floor level. Fire buckets shall be placed on hooks at a head to a suitable stand or wall in such a way that their bottom is 750 mm above the floor level. Such equipment if placed outside the building, shall be under sheds or covers;

(k) All extinguishers shall be thoroughly cleaned and re-charged immediately after discharge, sufficient refill material shall be kept readily available for this purpose at all times;

(I) All first-aid fire fighting equipment shall be subjected to routine maintenance, inspection, and testing to be carried out by properly trained persons, periodicity of the routine maintenance, inspection and test shall conform to the relevant Indian Standards.

(11) ***Other fire fighting arrangements*** — *(a)* In every factory adequate provisions of water supply for the fire fighting shall be made and where the amount of water required in litres per minute, as calculated from the formula A-

B - C- D divided by 20 in 550 or more, power driven trailer pumps of adequate capacity to meet the requirement of water as calculated above shall be provided and maintained.

IN THE ABOVE FORMULA

A = the total area in square meters of all floors including galleries in all buildings of the factory;

B = the total area in square meters of all floors and galleries including open spaces in which combustible materials are handled or stored;

C = the total area in square meters of all floors over 15 meters above ground level; and

D = the total area in square meters of all floors of all buildings other than those of fire resisting construction :

Provided that in areas where the fire risk involved does not require use of water, such areas under B, C or D may, for the purpose of calculation, be halved:

Provided further that where the areas under B, C or D are protected by permanent automatic fire fighting installations approved by any fire association or fire insurance company, such areas may, for the purpose of calculation, be halved :

Provided also that where the factory is situated at not more than 3 kilometers from an established city or town fire service, the pumping capacity based on the amount of water arrived at by the formula above may be reduced by 25 percent but no account shall be taken of this reduction in calculating water supply required under clause *(a)*

(b) Each trailer pump shall be provided with equipment as per Schedule II appended to this rule. Such equipment shall conform to the relevant Indian Standards.

(c) Trailer pumps shall be housed in a separate shed or sheds which shall be sited close to a principal source of water supplies in the vicinity of the main risks of the factory;

(d) In factories where the area is such as cannot be reached by man-hauling or trailer pumps within reasonable time vehicles with towing attachment shall be provided at the scale of one for every four trailer pumps with a minimum of one such vehicle kept available at all times;

(e) Water supply shall be provided to give flow of water as required under clause *(a)* for at least 100 minutes, at least 50% of this water supply or 450,000 litres whichever is less, shall be in the form of static tanks of adequate capacities

(not less than 450,000 litres each) distributed round the factory with due regard to the potential fire risks in the factory, (where pipes supply is provided, the size of the main shall not be less than 15 centimeter in diameter and it shall be capable of supplying a minimum of 4500 liters per minute at a pressure of not less than 7 kilograms per square centimeters);

(f) All trailer pumps including the equipment provide with them and the vehicles for towing them shall be maintained in good condition and subjected to periodical inspection and testing was required.

(12) ***Personnel in charge of equipment and for fire fighting, fire drills, etc.***

(a) The first-aid and other fire fighting equipment to be provided as required in sub-rules (10) and (11) shall be in charge of a trained responsible person.

(b) Sufficient number of persons shall be trained in the proper handing of fire fighting equipment as referred to in clause *(a)* and their use against the types of fire for which they are intended to ensure that adequate number of persons are available for fire fighting both by means of first-aid fire fighting equipment and others. Such persons shall be provided with clothing and equipment including helmets, belts and boots, preferably gumboots. Wherever vehicles with towing attachment are to be provided as required in clause *(d)* of sub-rule (11) sufficient number of persons shall be trained in driving these vehicles to ensure that trained persons are available for driving them whenever the need arises.

(c) Fire fighting drills shall be held as often as necessary and at least once in every period of 2 months.

(13) Automatic sprinklers and fire hydrants shall be in addition and not in substitution of the requirements in sub-rules (10) and (11).

(14) If the Chief Inspector is satisfied in respect of any factory or any part of the factory that owing to the exceptional circumstances such as inadequacy of water supply or infrequency of the manufacturing process or for any other reason, to be recorded in writing, all or any of the requirements of the rules are impracticable or not necessary for the protection of workers, he may be ordered in writing (which he may at his discretion revoke) exempt such factory or part of the factory from all or any of the provisions of the rules subject to conditions as he may by such order prescribe.

SCHEDULE I

FIRST AID FIRE FIGHTING EQUIPMENTS

(1) The different type of fires and first aid fire fighting equipments suitable for use on them are as under —

Class of fire	***Suitable type of appliances***
A. Fires in ordinary combustibles (Wood, vegetable fibre, Paper and the like);	Chemical Extinguishers of Soda-acid Gas/ expelled Water and anti-freeze types, and Water buckets.
B. Fires in flammable liquids, Paints, grease, solvents and the like;	Chemical Extinguishers of foam Carbondioxide and dry powder types and sand buckets.
C. Fires in gaseous substances under pressure;	Chemical Extinguishers of Carbondioxide and dry powder types.
D. Fires in Reactive Chemicals, active metals and the like;	Special type of dry powder extinguishers and sand buckets.
E. Fires in electrical equipments	Chemical extinguishers of Carbondioxide and dry powder type and sand bucket.

(2) One 9 litres water bucket shall be provided for every l00sq. m. of floor area or part thereof and one 9 litres water type extinguishers shall be provided for each six buckets or part thereof with a minimum of one extinguisher and two buckets per compartment of the building. Buckets may be dispensed with, provided supply of extinguishers is double that indicated above.

(3) Acceptable replacements for water buckets and water type extinguishers in occupancies where class B fires are anticipated, are as under:—

Acceptable replacements	Buckets of water	Water type extinguishers
For one bucket	For three bucket	For each 9 litres (or 2 gallons) extinguishers
Dry Sand 1 bucket	3 bucket	
Carbondioxide extinguishers 3 Kg. or 7 Ibs	9 Kg. (or 20 Ibs) (In not less than 2 extinguishers)	9 Kg. (or 20 Ibs).
		5 Kg. (or 11 Ibs in one or more extinguishers).
Dry powder 2Kg for 5 Ibs)	5Kg. (or 11 Ibs)	
Foam extinguishers 9 litres (or 2 gallons)	9 litres (or 2 gallons)	9 litres (or 2 gallons.

(4) ***The following provision shall be complied with where class E fires are anticipated —***

(a) For rooms containing electrical transformers, switchgears, motors and or other electrical apparatus only not less than two Kg. Dry powder or Carbon Dioxide type extinguishers shall be provided within 15 m. of the apparatus.

(b) Where motors and/or the electrical equipment are installed in rooms other than these containing such equipment only 5 Kg. Dry powder or Carbon Dioxide Extinguisher shall be installed within 15 m. of such equipment in addition to the requirements mentioned at (3) and (4) above. For this purpose the same extinguisher may be deemed to afford protection to all apparatus within 15 m. thereof.

(c) Where electrical motors are installed on platforms, one 2 Kg. Dry powder or Carbon Dioxide type extinguisher shall be provided on or below each platform. In case of a long platform with a number of motors, one extinguisher shall be acceptable as adequate for every 3 motors on the common platform. The above requirements will be in addition to the requirements mentioned at Item (3) & (4) above.

(5) The first and fire fighting equipments shall be so distributed over the entire floor area that a person has to travel not more than 15m. to reach the nearest equipment.

(6) Selection of sites for the installation of first aid fire fighting equipments:

(a) While selecting sites for first aid fire fighting equipments, due consideration shall be given to the nature of the risk to be covered. The equipments shall be placed in conspicuous positions and shall be readily accessible for immediate use in all parts of the occupancy. It should always be borne in mind while selecting sites that first aid fire fighting equipments are intended only for use on incident fires and their value may negligible if the fire is not extinguished or brought under control in the early stages.

(b) Buckets and extinguishers shall be placed at convenient and easily accessible locations either on hanger or on stands in such a way that their bottom is 750 mm above the floor level.

(7) The operating instructions of the extinguishers shall not he defaced or

obliterated. In case the erating instructions are obliterated or have become illegible due to passage of time fresh transfers of the same shall be obtained from the manufactures of the equipments and affixed to the extinguishers.

SCHEDULE II
EQUIPMENT TO BE PROVIDED WITH TRAILER PUMP

For light trailer pump of a capacity of 680 litres/minute.

1. Armoured Suction Hose of 9 meters length, with wrenches.
1. Metal suction strainer.
1. Basket strainer.
1. Two-way suction collecting-head.
I. Suction adapter.
10. Unlined or rubber-lined 70mm delivery hose of 25 meters length complete with quick-release countings.
1. Dividing breaching-piece.
2. Branch-piece with 15 mm nozzles.
1. Diffuser nozzle.
1. Standpipe with blank cap.
1. Hydrant key.
4. Collapsible canvas buckets.
1. Fire hook (preventer) with cutting edge.
1. 25 mm manila rope of 30 meters length.
1. Extension ladder of 9 meter length (where necessary)
1. Heavy axe.
1. Spade.
1. Pickaxe.
1. Crowbar.
1. Saw
1. Hurricane lamp
1. Electric torch

1. Pair rubber gloves

For large trailer pump of capacity of 800 Litres 1 minute

1. Armoured suction hose of 9 meters length, with wrenches

1. Metal strainer

1. Basket Strainer

1. Three-way suction collecting-head

1. Suction adaptor

14. Unlined or rubber lined 70 mm delivery hose of 25 meters length complete with quick-release couplings

1. Dividing breaching-piece

1. Collecting breaching-piece

4. Branch pipes with one 25 mm. two 20 mm and one diffuser nozzles

2. Standpipe with blank caps

2. Hydrant keys

6. Collapsible canvas buckets

1. Celing hook (preventer) with cutting edge

1. 50 mm manila rope of 30 meters length

1. Extension ladder of 9 meters length (where necessary)

1. Heavy axe	1 Saw
1. Spade	1 Hurricane lamp
1. Pick axe	1 Electric torch
1. Crowbar	1 Pair rubber Gloves

Note — If it appears to the Chief Inspector of Factories that in any factory the provision of breathing apparatus is necessary he may be order in writing require the occupier to provide suitable breathing appartus in addition to the equipment for light trailer pump or large trailer pump as the case may be.

Enforced vide notification No. GLR 327/88/474 dtd. 30/12/92

"61A. ***Reaction vessels and kettles***— (1) This rule applies to reaction vessels and kettles, hereinafter referred to as reaction vessels, which normally work at a pressure not above the atmospheric pressure but in which there is likelihood of pressure being created above the atmospheric

pressure due to reaction getting out of control or any other circumstances.

(2) In the event of the vessel being heated by electrical means, a suitable thermostatic control device shall be provided to prevent the temperature exceeding the safe limit.

(3) Where steam is used for heating purposes in a reaction vessel, it shall be supplied through a suitable pressure reducing valve or any other suitable automatic device to prevent the maximum permissible steam pressure being exceeded, unless the pressure of the steam in the supply line itself cannot exceed the said maximum permissible pressure.

(4) A suitable safety valve or rupture disc of adequate size and capacity shall be provided to effectively prevent the pressure being built up in the reaction vessel beyond the safe limit. Effective arrangements shall be made to ensure that the released gases, fumes, vapours, liquids or dusts, as the case may be led away and disposed of through suitable pipes without causing any hazard. Where flammable gases or vapours are likely to be vented out from the vesssel, the discharge shall be provided with a flame arrestor.

(5) Every reaction vessels shall be provided with a pressure gauge having the appropriate range.

(6) In addition to the devices as mentioned in the foregoing provisions, means shall be provided for automatically stopping the feed into the vessel as soon as process conditions deviate from the normal limits to an extent which can be considered as dangerous.

(7) Wherever necessary, an effective system for cooling flooding or blanketing shall be provided, for the purpose of controlling the reaction and process conditions within the safe limits of temperature and pressure.

(8) An automatic auditory and visual warning device shall be provided for clear warning whenever process conditions exceed the present limits. This device, wherever possible, shall be integrated with automatic process correction systems.

(9) A notice pointing out the possible circumstances in which pressures above atmospheric pressure may be built up in the reaction vessel, the dangers involved and the precautions to be taken by the operators shall be displayed at a conspicuous place near the vessel."

Rules prescribed under section 41 and 112

61B. ***Examination of eye sight of certain workers :*** (1) No person shall be employed to operate a crane, locomotive or fork-lift truck, or to give signals to a crane or locomotive operator unless his eye sight and colour vision have been examined and declared fit by a qualified opthal-mologist to work whether with or without the use or corrective glasses.

(2) The eye sight and colour vision of the person employed as referred to in clause (1) shall be examined at least once in every period of 12 months up to the age of 45 years and once in every 6 months boyond that age.

(3) Any fee payable for an examination of a person under this sub-rule shall be paid by the occupier and shall not be recoverable from that person.

(4) The record of examination or re-examination carried out as required under sub-rule (1) shall be maintained in Form 30 as given in Annexure 11.

61C. ***Railways in factories*** — (1) This rule shall apply to railways in the precincts of a factory which are not subject to Indian Railways Act, 1890.

(2) *Gateways*—A gateway through which a railway track passes shall not be used for the general passage of workers into or out of a factory.

(3) ***Barriers and Turngates*** — *(a)* Where building or walls contain doors or gates which open to a railway tract a barrier about 1 metre high shall be fixed parallel to and about 67 cm. away from the building or wall outside the opening and extending several feet beyond it at either end, so that any person passing out may become aware of an approaching train when his pace is checked at the barrier.

If the traffic on the nearest track is all in one direction the barrier shall be in the form of an "L" with the end of the short leg abutting on to the wall and the other end opening towards the approaching train.

(b) If the distance between wall and track cannot be made to accommodate such a barrier, the barrier or a turngate shall be placed at the inside of the opening;

(c) Where a footway passes close to a building or other obstruction as it approaches a railway track, a barrier or a turngate shall be fixed in such a manner that a person approaching the track is compelled to move away from the building or obstruction and thus obtain timely sight of an approaching locomotive or wagon.

(4) ***Crowds*** — (a) Workers Pay-windows, first-aid stations and other points where a crowd may collect shall not be placed near a railway track;

(b) At any time of the day when workers are starting or ending work, all railway traffic shall cease for not less than five minutes.

(5) ***Locomotives*** — *(a)* No locomotive shall be used in shunting operations unless it is in good working order;

(b) Every locomotive and tender shall be provided with efficient brakes, all of which shall be maintained in good working order. Brake shoes shall be examined at suitable fixed intervals and those that are worn out replaced at once;

(c) Water guage glasses of every locomotive, whatever its boiler pressure, shall be protected with substantial glass or metal screens;

(d) Suitable steps and hand-holds shall be provided at the corners of the locomotive for the use of shunters;

(e) Every locomotive crane shall be provided with lifting and jacking pads at the four corners or the locomotive for assisting in re-railing operations;

(f) It shall be clearly indicated on every locomotive crane in English and in language understood by the majority of the workers in the factory, for what weight of load and at what radius the crane is safe;

(6) ***Wagons***— *(a)* Every wagon (and passenger coach, if any) shall be provided either with self-acting brakes capable of being applied continuously or with efficient hand brakes which shall be maintained in good working order. The hand brakes shall be capable of being applied by a person on the ground and fitted with a device for retaining them in the applied position;

(b) No wagon shall be kept standing within 3 metres of any authorised crossing;

(c) No wagon shall be moved with the help of crowbars or pinch bars.

(7) Binding on locomotive, wagon or other rolling stock no person shall be permitted to be upon (whether inside or outside) any locomotive, wagon or after rolling stock except where secure foothold and handhold are provided.

(8) ***Attention to brakes and doors*** — (a) No locomotive, wagon or other rolling stock shall be kept standing unless its brakes are firmly applied and where it is on a gradient, without sufficient number of properly constructed scutches planed firmly in position;

(b) No train shall be set in motion until the shunting Jamadar has satisfies himself that all wagon doors are securely fastened.

(9) ***Projecting loads and cranes***— *(a)* If the load on a wagon projects beyond its length, a guard or dummytruck shall be used beneath the projection;

(b) No loco-crane shall travel without load unless the jib is completly lowered and positioned in line with the track;

(c) When it is necessary for a loco-crane to travel with a load, the jib shall not be swung until the loco-crane has come to rest.

(10) ***Loose-shunting***— Loose-shunting shall be permitted only when it cannot be avoided. It shall never be performed on a wagon not accompanied by a man capable of applying and pinning down the brakes. Wagon not provided with brakes in good working order and capable of being easily pinned down shall not be loose-shunted unless there is attached to it at least another wagon with such brakes. Loose-shunting shall not be performed with, or against a wagon containing passengers, live-stock or explosives.

(11) ***Fly-shunting***— Fly shunting shall not be permitted on any factory railway.

(12) ***The shunting jamadar*** — *(a)* Every locomotive or wagon in motion in a factory shall be in charge of a properly trained jamadar;

(b) Before authorising a locomotive or wagon to be moved, the shunting jamadar shall satisfy himself that no person is under or in-between in front of the Locomotive or wagon.

(13) ***Handsignals-***— The hand signals used by the shunting jamadar by day and night shall be those prescribed by the shunting rules of railways, working under the Indian Railway Act, *(IX of 1890)*.

(14) ***Night Work and Fog*** — *(a)* In factories where persons work at night, no movement of locomotive, wagon or other rolling stock otherwise than by hand shall be permitted between sunset and sunrise unless the tracks and their vicinity are lighted on a scale of not less than 10 lux as measured at the horizontal plane at the ground level;

(b) In no circumstances shall any locomotive or train be moved between sunset and sunrise or at any time when there is fog, unless it carries a white head light and a red rear light.

(15) ***Speed control*** — *(a)* A locomotive or train shall not be permitted to

move at a speed greater than seven kilometres per hour;

(b) A train, locomotive, wagon or other rolling stock shall not be moved by mechanical or electrical power unless it is preceded at a distance of not less than 10 metres during the whole of its journey by a shunting jamadar. He shall be provided with signalling flags or lamp and whistle necessary for calling the attention of the driver.

(16) ***Tracks***— *(a)* distance *(i)* between tracks and *(ii)* between tracks and building blind walls or other structures and *(iii)* tracks and materials deposited on the ground shall be respectively not less than —

(aa) from centre to centre of parallel tracks, the overall width of the widest wagon of that guage, plus twice the width of the door of such a wagon when opened directly outward plus I metre;

(bb) from a building or structure other than a leading platform to the centre of the nearest track, half the overall width of the widest wagon of the that guage, plus the width of its door when opened outward, plus 1.5 metres;

(cc) from material stacked or deposited alongside the track, on the ground or on a loading plant form, the centre of the nearest track, half the over all width of the widest wagon of that guage, plus half the width of its door when opened directly outward, plus 1 metres.

(b) Sleepers of a track shall be in level with the ground and at the crossing of the track with a road or walkway, the surface of the road or walkway shall be in level with the top of the rails;

(c) All track ends shall be equipped with buffer stops of a adequate strength;

(d) Barriers of substantial construction shall be securely and permanently fixed across any doorway or gateway in a building or in a wall which conceals an approaching train from view between the building and the track as prescribed in caluse *(a)* of sub-rule (3);

(e) Where track are carried on a gantry or other elevation, a safe footway or footway with hand rails and toeboards shall be provided at all positions where persons work or pass on foot; and where there is an opening in the stage of an elevated track for the dropping of material to a lower level the position shall be adequately forced or the opening itself provided with a grill through which a person cannot fall;

(f) All point levels shall have their movements parallel to, not across, the

direction of the track;

(g) All loading platforms which are more than 60 cm. above the level of the ground on which the track is laid and more than 15 metres in length, shall be provided with stops at intervals not greater than 15 metres apart to enable the platform to be easily mounted from the track;

(h) Turn tables on plant railways shall be provided with locking devices which will prevent the tables from turning while locomotives or wagons are being run on or off the tables;

(i) Workers shall be prohibited from passing under between or above railway wagons.

(17) ***Crossings*** — *(a)* At all crossings of a track with a road or walkway, danger or crossing signs and wherever reasonably practicable, blinking lights or alarm lights shall be provided. At all important crossings gates or barriers manned by watchman shall be provided, Swinging gates and barriers shall be secured against inadvertent opening or closing;

(b) All crossings, warning signs, gates and barriers shall be illuminated during hours of darkness.

(18) ***Duties of drivers and shunters*** — It shall be the duty of every driver of a locomotive or a shunter including a shunting jamadar, to report without delay to their superior any defect in permanent way, locomotive or rolling stock.

(19) ***Young persons not to be employed as drivers of locomotive or as shunters***— No person who is under 18 years of age and no person who is not sufficiently competent and reliable shall be employed as a driver of a locomotive or as a shunter.

(20) The Chief Inspector, may by an order in writing exempt a factory or part of it from all or any of the provisions of this rule to such extent and on such conditions as he deems necessary.

61D. ***Safety Committee—*** (1) In every factory —

(a) Wherein 250 or more workers are ordinarily employed; or

(b) Which carries on any process or operation declared to be dangerous under Section 87 of the Act; or

(c) Which carries on 'hozardous process' as defined under Section 2

(cb) of the Act; There shall be a Safety Committee —

(2) The representatives of the management on Safety Committee shall include—

(a) A senior official, who by his position in the organisation can contribute effectively to the functioning of the Committee, shall be the Chairman;

(b) A Safety Officer and a Factory Medical Officer wherever available and the Safety Officer in such a case shall be the Secretary of the Committee;

(c) A representative each from the production, maintenance and purchase departments.

(3) The worker's representatives on this Committee shall be elected by the workers.

(4) The tenure of the Committee shall be two years.

(5) Safety Committee shall meet as often as necessary but at least once in every quarter. The minutes of the meeting shall be recorded and produced to the Inspector in demand.

(6) ***Safety Committee shall have the right to be adequately and suitably informed of—***

(a) Potential safety and health hazards to which the workers may be exposed at work place;

(b) data on accidents as well as data resulting from surveillance of the working environment and of the health of workers exposed to hazardous substances so far as the factory is concerned, provided that the Committee undertakes to use the data on a confidential basis and solely to provided guidance and advice on measures to improve the working environment and the health and safety of the workers.

(7) ***Function and duties of the Safety Committee shall include —***

(a) Assisting and co-operating with the management in achieving the aims and objectives outlined in the Health and Safety Policy of the occupier;

(b) dealing with all matters Concerning health safety and environment and to arrive at practicable solutions to problems encountered;

(c) creating safety awareness amongest all workers;

(d) undertaking educational, training and promotional activities;

(e) discussing reports on safety, environment and occupational health

surveys, safety audit, risk assessment, emergency and disaster management plans and implementaion of the recommendation made in the reports;

(f) carrying out health and safety surveys and identifying causes of accidents;

(g) looking into any complaint made on the likelihood of an imminent danger to the safety and health of the workers and suggesting corrective measures; and

(h) reviewing the implementaion of the recommendations made by it.

(8) Where owing to the size of the factory, or any other reason, the functions referred to in sub-rule (7) cannot be effectively carried out by the Safety Committee, it may establish sub-committees as may be required to assist it.

61E. ***Quality of personal protective Equipment*** — All personal protective Equipmet provided to workers as required under any of the provisions of the Act or the Rules shall conform to the relevent Indian Standards.

61F. ***Protective Equipment*** — The Inspector may having regard to the nature of the hazards involved in work and process being carried out, order the occupier or the manager in writing to supply to the workers exposed to particular hazard and personal protective equipment as may be found necessary".

Rules prescribed under section 41 A of Sub. Section (1)read with section 112.

61G. ***Site Appraisal Committee*** — (1) Constitution the following provisions shall govern the functioning of the Site Appraisal Committee, hereinafter, be referred to as the "Committee" in these rules —

(a) State Government may constitute a Site Appraisal Committee with the members as provided under Section 41A (i) *(a)* to (i) and reconstitute the Committee as and when necessary;

(b) The State Government may appoint a senior official of the Factories Inspectorate, preferably with qualification in Chemical Engineering to be the Secretary of the Committee;

(c) The State Government may in addition co-opt the following as members of the Committee —

(i) a representative of the Fire Service organisation of the State Government;

(ii) a representative of the State Department of Industries;

(iii) a representative of the Director General of Factory Advice Service

and Labour Institutes, Mumbai.

(2) No member; unless required to so by a Court of Law, shall disclose otherwise than in, connection with the purposes of the Act, at any time any information relating to manufacturing or Commercial business or any working process which may come to his knowledge during his tenure as a Member on this Committee.

(3) ***Applications for appraisal of sites*** —

(a) Applications for appraisal of sites in respect of the factories covered under Section 2(cb) of the Act shall be submitted to the Chairman of this Site Apprisal Committee;

(b) The application for site appraisal along with 15 copies thereof shall be submitted in the Form annexed to this Rule. The Committee may dispense with furnishing information on any particular item in the Application. Form if it considers the same to be not relevant to the application under Consideration.

(4) ***Functions of the Committee*** —

(a) The Secretary shall arrange to register the applications received for appraisal of site in a separate register and acknowledge the same within a period of 7 days;

(b) The Secretary shall fix up meeting in such a manner that all the applications received and registered are referred to the Committee within a period of one month from the date of their receipt;

(c) The Committee may adopt a procedure for its working keeping in view the need for expeditions disposal applications;

(d) The Committee shall examine the application for appraisal of a site with reference to the prohibitions and restrictions on the location of industry and the carrying on of processes and operations in different areas as per the provisions of Rule 5 of the Environment *(Protection Act, 1986);*

(e) The Committee may call for documents, examine experts inspect the site if necessary and take other steps for formulating its views in regard to the suitability of the site;

(f) Wherever the proposed site requires clearance by the Ministry of Industry or the Ministry of Environment and Forests the application for Site Appraisal will be considered by the Site Appraisal Committee only after such clearance has been received.

FORMAT OF APPLICATION TO THE SITE APPRAISAL COMMITTEE

1. Name and address of the applicant.
2. Site Ownership Data.
2.1 Revenue details of site such as survey No., Plot No. etc.
2.2 Whether the site is classified as forest and if so whether approval of the Central Government under Section 5 of the Indian Forests Act, 1927 has been taken.
2.3 Whether the proposed site attracts the provisions of Section 3(2) (v) of the E.P. Act, 1986, if so the nature of the restrictions.
2.4 Local authority under whose jurisdiction the site is located.
3. Site Plan.
3.1 Site Plan with clear identification of boundaries and total area proposed to be occupied and showing the following details nearby the proposed site—

(a) Historical monument, if any, in the vicinity;

(b) Names of neighbouring manufacturing units and human habitats, educational and training institutions, petrol installations, storages of LPG and other hazardous substances in the vicinity and their distances from the proposed unit;

(c) Water sources (rivers, streams, canals, dams, water filtration plants, etc.) in the vicinity;

(d) Nearest hospitals, fire-stations, civil defence stations and police stations and their distances;

(e) High tension electrical transmission lines, pipe lines for water, oil, gas or sewerage, railway lines, road, stations, jetties and other similar installations.

3.2 Details of soil conditions and depth at which hard strata obtained.
3.3 contour map of the area showing nearby hillocks and difference in levels.
3.4 plot plan of the factory showing the entry at exit points, roads within, water drains, etc.
4. Project Report.
4.1 A summary of the salient features of the project.

4.2 Status of the organisation (Govt, Semi-Government, Public or private etc.)
4.3 Maximum number of persons likely to be working in the factory.
4.4 Maximum amount of power and water requirements and source of their supply.
4.5 Block diagram of the buildings and installations, in the proposed site.
4.6 Details of housing colony, hospital, school and other infrastructural facilities proposed.
5. Organisation structure of the proposed manufacturing unit/factory.
5.1 Organisation diagrams of
- proposed enterprise in general.
- Health, safety and Environment protection departments and their linkage to operation and technical departments.

5.2 Proposed Health and Safety policy.
5.3 Area allocated for treatment of wastes and effluent.
5.4 Percentage outlay on safety, health and environment protection measures.
6. Meteorological data relating to the site.
6.1 Average, minimum and maximum of.
- Temperature
- Humidity
- Wind velocities

during the previous ten years.
6.2 Seasonal variations of wind direction.
6.3 Highest water level reached during the floods in the area recorded so far.
6.4 Lightening and seismic data of the area
7. Communication Links
7.1 Availability of telephone/telex/wireless and other communication facilities for outside communication
7.2 Internal communication facilities proposed
8. Manufacturing Process Information
8.1 Process flow diagram
8.2 Brief write up on process and technology

8.3 Critical process parameters such as pressure build-up, temperature rise and run-away reactions

8.4 Other external effects critical to the process having safety implications, such as ingress of moisture or water, contact with incompatiable substances, sudden power failure

8.5 Highlights of the build-in safety pollution control devices or measures/ incorporated in the manufacturing technology

9. Information of Hazardous Materials

9.1 Raw materials intermediates, products and by-products and their quantities (Enclose Material Safety Data Sheet in respect of each hazardous substance).

9.2 Main and intermediate storages proposed for raw materials/ intermediates/products/by-products (maximum quantities to be stored at any time).

9.3 Transportation methods to be for materials inflow and outflow, their quantities and likely routes to be followed.

9.4 Safety measures proposed for :

- handling of materials;
- internal and external transportation; and.
- disposal (packing & forwarding of finished products).

10. Information on Dispersal/Disposal of Wastes and Pollutants.

10.1 Major pollutants (gas, liquid, solid,) their characteristics and quantities (average and at peak loads)

10.2 Quality and quantity of solid wastes generated, method of their treatment and disposal.

10.3 Air, water and soil pollution problems anticipated and the proposed measures to control the same, including treatment and disposal of effluents.

11. Process Hazards Information.

11.1 Enclose a copy of the report on environmental impact assessment.

11.2 Enclose a copy of the report on Risk Assessment study.

11.3 Published (open or classified) reports, if any, on accident situations/ occupational health hazards or similar plants elsewhere (within or outside

the country).

12. Information of proposed safety and Occupational Health Measures.

12.1 Details of fire fighting facilities and minimum quantity of water, CO_2 and or other fire fighting measures needed to meet the emergencies.

12.2 Details of in-house medical facilities proposed.

13. Information on Emergency Preparedness.

13.1 Onsite emergency plan.

13-2 Proposed arrangements, if any, for mutual aid scheme with the group of neighbouring factories.

14. Any other relevant information.

I certify that the information furnished above is correct to best of my knowledge and nothing of importance has been concealed while furnishing it.

(Name and signature of the Applicant)

*****

61H. ***Health and Safety Policy***— (1) Occupier of every factory except as provided for in sub-rule (2), shall prepare a written statement of his policy in respect of health and safety of workers at work.

(2) ***All factories*** —

(a) covered under Section *2(m)* (i) but employing less than 50 workers;

(b) covered under Section *2(m)* (ii) but employing less than 100 workers;

are exempted from requirements of sub-rule (1) :

Provided that they are not covered in the First Schedule under Section 2(cb) or varying out processes or operations declared to be dangerous under Section 87 of the Act.

(3) Notwithstanding anything contained in sub-rule (2), the Chief Inspector may require the occupiers of any of the factories or class or description of factories to comply with the requirements of sub-rule (1), if, in his opinion, it is expedient to do so.

(4) ***The Health and Safety Policy should contain or deal with*** —

(a) declared intention and commitment of the management to health, safety and environment and compliance with all the relevant statutory

requirements;

(b) organisational set up to carry out the declared policy clearly assigning the responsibility at different levels; and

(c) arrangements for making the policy effective.

(5) ***In particular, the policy should specify the following*** —

(a) arrangements for involving the workers;

(b) intentions of taking into account the health and safety performance of individuals at different levels while considering their career advancement;

(c) fixing the responsibility of the contractors, sub-contractors, transporters and other agencies entering the premises;

(d) providing a resume of health and safety performance of the factory in its Annual Reports;

(e) relevant techniques and methods, such as safety audits, risk assessment, for periodical assessment of the status on health, safety and environment and taking all the remedial measures;

(f) stating its intentions to integrate health and safety in all decisions including those dealing with purchase of plant, equipment, machinery, materials as well as selection and placement of personnel;

(g) arrangements for informing educating and training and retraining its own employee at different levels and the public, wherever required.

(6) A copy of the declared Health and Safety Policy signed by the occupier shall be made available to the Inspector having jurisdiction over the factory and to the Chief Inspector.

(7) The policy shall be made widely known by —

(a) making copies available to all workers including contract workers, apprentices, transport workers, supplier, *etc.;*

(b) displaying copies of the policy at conspicuous places; and

(c) any other means of communication; in a language understand by majority of workers.

(8) The occupier shall revise the Safety Policy as often as may be appropriate, but it shall necessarily be revised under the following circumstances —

(*a)* Whenever expansion or modification having implications on safety

and health of persons at work is made; or

(b) Whenever new substance(s) or articles are introduced in the manufacturing process having implications on health and safety of persons exposed to such substances.

61 I. ***Collection and development and dissemination of information-***

(1) The occupier of every factory carrying on a 'hazardous process' shall arrange, to obtain or develop information in the form of Material Safety Data Sheet (MSDS) in respect of every hazardous substance or material handled in the manufacture, transportation and storage in the factory. It shall be accessible upon request to a worker for reference —

(a) every such Material Safety Data Sheet shall include the following information—

(i) the identity used on the label;

(ii) hazardous ingredients of the substance;

(iii) physical and chemical characteristics of the hazardous substance;

(iv) the Physical hazards of the hazardous substances, including the potential for fire, explosion and reactivity;

(v) the health hazards of the hazardous substances, including signs and symptoms of exposure, and any medical conditions which are generally recognised as being agravated by exposure to the substance;

(vi) the primary route(s) of entry;

(vii) the permissible limits of exposure prescribed in the Second Schedule under Section 41F of the Act, and in respect of a Chemical not covered by the said Schedule, any exposure limit used or recommended by the manufacturer, importer or occupier;

(viii) any generally applicable precautions for safe handling and use of the hazardous substance, which are known, including appropriate hygienic practices, protective measures during repairs and maintenance of contaminated equipment, procedures for clean-up of spills and leaks;

(ix) any generally applicable control measures, such as appropriate engineering, controls, work practices, or use of personal protective equipment;

(x) emergency and first-aid procedure;

(xi) the date of preparation of the Material Safety Data Sheet, or the last change to it; and

(xii) the name, address and telephone number of the manufacturer, importer, occupier or other responsible party preparing or distributing the Material Safety Data Sheet, who can provide additional information on the hazardous substance and appropriate emergency procedures, if necessary.

(b) the occupier while obtaining or developing a Material Safety Data Sheet in respect of a hazardous substance shall ensure that the information recorded accurately reflects the scientific evidence used in making the hazard determination. If he becomes newly aware of any significant information regarding the hazards of a substance, or ways to protect, against the hazards, this new information shall be added to the Material Safety Data Sheet as soon as practicable;

(c) an example of such Material Safety Data Sheet is given in the Schedule to this rule.

Labelling

(2) Every container of a hazardous substance shall be clearly labelled or marked to identify—

(a) the contents of the container;

(b) the name and address of the manufacturer of importer of the hazardous substance;

(c) the physical and health hazards; and

(d) the recommended personal protective equipment needed to work safety with the hazardous substance.

SCHEDULE
FORMAT MATERIAL SAFETY DATA SHEET

1. CHEMICAL IDENTITY

Chemical Name	Chemical Classification	
Symptoms	Trade Name	
Formula	C.A.S. No.	U.N. No.
	Shipping Name	
	Codes Label	Hazchem No.
Regulated Identification		
	Hazardous Waste I.D. No.	

Hazardous Igredients C.A.S. No.	Hazardous Igredient C.A.S, No.
1	3
2	4.

2. PHYSICAL AND CHEMICAL DATA

Boiling Range/Point	°C	Physical State	Appearance
Melting/Freezing Point	^{0}C	Vapour at	Pressure Odour
		35° C	non Hg
Vapour Density (Air = 1)	Solubility in water at 30 °C		Others
Specific Gravity Water =1		PH	

3. FIRE AND EXPLOSION HAZARD DATA

Flammability	Yes/No.	LEL	%	Flash Point °C	Autoignition Temperature °C
TDG Flammability		UEL %		Flash Point °C	
Explosion Sensitivity to Impact		Explosion Sensitivity to Static Electricity		Hazardous Combustion Products	
Hazardous Polymerisation					
Combustible Liquid		Explosive Material		Corrosive Material	
Flammable Material		Oxidiser		Others	
Pyrophoric Material		Organic Peroxide			

4. REACTIVITY DATA

Chemical Stability	
Incompatibility with other Material	
Reactivity	
Hazardous Reaction Products	

5. HEALTH HAZARD DATA

Routes of Entry						
Effects of Exposure/ symptoms						
Emergency Treatment						
TLV (ACGIH)	ppm	mg/m^3	STEL		ppm	mg/m^3
Permissible Exposour Limit LD	ppm,	mg/m^3	Odour LL	Thresoll	ppm	mg/m^3
NFPA Hazard Signals	Health	Flammability		Stability	Special	

6. PREVENTIVE MEASURES

Personnel Protective Equipment
Handling and Storage Precautions

7. EMERGENCY AND FIRST AID MEASURE

FIRE	EXTINGUISHING
FIRE	Special Procedures
	Unusal Hazards
EXPOSURE	First Aid Measures
	Antidotes/Dosages
SPILLS	Steps to be taken
	Waste Disposal Method

8. ADDITIONAL INFORMATION/REFERENCES

9. MANUFACTURER/SUPPLIERS DATA

Name of Firm	Contact Person in Emergency
Mailing Address Telephone/Telex Nos. Telegraphic Address	Local Bodies involved
	Standard Packing
	Tremeard Details/Ref
	Other

10. DISCLAIMER

Information contained in this material data sheet is believed to be reliable but no representation guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is upto the manufacture/seller to ensure that the information contained in the material safetey data sheet is relevant to the product manufactured/ handled or sold by him as the case may be. The Government makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

61J. ***Disclosure of information to workers***— (1) The occupier of a factory carrying on a 'hazardous process' shall supply to all workers the following information in relation to handling of Hazardous materials or substances in the manufacture, transportion, storage and other processed —

(a) Requirements of Sections 41B, 41C and 41H of the Act;

(b) A list of 'Hazardous Processes carried on in the factory;

(c) Location and availability of all Material Safety Data Sheets as per Rule 61;

(d) Physical and health hazards arising from the exposure to or handling

of substances;

(e) Measures taken by the occupier to ensure safety and control of physical and health hazards;

(f) Measures to be taken by the workers to ensure safe handling storage and transportation of hazardous substances;

(g) Meaning of various labels and markings used on the containers of hazardous substances as provided under Rule 61;

(h) Personal Protective Equipment required to be used by workers employed in 'hazardous process' or 'dangerous operation';

(i) Signs and symptoms likely to be manifested on exposure to hazardous substances and to whom to report;

(j) Measures to be taken by the workers in case of any spillage or leakage of a hazardous substances;

(k) Role of workers *vis-a-vis* the emergency plan of the factory, in particular the evacuation procedures;

(l) Any other information considered necessary by the occupier to ensure safety and health of workers.

(2) The information required by sub-rule (i) shall be compiled and made known to workers individually through supply of booklets or leaflets and display of cautionary notices at the work places.

(3) The booklets, leaflets, and the cautionary notices displayed in the factory shall be in the language understood by the majority of the workers, and also explain to them.

(4) The Chief Inspector may direct the occupier to supply further information to the workers as deemed necessary.

(a) ----------
(b) ---------- } *Matter not print in original Gazatte*
(c) ----------

(d) a statement on resources and facilities available for dealing with an emergency including any agreement entered into with a neighbouring factory

for aid and assistance in the event of an emergency;

(e) a man of the area showing the approaches to the factory location of emergency facilities such as hospitals, police and fire service;

(f) the organisation of the management and the responsibility for safety indicating therein the persons responsible for on-site emergency action;

(g) details relating to alert system;

(h) information on availability of antidotes for poisoning resulting for an accident;

(i) any other information as may be considered relevant by the occupier or asked for by the District Emergency Authority.

61K. ***Disclosure of information to the Chief Inspector —*** The occupier of every factory carrying on "Hazordous Process" shall furnish in writing, to the Chief Inspector, a copy of all information furnished to the workers.

61L. ***Information on industrial waste*** — The information furnished under Rules 61J & 61K shall include the quantity of the solid and liquid wastes generated per day, their characteristics and the method of treatment such as incineration of solid wastes, chemical and biological treatement of liquid wastes, and arrangements for their final disposal.

61M. The occupier shall review once in every calender year and modify, if necessary, the information furnished under Rules 61J & 61K to the workers and Chief Inspector.

61N. ***Confidentiality of information*** — The occupier of a factory carrying on "Hazardous Process" shall disclose all information needed for protecting Safety and Health of the workers to *(a)* his workers; and *(b)* Chief Inspector as required under Rules 61J& 61K. If the occupier is of the opinion that the disclosure of details regarding the process and formulations will adversely effect his business interests, he may make a representation to the Chief Inspector stating the reasons for with-holding such information. The Chief Inspector shall give an opportunity to the occupier of being heard and pass an order to the representation. An occupier aggrieved by an order of the Chief Inspector may prefer an appeal before the State Govt. within a period of 30 days. The State Government shall give an opportunity to the occupier of being heard and pass an order. The order of the

State Government shall be final.

Rules framed under section 41. B, 41-c and 112specific responsibility of occupier in relation to hazaedous process

61O. ***Medical Examination*** — (1) Workers employed in a "Hazardous Process" shall be medically examined by a qualified medical practitioner hereinafter referred to as Factory Medical Officer, in the following manner -

(a) Once before employment to ascertain physical fitness of the person to do the particular job.

(b) once in a period of 6 months, to ascertain the health status of all the worker in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Factory Medical Officer it is necessary to do so at a shorter internal in respect of any worker;

(c) the details of pre-employment and periodical medical examinations carried out as aforesaid shall be recorded in the Health Register in Form 28.

(d) The occupier of every factory manufacturing Asbestos or its ancillary products shall maintain and keep maintaining Health Record of every worker in Prescribed Form No. 28 upto a minimum period of 40 years from the begining of employment or 15 years after retirement or cessation of employment whichever is later";

(2) No person shall be employed for the first time without a certificate of Fitness in Form 33 granted by the Factory Medical Officer. If the Factory Medical Officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector who shall refer the matter to the Certifying Surgeon whose opinion shall be final in this regard. If the Inspector himself is also a Certifying Surgeon, he may dispose of the application himself.

(3) Any findings of the Factory Medical Officer revealing any abnormality or unsuitability of any person employed in the process shall immediately by reported to the Certifying Surgeon who shall in turn, examine the concerned worker and communicate his findings to the occupier within 30 days. If the Certifying Surgeon is of the opinion that the worker so examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away be provided with alternate placement unless he is in

the opinion of the Certifying Surgeon fully incapacitated in which case the worker affected shall be suitable rehabilitated.

(4) A certifying surgeon on his own motion or on a reference from an Inspector may conduct medical examination of a worker to ascertain the suitability of his employment in a hazardous process or for ascertaining his health status. The opinion of the Certifying Surgeon in such a case shall be final. The fee required for the medical examination shall be paid by the occupier.

(5) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Certifying Surgeon and after making entries to that effect in the Health Register.

(6) The worker required to undergo medical' examination under these rules and for any medical survey conducted by or on behalf of the Central or the State Government shall not refuse to undergo such medical examination.

61P. ***Occupational Health Centres*** **—** (1) In respect of any factory carrying on "hazardous process" there shall be provided and maintained in good order an Occupational Health Centre with the services and facilities as per scale laid down hereunder —

(a) for factories employing upto 50 workers —

(i) the services of a Factory Medical Officer on retainer-ship basis, in his clinic to be notified by the occupier. He will carry out the pre-employment and periodical medical examination as stipulated in Rule 61T and render medical assistance during any emergency;

(ii) a minimum of 5 persons trained in first aid procedures amount whom atleast one shall always be available during the working period;

(iii) a fully equipped first-aid box;

(b) for factories employing 51 to 200 workers —

(i) an Occupational Health Centre having a room with a minimum floor area of 15 sq.m. with floors and walls made of smooth and impervious surface and with adequate illumination and ventillation as well as equipment as per the schedule annexed to this rule;

(ii) a part-time Factory Medical Officer shall be in over all charge of the Centre who shall visit the factory at least twice in a week and whose services

shall be readily available during medical emergencies;

(iii) one qualified and trained dresser-cum-compounder on duty throughout the working period;

(iv) a fully equipped first aid box in all the departments.

(c) for factories employing above 200 workers —

(i) one full-time Factory Medical Officer for factories employing upto 500 workers and one more Medical Officer for every additional 1000 workers or part thereof;

(ii) An Occupational Health Centre having at least 2 rooms each with a minimum floor area of 15 sq.m with floors and walls made of smooth and impervious surface and adequate illuminations and ventillation as well as equipment as per the schedule annexed to this rule;

(iii) there shall be one nurse, one dresser-cum-compounder and one sweeper-cum-ward boy throughout the working period;

(iv) the Occupational Health Centre shall be suitable equipped to manage medical emergencies.

(2) The Factory Medical Officer required to be appointed under sub-rule (1) shall have qualifications included in Schedules to the Indian Medical Degrees Act of 1916 or in the Schedules to the Indian Medical Council Act, 1956 and possess a Certificate of Training in Industrial Health of Minimum three months duration recognised by the State Government:

Provided that —

(i) a person possessing a Diploma in Industrial Health or equivalent shall not be required to possess the certificate of training as aforesaid;

(ii) the Chief Inspector may, subject to such conditions as he may specify, grant, exemption from the requirement of this sub-rule, if in his opinion a suitable person possessing the necessary qualification is not available for appointment;

(iii) in case of a person who has been working as a Factory Medical Officer for a period of not less than 3 years on the date of commencement of this rule, the Chief Inspector may subject to the condition that said person shall obtain the aforesaid certificate of training with in a period of three years, relax the qualification.

(3) The syllabus of the course leading the above certificate, and the

organisations conducting the course shall be approved by the Directorate General of Factory Advice Service and Labour Institute or the State Government in accordance with the guidelines issued by the Directorate General of Factory Advice Service and Labour Institute.

(4) Within one month of the appointment of a Factory Medical Officer, the occupier of the factory shall furnish to the Chief Inspector the following particulars :-

(a) Name and address of the Factory Medical Officer;
(b) Qualifications;
(c) Experience, if any and .
(d) The sub-rule under which appointed.

SCHEDULE

EQUIPMENT FOR OCCUPATIONAL HEALTH CENTRE IN FACTORIES

1. A glazed sink with hot and cold water always available.
2. A table with a smooth top at least 180 cm x 105 cm.
3. Means for sterlizing instruments.
4. A couch.
5. Two buckets or containers with close fitting lids.
6. A kettle and spirit stove or other suitable means of boiling water.
7. One bottle of spiritus ammoniac aromations (120) ml.
8. Two medium size sponges.
9. Two ‘kidney’ trays.
10. Four cakes of toilet, preferable antiseptic soap.
11. Two glass tumblers and two wine glasses.
12. Two clinical thermometers.
13. Two tea spoons.
14. Two graduated (120 ml.) measuring glasses.
15. One wash bottle (100 cc) for washing eyes.
16. One bottle (one litre) carbolic lotion 1 in 20.
17. Three chairs.
18. One screen.
19. One electric hand torch.
20. An adequate supply of tetanus toxied.

21. Coramine liquid (60 ml.).
22. Tablets — antihishtaminic, antispasmodic (25 each).
23. Syringes with needles — 2 cc,5 cc and 10 cc.
24. Two needle holders, big and small.
25. Suturing needles and materials.
26. One dissecting forceps.
27. One dressing forceps.
28. One scapels.
29. One stethescope.
30. Rubber bandage — pressure bandage.
31. Oxygen cylinder with necessary attachments.
32. One Blood pressure apparatus.
33. One patellar Hammer.
34. One peak-flow meter for lung function measurement.
35. One stomach wash set.
36. Any other equipment recommended by the Factory Medical Officer according to specific need relating to manufacturing process.
37. In addition —

(1) For factories employing 51 to 200 workers —

1. Four plain wooden splints 900 mm x 100 mm x 6 mm.
2. Four plain wooden splints 350 mm x 75 mm x 6 mm.
3. Two plain wooden splints 250 mm x 50 mm x 12 mm.
4. One pair artery forceps.
5. Injections - morphia, pethidine, atropine, adrenaline, coramine, novacan (2 each).
6. One surgical scissors.

(2) For factories employing above 200 workers —

1. Eight plain wooden splints 900 mm x 100 mm x 6 mm.
2. Eight plain wooden splints 350 mm x 75 mm x 6 mm.
3. Four plain -wooden splints 250 mm x 50 mm x 12 mm.
4. Two pairs artery forceps
5. Injections - morphia, pethadine, atropine, adrenaline, ceramine, novacan (4 each).
6. Two surgical scissors.

61Q. ***Ambulance Van***— (1) In any factory carrying on "hazardous process",

there shall be provided and maintained in good condition, a suitably constructed ambulance van equipped with items as per sub-rule (2) and manned by a full-time Driver-cum-Mechanic and a Helper trained in first-aid, for the purposes of transportation of seriouscases of accidents or sickness. The ambulance van shall not be used for any purpose other than the purpose stipulated herein and will normally be stationed at or near to the Occupational Health Centre:

Provided that a factory employing less than 200 workers, may make arrangements for procuring such facility at short notice from nearby hospital or other places to meet any emergency.

(2) The Ambulance should have the following equipments —

(a) ***General***

A wheeled stretcher with folding and adjusting devices with the head of the stecher capable of being tilted upward :

Fixed suction unit with equipment. Fixed oxygen supply with equipment; Pillow with case; Sheets blankets; Towels; Emesis bag; Bed pan - Urinal - Class.

(b) ***Safety equipment,***

Flares with life of 30 minutes; - Flood lights; Flash lights; Fire extinguisher dry powder type; Insulated gauntlets.

(c) ***Emergency care equipments***.

(i) Resuscitation :

— Portable suction unit; portable oxygen units;
— Beg - valve - mask, hand operated artificial ventilation unit;
— Airways; - Mouth gags; - Tracheestomy adminstors;
— Short spine board; - I.V. Fluide with administration unit;
— B.P. manomator ; - cugg; - Stethoscope,

(ii) Immobilization.

— Long & short padded boards; - wire leadder splints;
— Traingular bandage; - Long and short spine boards,

(iii) Dressings.

— Gauze pads - 4" x 4"; - Universal dressing 10"x36";
— Roll of aluminium foils; - soft rollar bandages 6" x 5 yards);
— Adhesive tape in 3" roll; - Safety pins;

— Bandage sheets; - Burn sheet.

(iv) Poisoning.

— Syrup of Imecae; - Activated Charcoal pre packeted in doses; -

— snake bite kit;

— Drinking water.

(v) Emergency Medicines

— As per requirement (under the advice of Medical Officer only).

61R. W. Decontamination facilities : In every factory, carrying out 'hazardous process" the following provisions shall be made to meet emergency -

(a) fully equipped first aid box;

(b) readily accessible means of water for washing by workers as well as drenching the clothing of workers who have been contaminated with hazardous and corrisive substance; and such means shall be as per the scale shown in the Table below :

No. of persons employed at any time	No. of drenching showers
(i) Upto 50 workers	2
(ii) Between 51 to 200 workers	2 + 1 for every additional 0 or part thereof.
(iii) Between 201 to 500 workers	5 + 1 for every additional 100 or part thereof.
(iv) 501 workers and above	8 + 1 for every additional 200 or part thereof.

SI. No.	Name and Designation	Qualification	Experience	Section(s) and the Rules under which comptency is sought for

(c) a sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall visible at all times.

61S. ***Making available Health Records to workers* — (1)** The occupier of every factory carrying out 'hazardous process' shall make accessible the health records including the records of worker's exposure to hazardous process or' as the case may be, the medical records of any worker for his persual under the

following conditions —

(a) Once in every six months or immediately after the medical examinaton whichever is earlier;

(b) If the Factory Medical Officer or the Certifying Surgeon as the case may be, is of the opinion that the workers has manifested signs and symtoms of any notifiable disease as specified in the Third Schedule of the Act;

(c) If the workers leaves the employment;

(d) If any one of the following authorities so direct.

— the Chief Inspector of Factories;

— the Health Authority of the Central or State Government;

— Commissioner of Workmen's Compensation;

— The Director General, Employee's State Insurance Corporation;

— The Director, Employees State Insurance Corporation (Medical Benefits); and

— The Director General, Factory Advice Service and Labour Institute.

(2) A copy of the up-to-date health records including the record or worker's exposure to hazardous process or as the case may be, the medical records shall be supplied to the worker on receipt of an application from him X-ray plates and other medical diagonstic reports may also be made available for reference to his medical practitioner.

61T Qualifications, *etc.*, of supervisors— (1) All persons who are required to supervise the handling of hazardous substances shall possess the following qualifications and experience —

(a) (i) a degree in Chemistry or Diploma in Chemical Engineering or Technology with 5 years experience; or

(ii) a Master's Degree in Chemistry or a Degree in Chemical Engineering or Technology with 2 years experience.

The experience stipulated above shall be in process operation and maintenance in the Chemical Industry.

(b) the Chief Inspector may require the supervisor to undergo training in Health and Safety.

(2) The syllabus and duration of the above training and the organisations conducting the training shall be approved by the DGFASLI or the State Government in accordance with the guidelines issued by the DGFASLI.

61U. Issue of guidelines — For the purpose of Complaince with the requirements of sub-sections (1), (4) and (7) of Section 41-B or 41-C the Chief Inspector may, if deemed necessary, issue guidelines from time to time to the occupier of factories carrying on 'hazardous process' such guidelines may be based on National Standards, Codes of Practics or recommendations of International Bodies such as ILO and WHO"]

CHAPTER V
Welfare

62. ***Washing facilities***— (1) This rule shall come into force, in respect of any class or description of factories, on such dates as the State Government may, by notification in the official *Gazette,* appoint in this behalf.

(2) There shall be provided and maintained in every factory for the use of employed persons adequate and suitable facilities for washing which shall include soap and nail brushes or other suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.

(3) Without prejudice to the generality of the foregoing provisions the washing facilities shall include —

(a) a trough with taps or jets intervals of not less than two feet; or

(b) wash-basins with taps attached thereto; or

(c) taps on stand pipes; or

(d) showers controlled by taps; or

(e) circular troughs of the fountain type; or

(f) wash-basins or bathing places with standing water in clean vessels:

Provided that the Inspector may, having regard to the needs and habits of the workers, fix the proportion in which the aforementioned types of facilities shall be installed.

(4) (a) every trough and basin shall have a smooth, impervious surface and shall be fitted with a waste pipe and plug.

(b) the floor or ground under and in the immediate vicinity of every trough, tap, jet, wash-basin, stand-pipe and shower shall be so laid or finished as to provide a smooth imprevious surface and shall be adequately drained.

(5) For persons whose work involve contact with any injurious or noxious substances there shall be at least one tap for every fifteen persons; and for persons whose work does not involve such contract the number of taps shall be as follows:-

No. of workers	No. of taps
Up to 20	1
21 to 35	2
36 to 50	3
51 to 150	4
151 to 200	5
Exceeding 200 but not exceeding 500	5 plus one tap for every 50 or fraction of 50
Exceeding 500	11 plus one tap for every 100 or fraction of 100.

(6) If female workers are employed, separate washing facilities shall be provided and so enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass. The entrance to such facilities shall bear conspicuous notice in the language understood by the majority of the workers "For Women Only" and shall also be indicated pictorially.

(7) The water supply to the washing facilities shall be capable of yielding at least six gallons a day for each person employed in the factory and shall be from a source approved in writing by the Health Officer; Provided that where the Chief Inspector is satisfied that such an yield is not practicable he may, by certificate in writing, permit the supply of a smaller quantity not being less than one gallon per day for every person employed in the factory.

Rule prescribed under section 43

62A. All classes of factories mentioned in the Schedule annexed hereto shall provide facilities for keeping clothing not worn during working hours and for the drying of wet clothing. Such facilities shall include the provision of arrangement approved by the Chief Inspector of Factories.

SCHEDULE

Engineering Workshop.
Iron and Steel Works.
Oil Mills,
Chemical Works,
Automobile Workshop.
Dying Works.

Any other factory where all or some of the workers are provided with special type of clothing during working hours.

Rule prescribed under sub-section (1) of section 45

63. *First-Aid appliance* — The first-aid boxes or cupboards shall be distinctively marked with a red cross on a white background and shall contain the following equipment,

A. For factories in which the number of persons employed does not exceed ten or (in the case of factories in which mechanical power is not used) does not exceed fifty persons — Each first-aid box or cupboard shall contain the following equipment —

(i) 6 small sterilized dressings,
(ii) 3 medium size sterilized dressings.
(iii) 3 large sized sterilized dressings.
(iv) 3 large size burn dressings.
(v) 1 (1 oz) bottle containing a two percent alcoholic solution of iodine.
(vi) 1 (1 oz) bottle containing salvolutile having the does and mode of administration indicated on the label.
(vii) A snake-bite lancet.
(viii) 1 (1 oz) bottle of potassium permanganate crystals.
(ix) 1 pair scissors.
(x) 1 copy of the first-aid leaflet issued by the Chief Adviser Factories, Government of India.
(xi) Fifty tablets (of 5 grains) of Asprin.
(xii) One oz. of ointment of burns.
(xiii) One bottle (of 1 oz) of a suitable surgical antiseptic solution.

B. ***For factories in which mechanical power is used and in which the number of persons employed exceeds ten but does not exceed fifty -*** Each first-aid box or cupboard shall contain the following equipment —

(i) 12 small sterilized dressings.
(ii) 6 medium size sterilized dressings.
(iii) 6 large size sterilized dressings.
(iv) 6 large size burn dressings,
(v) 6 ($^1/_2$ oz) packets sterilized cotton wool.
(vi) 1 (2 oz) bottle containing a two percent alcoholic solution of iodine.
(vii) I (2 oz.) bottle containing salvolutile having the dose and mode of administration indicated on the label.

(viii) 1 roll of adhesive plaster.
(ix) A snake-bite lancet.
(x) 1 (1 oz.) bottle of potassium permanganate crystals.
(xi) 1 pair scissors.
(xii) 1 copy of first-aid leaflet issued by the Chief Advisor, Factories, Government of India.
(xiii) One hundred tablets (of 5 grains each) Aspirin.
(xiv) Two oz. of ointment of burns,
(xv) One bottle (of 2 oz.) of a suitable surgical antiseptic solution.

C. ***For factories employing more than 50 persons -*** *Each first-aid box or cupboard shall contain the following equipments —*

(i) 24 small sterilized dressings.
(ii) 12 medium size sterilized dressings.
(iii) 12 large size sterilized dressings.
(iv) 12 large size burn dressings.
(v) 12($^1/_2$ oz.) packets sterilized cotton wool.
(vi) 1 snake-bite lancet.
(vii) 1 pair scissors.
(viii) 2(1 oz.) bottles of potassium permanganate crystals.
(ix) 1(4 oz.) bottle containing a two percent alcoholic solution of iodine.
(x) 1(4 oz.) bottle of salvolutile having the dose and mode of administration indicated on the label.
xi) 1 copy of the first-aid leaflet issued by the Chief Advisor of Factories, Government of India.
(xii) 12 roller bandages 4 inches wide
(xiii) 12 roller bandages 2 inches wide
(xiv) 2 rolls of adhesive plaster
(xv) 6 triangular bandages.
(xvi) 2 packets of safety pins.
(xvii) A supply of suitable splints
(xviii) 1 tourniquet.
(xix) Two hundred tablets (of 5 grains each) of Aspirin.
(xx) Four oz. of ointment of burns.
(xxi) Two bottles (of 2 oz.) of a suitable surgical antiseptic solution :

Provided that items (xii) to (xviii) inclusive need not be included in the standard

first-aid box or cupboard (a) where there is a properly equipped ambulance room, or (b) if at least one box containing such items and placed and maintained in accordance with the requirements of Section 45 is separately provided.

D. In lieu of the dressings required under items (i) and (ii), there may be substituted adhesive wound dressings approved by the Chief Inspector of Factories.

Rules prescribed under sub-section (3) of section 45

64. *Ambulance room* — (1) This rule shall come into force, in respect of any class or description of factories, on such dates as the State Government may, by notification in the official *Gazette* appoint in this behalf.

(2) The ambulace room or dispensary shall be in charge of a qualified medical practitioner assisted by at least one qualified nurse and such subordinate staff as the Chief Inspector may direct.

(3) The ambulance room or dispensary shall be separate from the rest of the factory and shall be used only for the purpose of first aid treatment and rest. It shall have a floor area of at least 250 sq. ft. and smooth, hard and impervious walls and floor and shall be adequately ventilated and lighted by both natural and artificial means. An adequate supply of wholesome drinking water shall be laid on and the room shall contain at least —

(i) A glazed sink with hot and cold water always available;
(ii) A table with a smooth top at least 6x3 feets 6 inches.
(iii) Means for sterilizing instruments;
(iv) A couch;
(v) Two stretchers;
(vi) Two buckets or containers with close fitting lid.
(vii) Two rubber hot water bages;
(viii) A kettle and spirit stove or other suitable means of boiling water;
(ix) Twelve plain wooden splints - 30 x 4 x $^1/_4$ inches;
(x) Twelve " " " - 14 x 3 x $^1/_4$ inches;
(xi) Six " " " - 10 x 2 x $^1/_2$ inches;
(xii) Six wooden blankets;
(xiii) One pair artery forceps;
(xiv) One bottle of brandy;

(xv) Two medium size sponges;
(xvi)Six hand towels;
(xvii) Four "Kidney" trays;
(xviii) Four cakes carbolic soap;
(xix) Two glass tumblers and two wine glasses;
(xx) Two clinical thermometers;
(xxi) One Graduated measuring glass with teaspoon;
(xxii) One eye bath;
(xxiii) One bottle (2 ibs.) carbolic lotion 1 in 20;
(xxiv) Three chair
(xxv) One screen
(xxvi) One electric hand torch
(xxvii) Four first-aid boxes or cupboards stocked to the standards prescribed under item C of Rule 63.
(xxviii) An adequate supply of anti-tetanus serum.

(4) The occupier of every factory to which these rules apply shall, for the purpose of removing serious cases of accident or sickness, provide in the premises and maintain in good condition a suitable conveyance unless he has made arrangements for obtaining such a conveyance from a hospital.

(5) A record of all cases of accident and sickness treated at the room shall be kept and produced to the Inspector of Certifying Surgeon when required.

Rules 65 to 70 prescribed under sec 46. Enfored vide Gazette notification No. GLR/348/ 51/6 dtd. 14 May, 62

65. *Canteens* —(1) Rules 65 to 70 shall come into force in respect of any class or description of factories on such dates as the State Government may, by notification in the official *Gazette,* appoint in this behalf.

(2) The occupier of every factory notified by the State Government, and wherein more than two hundred and fifty workers are ordinarily employed shall provide in or near the factory an adequate canteen according to the standards prescribed in these rules.

(3) The manager of a factory shall submit for the approval of the Chief Inspector plans and site plan in duplicate, of the building to be constructed or adopted for use as a canteen.

(4) The canteen building shall be situated not less than fifty feet from any latrine, urinal, boiler, house-coal stacks, ash dumps and any other sources of dust smoke or obnoxious fumes :

Provided that the Chief Inspector may in any particular factory relax the provisions of this sub-rule to such extent as may be reasonable in the circumstances and may require measurse to be adopted to secure the essential purpose of this sub-rule.

(5) The canteen building shall be constructed in accordance with the plans approved by the Chief Inspector and shall accommodate at least a dining hall, kitchen, store room, pantry and washing places separately for workers and for utensils.

(6) In a canteen the floor and inside walls up to a height of 4 feet from the floor shall be made of smooth and impervious material, the remaining portion of the inside walls shall be made smooth by cement plaster or in any other manner approved by the Chief Inspector.

(7) The doors and windows of a canteen building shall be of flyproof construction and shall allow adequate ventilation.

(8) The canteen shall be sufficient lighted at all times when any persons have access to it,

(9)(a) In every canteen —

(i) all inside walls of rooms and all ceilings and passages and staircases shall be lime-washed or colour-washed at least once in each year, or painted once in three years dating from the period when last lime-washed, or painted, as the case may be;

(ii) all wood work shall be varnished or painted once in three years dating from the period when last varnished or painted;

(iii) all internal structural iron or steel work shall be varnished or painted once in three years dating from the period when last varnished or painted :

Provided that inside walls of the kitchen shall be lime-washed once every four months.

(b) Records of dates on which lime-washing, colour-washing, varnishing or painting is carried out shall be maintained in the prescribed Register (Form No. 7).

(10) The precints of the canteen shall be maintained in a clean and sanitary condition. Waste water shall be carried away in suitable cover drains and shall not be allowed to accumulate so as to cause a nuisance. Suitable arrangements shall be made for the collection and disposal of garbage.

66. ***Dining hall*** — (1) The dining hall shall accommodate at a time at least 30 percent of the workers working at a time :

Provided that in any particular factory or in any particular class of factories, the State Government may, by a notification in this behalf, alter the percentage of workers to be accommodated.

(2) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs, shall be not less then 10 square feet per dinner to be accommodated as prescribed in sub— rule (I).

(3) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number. Washing places for women shall be separated and screened to secure privacy.

(4) Sufficient tables, chairs or benches shall be available for the number of dinners to be accommodated as prescribed in sub-rule (1).

67. ***Equipment*** — (1) There shall be provided and maintained sufficient utensils, crockery, cutlery, furniture and any other equipment necessary for the efficient running of the canteen. Suitable clean clothes for the employees serving in the canteen shall also be provided and maintained.

(2) The furniture, utensils and other equipment shall be maintained in a clean and hygienic condition. A service counter, if provided, shall have a top of smooth and impervious material. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipment.

68. ***Prices to be charged***— (1) Food, drink and other items served in the canteen shall be sold on a non-profit basis and the prices charged shall be subject to the approval of the Canteen Managing Committee.

(2) The charge per portion of food-stuff, beverages and any other items served in the canteen shall be conspicuously displayed in the canteen.

69. ***Accounts*** — (1) All books of accounts, registers and other documents used in connection with the running of the canteen shall be produced on demand to an Inspector of Factories.

(2) The accounts pertaining to the canteen shall be audited, once in every twelve months by registered accountants and auditors. The Balance-sheet prepared by the said auditors shall be submitted to the Canteen Managing Committee not later than two months after closing of the audited accounts :

Provided that the accounts pertaining to the canteen in a Government factory having its own Account Department, may be audited in such Department.

70. Managing Committee— (1) The Manager shall appoint a Canteen Managing Committee which shall be consulted from time to time as to —

(a) the quality and quantity of food-stuffs to be served in the canteen;

(b) the arrangement of the menus;

(c) times, meals in the canteen; and

(d) any other matter as may be directed by the Committee.

(2) Canteen Managing Committee shall consist of an equal number or persons nominated by the occupier and elected by the workers. The number of elected workers shall be in the proportion of 1 for every 1,000 workers employed in the factory; provided that in no case shall there be more than 5 or less than 2 workers on the Committee.

(3) The manager shall determine and supervise the procedure for elections to the Canteen Managing Committee.

(4) A Canteen Managing Comittee shall be dissolved by the Manager two years after the last election, no account being taken of a bye-election.

Rules prescribed under sec 47.

71. Shelters, rest-rooms and lunch-rooms — (1) This rule shall come into force, in respect of any class or description of factories, on such dates as the State Government may, by notification in the official *Gazette,* appoint in this behalf.

(2) The shelters, or rest-rooms and lunch-rooms shall conform to the following standards and the manager of a factory shall submit for the approval of the Chief Inspector a site-plan in duplicate of the building to be constructed or adopted —

(a) the building shall be soundly constructed and all the walls and roofs shall be of suitable heat resisting materials and shall be waterproof. The floor and walls to a height of 3 feet shall be so laid or finished as to provide a smooth, hard and impervious surface;

(b) the height of every room in the building shall be not less than 12 feet from floor level to the lowest part of room and there shall be at least 12 square feet of floor areas for every person employed;

Provided that —

(i) workers who habitually go home for their meals during the rest periods may be excluded in calculating the number of workers to be accommodated; and

(ii) in the case of factories in existence at the date of commencement of the Act, where it is impracticable, owing to lack of space to provide 12 square feet of floor area for each person, such reduced floor area per person shall be provided as may be approved in writing by the Chief Inspector;

(c) effective and suitable provision shall be made in every room for securing and maintaining adequate ventilation by the circulation of fresh air and there shall also be provided and maintained sufficient and suitable natural or artificial lighting;

(d) every room shall be adequately furnished with chairs or benches with back-rests;

(e) sweepers shall be employed whose primary duty it is to keep the rooms, building and precincts thereof in a clean and tidy condition.

Rules prescribed under sub-section 3 of section 48

72. Creches — (1) This rule shall come into force, in respect of any class or description of factories, on such dates as the State Government may, by notification in the official *Gazette,* appoint in this behalf.

(2) The creche shall be conveniently accessible to the mothers of the children accommodated therein and so far as is reasonably practicable it shall not be situated in close proximity to any part of the factory where obnoxious fumes, dust or odours are given of or in which excessively noisy processes are carried on.

(3) The building in which the creche is situated shall be soundly constructed and all the walls and roof shall be of suitable heat resisting materials and shall be water-proof. The floor and internal walls of the creche shall be so laid or finished as to provided a smooth impervious surface.

(4) The height of the rooms in the building shall be not less than 12 feet from the floor to the lowest part of the roofs and there shall be not less than 20 sq. feet

of floor area for each child to be accommodated.

(5) Effective and suitable provision shall be made in every part of the creche for securing and maintaining adequate ventilation by the circulation of fresh air.

(6) The creche shall be adequately furnished and equipped and in particular there shall be one suitable cot or cradle with the necessary bedding for each child; provided that for children over two years of age it will be sufficient if suitable beddings is made available, at least one chair or equivalent seating accommodation for the use of each mother while she is feeding or attending to her child, and a sufficient supply of suitable toys for the older children.

(7) A suitable fenced and shady open air play ground be provided for the older children.

Provided that the Chief Inspector may, by order in writing, exempt any factory from complaince with this sub-rule if he is satisfied that there is not sufficient space available for the provision of such a play-ground.

73. Wash-room — (1) There shall be in or adjoining the creche a suitable wash-room for the washing of the children and their clothing. The wash-room shall conform to the following standards —

(a) the floor and internal walls of the room to a height of 3 feet shall be so laid or finished as to provide a smooth impervious surface. The room shall be adequately lighted and ventilated and the floor shall be effectively drained and maintained in a clean and tidy condition;

(b) there shall be at least one basin or similar vessel for every four children accommodated in the creche at any one time together with a supply of water provided, if practicable, through taps from a source approved by the Health Officer. Such source shall be capable of yielding for each child a supply of at least five gallons of water a day;

(c) an adequate supply of clean clothes, soap and clean towels shall be made available for each child while it is in the creche.

(2) Adjoining the washing-room referred to above, a latrine shall be provided for the sole use of the children in the creche. The design of latrine and the scale of accommodation to be provided shall either be approved by the Public Health Authorities, or where there is no such Public Health Authority, be the Chief Inspector of Factories.

74. Supply of milk and refreshment — At least half a pint of clean pure milk

shall be available for each child on every day it is accommodated in the creche and the mother of each child shall be allowed in the course of her daily work three hour's intervals of at least 20 minutes each time to feed the child. For children above two years of age there shall be provided in addition an adequate supply of wholesome refreshment.

75. Clothes for creche staff — The creche staff shall be provided with suitable clean clothes for use while on duty in the creche.

Rules prescribed under section 49 (2) and section 50

Rules 75-A enforced vide notification No. GLR.118/ 51/58. dtd. 8.7.1952

75A. 1. Short title and commencement — (1) These rule may be called Welfare Officers (Recruitment and Conditions of Service) Rules, 1950.

(2) They shall come into force on such date as the State Government may, by notification in the official Gazette, appoint in this behalf.

2. Definitions— In these rules, unless the context otherwise requires —

(a) "Act" means the Factories Act, 1948 (LXII of 1948)\

(b) The expressions "factory" and "occupier" have the meanings respectively assigned to them in the Act.

3. ***Number of Walfare Officers —*** There shall be one Welfare Officer for factories employing between 500 to 2,000 workers per day. Where, the number of workers exceed 2,000 there shall be an Additional Welfare Officer for every additional two thousand workers or fraction thereof over 500. Where there are more than one Welfare Officers, one of them shall be called the Chief Welfare Officer and the other Assistant Welfare Officers.

4. ***Qualifications*** — A person shall not be eligible for appointment as Welfare Officer, unless he — *(a)* possesses a degree of a University, recognised by the State Government in this behalf, *(b)* has obtained a Degree or Diploma in Social Science from any institution recognised by the State Government in this behalf; and *(c)* has adequate knowledge of Assamese and Hindi and of the language spoken by the majority of the workers in the factory to which he is to be attached:

Provided that in the case of person who is acting as a Welfare Officer at the commencement of these rules the State Government may, subject to such conditions as it may specify, relax all or any of the aforesaid qualifications:

Provided further that while preference shall be given to those having a Diploma, the State Government may grant exemption in suitable case until such time as

better facilities in the matter of training in Social Science are made available throughout the country.

Enforced sub rule (5)(6) and (7) of Rule 75(A) vide Notification No. : GLR.159/88/25 dt : 10-04-1991

5. Recruitment ofWelfare Officers — (1) The post of a Welfare Officer shall be advertised in at least two news papers having a wide circulation in the State one of which shall be an English news paper."

(2) The selection shall be made from among the candidates applying for the post by a committee appointed by the occupier of the factory.

(3) The appointment when made shall be notified by the occupier to the State Government or such authority as the State Government may specify for the purpose, giving full details of the qualifications, *etc.* of the officer appointed and the conditions of his service."

6. Conditions of Service of Welfare Officers — *(a)* A Welfare Officer shall be given appropriate status corresponding to the status of the other executive heads of the factory and he shall be started on a suitable scale of pay given to the other executive heads of the Factory as per respective services Rules/Regulations of the employer/occupier.

(b) The conditions of service of a Welfare Officer shall be the same as of other members of the staff of corresponding status in the factory:

Provided that, in the case of discharge or dismissal, the Welfare Officer shall have right of appeal to the State Government whose decision thereon shall be final and binding upon the occupier/employer :

Provided further that before disposal of such an appeal the State Government may give a hearing to the occupier/employer concerned.

7. Duties of Welfare Officer — The duties of Welfare Officer shall be -

(a) to establish contacts and hold consultations with a view to maintaining harmonious relations between the factory management and workers;

(b) to bring to the notice of the factory management the grievances of workers, individual as well as collective, with a view of securing their expeditious redress and to act as a liasion officer between the management and labour;

c) to study and understand the point of view of labour in order to help the factory management to shape and formulate labour policies and to interpret these policies to the workers in a language they can understand;

(d) to watch industrial relations with a view to using his influence in the event of a dispute between the factory management and workers and to help to bring about a settlement by persuasive effort;

(e) to advise on fulfilment by the management and the concerned departments of the factory of obligations, statutory or otherwise concerning regulation of working hours, maternity benefit, medical care, compensation for injuries and sickness and other welfare and social benefit measures;

(f) to advise and assist the management in the fulfilment of its obligation statutory or otherwise, concerning prevention of personal injuries and maintaining a safe work environment, in such factories where a Safety Officer is not required to be appointed under the enabling provisions under Section 40B;

(g) to promote relations between the concerned departments of the factory and workers which will bring about productive efficiency as well as amelioration in the working conditions and to help workers to adjust and adopt themselves to their working environments;

(h) to encourage the formation of Works and Joint Production Committees, Co-operative Societies and Welfare Committees, and to supervise their work;

(i) to encourage provisions of amenities such as canteens, shelters for rest, creches, adequate latrine facilities, drinking water, sickness and benevolent scheme payments, pension and superannuation funds, gratuity payments, granting of loans and legal advice to workers;

(j) to help the factory management in regulating the grant of leave with wages and explain to the workers the provisions relating to leave with wages and other leave privileges and to guide the workers in the matter of submission of application for grant of leave for regulating authorised absence;

(k) to advise on provision of welfare facilities, such as housing facilities, foodstuffs, social and recreational facilities, sanitation, advice on individual personnel problems and education of children;

(I) to advise the factory management on question relating to training of new starters, apprentice workers on transfer and promotion, instruction and supervisors, supervision and control of notice board and information bulletins to further education of workers and to encourage their attendance at technical institutes; and

(m) to suggest measures which will serve to raise the standard of living of workers in general, and promote their well-being.

7A. Welfare Officers not to deal with disciplinary case or appear on behalf of the management against workers. No Welfare Officer shall deal with any disciplinary cases against workers or appear before a conciliation officer in a Court or Tribunal on behalf of the factory management against a worker or workers."

8. Power of exemption — The State Government may, by notification in the official *Gazette,* exempt any factory or class or description of factories from the operation of any of the provisions of these rules subject to compliance with such alternative arrangements as may be approved.

CHAPTER VI

WOKING HOURS OF ADULTS

Rules prescribed under sub-section (2) of section 53

76. *Compensatory holidays* : (1) Except in the case of worker engaged in any work which for technical reason must be carried on continuously throughout the day, the compensatory holidays to be allowed under sub-section (1) of Section 52 of the Act shall be so spaced that not more than two holidays are given in one week.

(2) The Manager of the factory shall display, on or before the end of the month in which holidays are lost, a notice in respect of workers allowed compensatory holidays during the following months and of the dates thereof, at the place at which the notice of periods of work prescribed under Section 61 is displayed. Any subsequent change in the notice in respect of any compensatory holidays shall be made not less than three days in advance of the date of that holiday,

(3) Any compensatory holiday or holidays which a worker is entitled shall be given to him before he is discharged or dismissed and shall not be reckoned as part of any period of notice required to be given before discharge or dismissal.

(4) *(a)* The Manager shall maintain a Register in Form No. 9 :

Provided that if the Chief Inspector of Factories is of the opinion that any muster-roll or register maintained as part of the routine of the factory or return made by the Manager, gives in respect of any or all of the workers in the factory the particulars required for the enforcement of Section 53, he may by order in writing, direct that such muster-roll or register or return shall, to the corresponding extent, be maintained in place of and be treated as the register or return required under this rule for that factory.

(b) The register maintained under clause *(a)* shall be preserved for a period of three years after the last entry in it and shall be produced before the Inspector on demand.

Overtime Muster roll Prescribed under sub-section 4 and 5 of section 59.

77. *Muster-roll for exempted factories*— (1) The Manager of every factory in which workers are exempted under Section 64 or 65 from the provisions of Section 51 or 54 shall keep a muster-roll in Form No. 10 showing the normal piece-work rate of pay, or the rate of pay per hour of all exempted employees. In this muster-roll shall be correctly entered the overtime hours of work and payments therefor of all exempted workers. The muster-roll in Form No. 10 shall always be available for inspection and it shall be preserved for a minimum period of three years after the date of last entry in it.

(2) *Overtime slips*— The exact period or periods of overtime worked by each workers shall be correctly entered in overtime slips in duplicate, a copy of which duly signed by the Manager or by a person duly authorised by him shall be given to the workers concerned immediately after completion of the overtime work.

77.A. The cash equivalent of the advantage accruing through the concessional sale to a worker of food-grains and other articles shall be computed at the end of every wage period fixed under the provisions of the Payment of Wages Act, 1936.

77.B. For the purpose of computing cash equivalent of the advantage accruing

through the concessional sales to a worker of foodgrains and other articles, the difference between the value of foodgrains and other articles at the average rates in the nearest market prevailing during the wages period in which overtime was worked and value of foodgrains and other articles supplied at concessional rates shall be calculated and allowed for the number of overtime hours worked.

This rule shall not apply to any Federal Railway Factory whose alternative method of computation has been approved by the State Government.

Notice Prescribed under sub-section (8) of section 61

78. ***Notice of periods of work for adults and children —*** The notice of periods of work for adult and children workers shall be in Form No. 11.

Register Prescribed under sub-section 2 of section 62

79. ***Register of adult workers*** — The register of adult workers shall be in Form No. 12, provided in a factory exempted from Section 61 in Rule 83, the register may be maintained in Form No. 13.

When the register is maintained in Form No. 13, correct entries of actual starting and stopping times of each worker for each work period shall be made in it at the time when the worker enters the factory to commence work and leaves the factory after completion of his work period, in the "In" and "Out" columns, respectively. The register shall be written in ink either in English or the State language and it shall be preserved for a minimum period of three years.

Rules 80 to 83 prescribed under section 64

80. ***Persons defined to hold positions of supervision or management—*** The following persons shall be deemed to hold positions of supervision of management —

(a) all persons specified in the Schedule annexed hereto;

(b) any other person who, in the opinion of the Inspector, holds a position of supervision or management.

SCHEDULE

List of persons to hold position of supervision or management in factories

1. Managers.
2. Assistant Managers.

3. Engineers.
4. Foremen.
5. Weaving Master and Spinning Master in Textile Mills.
6. Head Electricians.
7. Supervisors and Instructors.

81. ***Persons defined to hold confidential position —*** All time keepers employed in a factory within the meaning of sub-section (1) of Section 2 shall be deemed to be employed in a confidential position in the factory.

82. ***List to be maintained of persons holding confidential position or position of supervision or management*** — A List showing the names and the designations of all persons to whom the provision of sub-section (1) of Section 64 have been applied shall be maintained in every factory.

83. ***Exemption of certain adult male workers —*** Adult male workers engaged in factories specified in column 3 of the Schedule hereto annexed on the work specified in column 4 of the said Schedule shall be exempt from the provisions of the Sections specified in column 5 subject to the conditions, if any, specified in column 6 of the said Schedule.

SCHEDULE

Sl. No.	Section of the Act empowering grant of exemption	Class of factories	Nature of work exempted	Extent of Exemption	Conditions
1	2	3	4	5	6
125 1	64 (2) (a) and 64 (3)	All factories	Urgent repairs	Sections 51, 52, 54, 55, 56 and 61	(i) "Total hours of work done by any worker including the hours of normal work, if any, shall not exceed 15 on any one day, 39 during any three consecutive days or 66 during each period of seven consecutive days commencing from his first employment on such repairs. (ii) No worker shall be employed for more than 14 consecutive days without a rest period of 24 consecutive hours, and and as the work permits a rest period of one hour shall be permited to each worker during his daily working hours. (iii) Within 24 hours of the commencement of the work, a notice shall be sent to the Inspector describing the nature of the urgent repairs, stating the names of the persons employed, the exact time of commencement of work and the period probably required for its completion. A copy of the above notice shall be displayed in accordance with Section 108 (2) of the Act before the workers are engaged on urgent repairs.
126 2	64 (2) (b) and 64 (3)	All factories	(1) Maintenance work in the mechanic shop, the smithy or the foundry or in connection with the mill-gearing, the electric driving or lighting apparatus, the mechanical or elctrical lifts or the steam or water pipe or pumps of a factory. (2) Work of examining or repairing any machinery or other part of the plaint which is necessary to carry on the work in factory.	Sections 51, 54, 55, 56 and 61	(i) These exemptions shall apply in case of the limited number of maintenance staff approved in writing by the Chief Inspector of Factories. The occupier or manager of the factories before availing of these exemptions shall apply to the Chief Inspector for necessary approval of staff. (ii) No worker shall be employed for more than 10 hours in any one day, and spread over hours shall be limited to 12 in any day. (iii) Total number of hours of overtime work done by any workers shall not exceed 50 in any one quarter.

Sl. No.	Section of the Act empowering grant of exemption	Class of factories	Nature of work exempted	Extent of Exemption	Conditions
1	2	3	4	5	6
			(3) Work in boiler houses and engine rooms, such as lighting fires in order to raise steam or generate gas prepatory to the commencement of regular work in the factory.		
3	64 (2) (c) and 64 (3)	All factories	Work performed by factories drivers on lighting, ventilating and humidifying apparatus, work performed by fire pumpmen, work of loading unloading or transporting raw materials in factries where such work is intermitent and mainly outside the factory premises	Sections 51,54, 55, 56 and 61	(i) The exemptions shall apply to a limited number of adult male workers to be approved by the Chief Inspector of Factories. A list of such workers shall be submitted to Chief Inspector of Factories for approval prior to the exemptions being availed. (ii) No worker shall be employed for more than 10 hours in any one day, (iii) Total number of hours of overtime work done by any worker shall not exceed 50 in any one quarter. (iv) Spread over hours shall not exceed 12.
4.	64 (2) (d) and 64 (3)	Oil tank installations	Work in connection with pumping operation	Sections 51,52, 54, 55, 56 and 61	(i) The worker shall ordinarily be employed on daily eight hours shifts.
		Oil Refineries	All continuous process work in refining crude petroleum,	-do-	(ii) No such worker shall be employed for more than 14 consecutive days without a rest period of 24 consecutive hours.
		Iron and Steel Factory	All work on steel furnace.	-do-	(iii) No worker shall be employed for more than 10 hours in any one day except to enable a shift worker to work a part or the whole of a subsequent shift in the absence of a worker who has failed to report for duty in time for a part of the whole shift, in which case the daily maximum hours of work shall be limited to 16.
		Calcining work	Continuous process of Calcination of Coke.	-do-	(iv) Total number of hours of over time work done by any worker shall not exceed 50 in any one quarter. (v) The system of shift used in the factory shall have the approval of the Chief Inspector.

Sl. No.	Section of the Act. empowering grant of exemption	Class of factories	Nature of work exempted	Extent of Exemption	Conditions
1	2	3	4	5	6
					(vi) Spread over hours shall not exceed 12 except to enable a shift worker to work a part or the whole of a subsequent shift in the absence of a worker who has faild to report for duty in time or for the whole shift.
		Hydro-electric Public supply factory	Operation and maintenance of prime movers and auxiliaries, transformers and switches.	Sections 51, 52, 54, 55 and 61	(i) No worker shall be employed for more than 14 consecutive days without a rest period of 24 consecutive hours. (ii) No worker shall be employed for more than 10 hours in any one day except to facilitate a change of shift. (iii) Total overtime hours of work shall not exceed 50 in any quarter.
		Public Electric Supply companies generating electricity with thermal pnower.	Workers attending to boilers, turbines, engines, generators, motors, switch boards, pumps, batteries and auxiliaries.	-do-	
		Electrical Transforming Factories	Operation and maintenance of transforming plant, switches and synchronous condensers.	Sections 51, 52, 54, 55 and 61	-do-
		Water works and water pumping station	The work of attending to boilers, prime movers, pumps and auxiliaries.	-do-	-do-
		Distilleries	Attendance of boilers, prime movers and pumps, extraction of sugar from various bases, fermentation of sugar juice and wash distillation processes.	-do-	-do-
		Chemical factories.	Work on sulphur burners, chambers, concentrators and pumps, roasting furnace, manufacture of hydrochloric acid, nitric acid, sulphuric acid, sulphates, sulphides,	-do-	(i) No worker shall be employed for more than 14 consecutive days without a rest period of 24 consecutive hours. (ii) No worker shall be employed for more than 10 hours in any one day except to enable a shift worker to work a part or the whole of a subsequent shift in the absence of worker who has failed to report for duty in time or for the whole shift.

Sl. No.	Section of the Act. empowering grant of exemption	Class of factories	Nature of work exempted	Extent of Exemption	Conditions
1	2	3	4	5	6
131			nitrates, chlorides, superphosphates. Work on steam service.		(iii) Total overtime of work shall not exceed 50 in any quarter.
		Vegetable oil Hydrogeneration factories	Work of refining, bleaching, filtering, generation of hydrogen, hydrogeneration and deodorising processes, compressing of oxygen, charging of cylinders, work on power equipment.	Sections 51, 52, 54, 55 and 61	(i) No worker shall be employed for more than 14 consecutive days without a rest period of 24 consecutive hours. (ii) No worker shall be employed for more than 10 hours in any one day except to enable a shift worker to work a part or the whole of subsequent shift in the absence of a worker who has failed to report for duty in time or for the whole shift. (iii) Total overtime hours of work shall not exceed 50 if any one quarter.
		Ice Factories	Work of engine and compressors drivers, assistants and oilers, work on the ice making machinery.	-do-	**-do-**
		Glass factories	Work in attending to furnace.	Sections 52 and 55	No worker shall be employed for more than 14 consecutive days without rest period of 24 consecutive hours.
			All process work from mixing of batch to removal of manufactured glass-ware from the lears.	Section 52	
		Paper factories	All work on paper making mechinery and on the generation and supply of power connected therewith.	Sections 54 and 55	No worker shall be employed for more than 10 hours in any one day, and for more than 14 consecutive days without a rest period of 24 consecutive hours.
		Paper factories	Work on choppers, digesters, kneaders, strainers and washers, beaters, paper making machines, pumping plant, reel-ers, cutters and power plant	Sections 52, 54 and 55	Do.
132		Ply wood factories	The continuous process work of cutting, gumming, pressing and drying of ply-wood.	Section 55	If the process is carried on throughout the day.

Sl. No.	Section of the Act. empowering grant of exemption	Class of factories	Nature of work exempted	Extent of Exemption	Conditions
1	2	3	4	5	6
	64 (2)(c) and 64(3)	Mustard Oil Mills	The work of ghan-nymen only	Section 55	No worker shall be employed for more than 14 consecutive days without a rest period of 24 consecutive hours.
	64 (2)(g) and 64(3)	Tea factories	The work of rolling, fermenting, firing, sorting, cleaning and packing in the tea manufacturing process.	Sections 52, 55 and 61.	
	64 (2)(g) and 64(3)	Rice Mills paraboiling process	The work of paraboiling only	Do	Do
		Flour Mills	All work	Sections 52, and 55	Do

	64 (2)(i) and 64(3)	Printing Press	Work of printing news papers in case it is held up due to break down of machinery.	Sections 51, 54 and 56	No worker shall be employed for more than 10 hours on any day and the total number of hours of overtime work done by any worker shall not exceed 50 in any quarter.
5.	64 (2)(d) and 64(3)	Factories manufacturing as-be s t o s products.	All continuous process work	Sections 51, 52,54, 55, 56 and 61	(i) The workers shall ordinarily be employed on daily eight hours shifts. (ii) No such worker shall be employed for more than 14 consecutive days without a rest period of 24 consecutive hours. (iii) No worker shall be employed for more than 10 hours in any one day except to enable a shift workers to work a part or the whole of a subsequent shift in the absence of as worker who has failed to report for duty in time or for the whole shift in which care the daily maximum hours of work shall be limited to 16. (iv) Total number of hours of overtime work done by any worker shall not exceed 50 in any quarter. (v) The system of shift used in the factory shall have the approval of the Chief Inspector. (vi) Spread over hours shall not exceed 12 except to enable a shift worker to work a part or whole to a subsequent shift in the absence of a worker who has failed to report for duty in time or for the whole shift."]

* Inserted in Schedule of Rule 83 after the existing provision, Serial "4" vide Notification No. GLR. (RC) 72789/30, dated 13th July, 1990.

Explanations — (1) For the purposes of this Rule (R. 83) "urgent repair" shall mean —

(a) Repairs to any part of the machinery, plan or structure of a factor which are of such a nature that delay in their execution woul involve danger to human life safety or the stoppage of the manufacturing process.

(b) Breakdown repairs to the prime movers, transmission or othe essential plant of other factories, collieries, railways, dockyard harbours, tramways, motor transport, gas, electric generation and transmission, pumping or other similar essential or public utility services carried out in general engineering works and foundries and which are necessary to enable such concerns to maintain their main manufacturing process, production or service during normal working hours.

(c) Repairs to deep sea ships and repairs to commercial air-craft done in a factory which are essential to enable such ships or air-craft leave port at proper time or continue their normal operations lot sea or air-worthy condition, as the case may be, and break down repairs to Inland Water Transport Vessels which are essential to enable such vessels to continue their normal operations.

(d) Repairs in connection with a change of motive power, *e.g.* from steam to electricity *vice-versa,* which such work cannot possibly be done without stoppage of the normal manufacturing process.

(1) Periodical cleaning is not included in the terms "examining or "repairing";

(2) "Maintenance" for the purpose of this rule means normal upkeep of power plant, transmission mechinery, electric motors and their switch gears and cables.

Note: In all the factories where exemption from Section 52, is availed of, compensatory holiday must be given in accordance with Section 53 of the Act and where exemptions from Sections 51 and 54 are availed of overtime wages must be paid in accordance with Section 59 of the Act.

CHAPTER VII
EMPLOYMENT OF YOUNG PERSONS

Rule 84 prescribed under sub-section 7of sec. 69
Ins. Rule 84 vide notification No.GLR(RC) 72/89/30 dt. 13-07-90

84. ***Certificate of fitness*** — (1) For granting of certificate of fitness to the young persons to be employed in a factory, the occupier of the factory

shall pay fees at the rate of Rs. 50.00 for each such certificate.

(2) The same fee shall be charged for the renewal of certificate of fitness as for the grant thereof.

(3) The fees payable for issuing certificate of fitness shall be paid into local Treasury under the Head of Account "0230 — Labour and Employment 104, Fees under the Factories Act, 1948.

Notice prescribed under sub-section 3 of section 72

84 A. ***Notice of periods of work for children —*** The notice of periods of work for child workers shall be in Form No. 11".

Register prescribed under sub-section 2 of sec. 73

85. ***Register of Child workers*** — (1) The register of child workers shall be in Form No. 14.

(2) *Omitted*

(3) *Omitted*

(4) *Omitted"*

(5) The fees shall be paid into the local treasury under the Head of Account "0230 - LABOUR AND EMPLOYEMENT 104 " - Fees under the Factories Act, 1948."]

CHAPTER VIII
LEAVE WITH WAGES

Rule 85(A) prescribed under sec. 80

85A. The cash equivalent of the advantage accruing through the concessional sale of foodgrains and other articles payable to workers proceeding on leave shall be the difference between the value at the average rates in the nearest market prevailing during the month immediately preceding his leave and the value at the concessional rates allowed of the foodgrains and other articles he is entitled to.

For the purpose of the cash equivalent monthly average market rates of foodgrains and other articles shall be completed at the end of every month.

Rule 86 to 93 Prescribed under section 83 and 112

86. Leave with Wages Register — (1) The manager shall keep a register in Form No. 15 hereinafter called the Leave with Wages Register :

Provided that if the Chief Inspector is of the opinion that any muster roll or

register maintained as part of the routine of the factory or return made by the manager, gives, in respect of any or all of the workers in the factory, the particulars required for enforcement of Chapter VIII of the Act, he may, by order in writing, direct that such muster roll or register or return shall, to the corresponding extent, be maintained in place of and be treated as the register or return required under this rule in respect of that factory.

(2) The Leave with Wages Register shall be preserved for a period of three years after the last entry in it and shall be produced before the Inspector on demand.

87. Leave Book — (1) The manager shall provide each worker who has become entitled to leave during a calendar year, with a book in Form No. 16 (hereinafter called the Leave Book) not later than the 31st January of that year. The Leave Book shall be the property of the worker and the manager or his agent shall not demand it except to make entries of the dates of holidays or interruptions in service, and shall not keep it for more than a week at a time :

Provided that in the case of worker who is discharged or dismissed from service during the course of the year *i.e.,* who is covered under subsection (3) of Section 79 of the Factories Act, 1948, the manager shall issue an abstract from the "Register of Leave with Wages (Form No, 15)" within a week from the date of discharge or dismissal, as the case may be.

(2) If a worker loses his Leave Book, the manager shall provide him another copy on the payment of 25 paise and shall complete it from his record.

88. ***Medical Certificate*** — If any worker is absent from work due to his illness and he wants to avail himself of the leave with wages due to him to cover the whole or part of the period of his illness under the provisions of clause (7) of Section 79 of Chapter VIII as revised by the Factories Act (Amended 1954), he shall, if required by the manager, produce a medical certificate signed by a registered medical pratitioner or by a registered or recognised Vaid or Hakim stating the cause of the absence and the period for which the worker is, in the opinion of such medical pratitioner, Vaid or Hakim, unable to attend to his work, during the period for which the leave is to be availed of.

89. ***Notice to Inspector of involuntary unemployment*** — The manager shall give, as soon as possible, a notice to the Inspector of every case of involuntary unemployment of workers, giving number of unemployed and the reason for

their unemployment. Entries to this effect shall be made in the Leave with Wages Register and the Leave Book in respect of each worker concerned.

90. ***Notice by worker*** — Before or at the end of every calendar year, a worker, who may be required to avail of leave in accordance with subsection (8) of Section 79 of the Factories Act, 1948, may give notice to manager of his intention not to avail himself of the leave with wages falling due in the following calendar year. The manager shall make an entry to that effect in the Leave with Wages Register and in the Leave Book of worker concerned.

91. ***Notice of leave with wages*** — (1) As far as circumstances permit, members of the same family comprising husband, wife and children shall be allowed leave on the same date.

(2) A worker may exchange the period of his leave with another worker, subject to the approval of the Manager.

92. ***Payment of wages if the worker dies*** — If a worker dies before he resumes work, the balance of his pay due for the period of leave with wages not availed of shall be paid to his nominee within one week of the intimation of the death of the worker. For this purpose each worker shall submit a nomination in Form No. 31 duly signed by himself and attested by two witnesses. The nomination shall remain in force it is cancelled or revised by another nomination.

93. ***Register to be maintained in case of exemption under Section 84 -***

(1) Where an exemption is granted under Section 84, the manager shall be maintained a register showing the position of each worker as regards leave due, leave taken and wage granted.

(2) He shall display at the main entrance of the factory of the notice, giving full details of the system established in the factory for leave with wages and shall send a copy of it to the Inspector.

(3) No alteration shall be made in the Scheme approved by the State Government at the time of granting exemption under Section 84 without its previous sanction.

CHAPTER IX
SPECIAL PROVISION

Rules prescribed under section 87

94. ***Dangerous operations*** — (1) The following operations when carried on in any factory are declared to be dangerous operations under Section 87—

1. Manufacture of aerated of water and processes incidental thereto.
2. Electrolytic plating or oxidation of metal articles by use of an electrolyte containing chromic acid or other chromium compounds.
3. Manufacture and repair of electric accumulators.
4. Glass manufacture.
5. Grinding or glazing of metals.
6. Manufacture and treatement of lead and certain compounds of lead.

Schedule (8) Substituted vide Notification No. GLR 151/65/6 Dtd. 23-11-66

7. Generation of gas from dangerous petroleum.
8. Cleaning or smoothing, roughening of articles by a jet of sand metal shot or grit or other abrasive propelled by a blast of compressed air or steam.
9. Liming and tanning of raw hides and skins and processes incidental thereto.
10. Manufacture of Pottery.
11. Manufactures in chemical works and processes incidental thereto.
12. Printing Presses and Type Foundries Certain lead processes carried therin.
13. Compression of Oxygen and Hydrogen produced by electrolysis of water.
14. Manufacture, handling and use of benzene and substances containing benzene.
15. Process of extracting oils and fats from vegetable and animal source in solvent extraction plants.

Schedule (15) inserted vide notification No. GLR (RC) 43/86/ 241 Dtd. 5-5-93

16. Manipulation of stone of any other materials containing free silica.
17. Handling and processing of asbestos, manufacture of any article of asbestos and any other process of manufacture or otherwise in which asbestos is used in any form.
18. Handling or manipulation of corrosive substances.

Schedule XVI to XXV inserted vide notification No. GLR (RC) 43/86/ 94 Dtd. 02-02-91 (w.e. f. 19-02-92)

19. Manufacture or manipulation of Manganese and its compounds.
20. Manufacture and manipulation of dangerous pesticides.
21. Manufacturing process or operation in carbon disulphide.
22. Manufacturing or manipulation of carcinogenic dye intermediates.
23. Operations involving high noise level.
24. Manufacture of rayon by viscose process.
25. Manufacture, storing, handling and use of highly flammable liquids and flammable compressed gases.

(2) The provisions specified in the Schedule hereto shall apply to any class or description of factories wherein dangerous operations specified in each Schedule are carried out.

(3) This rule shall came into force in respect of any class or description of factories, wherein the said operations are carried on, on such dates as the State Government may by notification in the official Gazette appoint in this behalf.

Inserted sub- rule (4) a,b,c vide notification No. GLR (RC) 72/89/30 dtd. 13-07-1990 (w.e. f. 27-07-1990)

(4)(a) For medical examinations of workers to be carried out by the certifying surgeon as required by the schedules annexed to this rule, the occupier of the factory shall pay fees at the rate of Rs. 30.00 per examination of each worker every time he is examined.

(b) The fees prescribed in sub-rule (4) *(a)* shall be exclusive of any charges for biological, radiological or other tests which may have to be carried out in connection with the medical examination. Such charges shall be paid by the occupier.

(c) The fees to be paid for medical examinations shall be paid into local

treasury under the head of account "0230 - Labour & Employment 104 Fees under the Factories Act, 1948."

SCHEDULE I
MANUFACTURE OF AERATED WATER AND PROCESSES INCIDENTIAL THERETO

1. ***Fencing of machines*** — All machines for filling bottles or syphons shall be so constructed, placed or fenced as to prevent, as far as may be practicable, a fragment of a bursting bottle or syphon from striking any person employed in the factory.

2. ***Face guards and gauntlets*** — (1) The occupier shall provide and maintain in good condition for the use of all persons engaged in filling bottles or syphons—

(a) suitable face-gaurds to protect the face, neck and throat; and

(b) suitable gauntlets for both arms to protect the whole hand and arms:

Provided that —

(i) Paragraph 2 (1) shall not apply whether bottles are filled by means of an automatic machine so constructed that no fragment of a bursting bottle can escape, and

(ii) where a machine is so constructed that only one arm of the bottle at work upon it is exposed to danger, a gauntlet need not be provided for the arm which is not exposed to danger.

(2) The occupier shall provide and maintain in good condition for the use of all persons engaged in corking, crowning, screwing, wiring, foiling, capsuling, sighting or labelling bottles or syphons —

(a) suitable face-guards to protect the face, neck and throat; and

(b) suitable gauntlet for both arms to protect the arm and at least half of the palm and the space between the thumb and forefinger.

3. ***Wearing of face guards and gauntlets*** — All persons engaged in any of the processes specified in paragraph 2 shall, while at work in such processes, wear the face-guards and gauntlets provided under the provisions of the said paragaraph.

SCHEDULE II
ELECTROLYTIC PLATING OR OXIDATION OF METAL ARTICLES BY USE OF AN ELECTROLYTE CONTAINING CHROMIC ACID OR OTHER CHROMIUM COMPOUNDS

1. ***Definitions — For the purposes of this Schedule —***

(a) "Electrolytic chromium process" means the electrolytic plating or oxidation of metal articles by the use of an electrolyte containing chromic acid or other chromium compounds;

(b) "Bath" means any vessel used for an electrolytic chromium process or for any subsequent process;

(c) "Employed" means in paragraphs 5,7, 8 and 9 of this Schedule, employed in any process involving contact with liquid from a bath;

(d) "Suspension" means suspension from employment in any process involving contact with liquid from any bath by written certificate in the Health Register, signed by the Certifying Surgeon, who shall have power of suspension as regards all persons employed in any such process.

2. ***Exhaust draught*** — An efficient exhaust draught shall be applied to every vessel in which an electrolytic chromium process is carried on. Such draught shall be provided by mechanical means and shall operate on the vapour or spray given off in the process as near as may be at the point of origin. The exhaust draught appliance shall be so constructed, arranged and maintained as to prevent the vapour or spray entering into any room or place in which work is carried on.

3. ***Prohibition relating to women and young persons*** — No woman, adolescent or child shall be employed or permitted to work at a bath.

4. ***Floor of work-rooms*** — The floor of every room containing a bath shall be impervious to water. The floor shall be maintained in good and level condition and shall be washed down at least once a day.

5. ***Protective clothing*** — (1) The occupier of the factory shall provide and maintain in good and clean condition the following articles of protective clothing for the use of all persons employed on any process at which they are liable to

come in contact with liquid from a bath and such clothing shall be worn by the persons concerned —

(a) water-proof aprons and bids; and

(b) for persons actually working at a bath, loose-fitting rubber gloves and rubber books or other water-proof footwear.

(2) The occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and adequate arrangements for the drying of the protective clothing.

Rules prescribed under section 87

6. *Medical requisites* — The occupier shall provide and maintain a sufficient supply of suitable ointment and impermeable water-proof plaster in a separate box readily accessible to the workers and used solely for the purpose of keeping the ointment and plaster.

7. *Medical examination* *(a)* — Every person employed shall be examined by the Certifying Surgeon once in every 14 days and such examination shall be taken place at the factory.

(b) A Health Register in the prescribed Form No. 17 shall be kept by the occupier of the factory and it shall be entered the names of all persons employed together with such entries as the Certifying Surgeon may make from time to time.

(c) No person after suspension shall be employed without written sanction from the Certifying Surgeon entered in or attached to the Health Register.

8. *Cautionary Placard* — A Cautionary placard in the form specified by the Chief Inspector and printed in the language of the majority of the workers employed shall be affixed in a prominent place in the factory where it can be easily and conveniently read by the workers.

9. *Weekly examination* — A responsible person appointed in writing by occupier of the factory shall twice in every week inspect the hands and forearms of all persons employed and shall keep a record of such inspections in the Health Register.

SCHEDULE III

MANUFACTURE AND REPAIR OF ELECTRIC ACCUMULATORS

1. Savings — This Schedule shall not apply to the manufacture or repair of electric accumulators .or parts thereof not containing lead or any compound of lead; or to the repair on the premises, of any accumulator forming part of a stationary battery.

2. Definitions — For the purposes of this Schedule —

(a) "Lead process" means the melting of lead or any material containing lead, casting, pasting, lead burning, or any other work, including trimming, or any other abrading or cutting of pasted plates, involving the use, movement or manipulation of, or contact with, any oxide of lead,

(b) "Manipulation of raw oxide of lead" means any lead process involving any manipulation or movement of raw oxides of lead other than its conveyance in a receptacle or by means of an implement from one operation to another.

(c) "Suspension" means suspension from employment in any lead process by written certificates in the Health Register (Form No.17) signed by the Certifying Surgeon, who shall have power of suspension as regards all persons employed in any such process.

3. Prohibition relating to women and young persons — No woman or young person shall be employed or permitted to work in any lead process or in any room in which the mainpulation of raw oxide of lead or pasting is carried on.

4. Separation of certain processes — Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one another, and from any other process —

(a) Manipulation of raw oxide of lead,

(b) Pasting,

(c) Drying of pasted plates,

(d) Formation with lead burning ("tacking") necessarily carried on in connection therewith,

(e) Melting down of pasted plates.

5. Air space — In every room in which a lead process is carried on, there shall be at least 500 cubic feet of air space for each person employed therein, and in-computing this air space no heigh over 12 feet shall be taken into account.

6. Ventilation — Every workroom shall be provided with inlets and outlets of adequate size as to secure and maintain efficient ventilation in all parts of the room.

7. Distance between workers in pasting room — In every pasting room the distance between the centre of the working position of any paster and that of the paster working nearest to him shall not be less than five feet.

8. Floor of workrooms — (1) The floor of every room in which a lead process is carried on shall be —

(a) of cement or similar material so as to be smooth and impervious to water;

(b) maintained in sound condition;

(c) kept free from materials, plant, or other obstruction not required for, or produced in, the process carried on in the room.

(2) In all such rooms other than grid casting shops the floor shall be cleaned daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room.

(3) In grid casting shops the floor shall be cleaned daily.

(4) Without prejudice to the requirements of sub-paragraphs (1), (2) and (3), where manipulation of raw oxide of lead or pasting is carried on, the floor shall also be —

(a) kept constantly moist while work is being done;

(b) provided with suitable and adequate arrangements for drainage;

(c) thoroughly washed daily by means of hose pipe.

9. Work-benches — The work benches at which any lead process is carried on shall —

(a) have a smooth surface and be maintained in sound condition;

(b) be kept free from all materials or plant not required for or produced in, the process carried on thereat;

and all such work-benches other than those grid casting shops shall —

(*c)* be cleaned daily either after being thoroughly damped or by means of a such cleaning apparatus at a time when no other work is being carried on thereat;

and, all such work-benches in grid casting shops shall —

(d) be cleaned daily;

and every work-bench used for pasting shall —

(e) be covered through out with sheet lead or other impervious material;

(f) be provided with raised edges;

(g) be kept constantly moist while pasting being carried on.

10. Exhaust draught — The following process shall not be carried on without the use of an efficient exhaust draught —

(a) Melting of lead or materials containing lead;

(b) Manipulation of raw oxide of lead, unless done in an enclosed apparatus so as to prevent the escape of dust into the workroom;

(c) Pasting;

(d) Trimming, brushing, filling or any other abrading or cutting of pasted plates giving rise to dust;

(e) Lead burning, other than —

(i) "tacking" in the formation room;

(ii) chemical burning for the making of lead linings for cell cases necessarily carried on in such a manner that the application of efficient exhaust is impracticable.

such exhaust draught shall be effected by mechanical means and shall operate on the dust or fume given off as nearly as may be to its point of origin, so as to prevent it entering the air of any room in which persons work.

11. ***Fumes and gases from melting pots***— The products of combustion produced in the heating of any melting pot shall not be allowed to escape into a room in which persons work.

12. Container for dross — A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptacle shall be kept covered while in the workroom, except when dross is being deposited therein.

13. Container for lead waste — A suitable receptacle shall be provided in every workroom in which old plates and waste material which may give rise to dust shall be deposited.

14. Racks and shelves in drying room — The racks or shelves provided in any

drying room shall not be more than 8 feet from the floor nor than 2 feet in width; provided that as regards racks or shelves set or drawn from both sides the total width shall not exceed 4 feet.

Such racks or shelves shall be cleaned only after being thoroughly damped unless an efficient suction cleaning apparatus is used for this purpose.

15. Medical examination — *(a)* Every person employed in a lead process shall be examined by the Certifying Surgeon within the seven days preceding or following the date of his first employment in such process and thereafter shall be examined by the Certifying Surgeon once in every calendar month, or at such other intervals as may be specified in writing by the Chief Inspector, on a day of which due notice shall be given to all concerned.

"First employment" means first employment in a lead process in the factory or workshop and also re-employed therein in a lead process following any cessation of employment in such process for a period exceeding three calendar months.

(b) A Health Register in Form No. 17 containing the names of all persons employed in a lead process shall be kept.

(c) No person after suspension shall be employed in a lead process without written sanction from the Certifying Surgeon entered in or attached to the Health Register.

16. Protective clothing — Protective clothing shall be provided and maintained in good repair for all persons employed in —

(a) manipulation of raw oxide of lead;

(b) pasting;

(c) the formation room;

and such clothing shall be worn by the persons concerned. The protective clothing shall consist of a water-proof apron and water-proof footwear; and, also as regards persons employed in the manipulation of raw oxide of lead or in pasting, head coverings. The head coverings shall be washed daily.

17. Mess-room — There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable mess-room, which shall be furnished with *(a)* sufficient tables and benches, and *(b)* adequate means for warming food.

The mess-room shall be provided under the charge of a responsible person, and shall be kept clean.

18. Cloak-room — There shall be provided and maintained for the use of all persons employed in a lead process —

(a) a clock-room for clothing put off during working hours with adequate arrangements for drying the clothing if wet. Such accommodation shall be separate from any mess-room;

(b) separate and suitable arrangements for the storage of protective clothing provided under paragraph 16.

19. Washing facilities — There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in a lead process —

(a) a wash place under cover, with either —

(i) a trough with a smooth impervious surface fitted with a waste pipe, without plug and of sufficient length to allow of at least two feet for every five such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than two feet; or

(ii) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water laid on;

(iii) a sufficient supply of clean towels made of suitable materials renewed daily, which supply, in the case of pasters and persons employed in the manipulation of raw oxide of lead; shall include a separate marked towel for each such worker; and

(iv) a sufficient supply of soap or other suitable cleansing material and of nail brushes;

(b) there shall, in addition, be provided means of washing in close proximity to the rooms in which manipulation of raw oxide of lead or pasting is carried on if required by notice in writing from the Chief Inspector.

20. Time to be allowed for washing — Before each meal and before the end of day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each person who has been employed in the manipulation of raw oxide of lead or in pasting :

Provided that if there be one basin or two feet of trough for each such persons this Rule shall not apply.

21. Facilities for bathing — Sufficient bath accommodation to the satisfaction

of the Chief Inspector shall be provided for all persons engaged in the manipulation of raw oxide of lead or in pasting, and a sufficient supply of soap and clean towels.

22. Foods, drinks, etc., prohibited in work-room— No food, drink, pan, supari or tobacco shall be consumed or brought by any worker into any work-room in which any lead process is carried on.

SCHEDULE IV
GLASS MANUFACTURE

1. ***Exemption*** — If the Chief Inspector is satisfied in respect of any factory or any class of process that, owing to the special methods of work or the special conditions in a factory or otherwise, any of the requirements of this Schedule can be suspended or relaxed without danger to the persons employed therein, or that the application of this Schedule or any part thereof is for any reason impracticable, he may by certificate in writing authorise such suspension or relaxation, as the case may be, indicated in the certificate for such period and on such conditions as he may think fit.

2. ***Definitions*** — For the purpose of this Schedule —

(a) "Efficient exhaust draught" means localised ventilation effected by mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them (as far as practicable under the atmospheric conditions usually prevailing) from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume, or dust originate.

(b) "Lead Compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution of hydrochloric acid and quantity of soluble lead compound exceeding, when calculated as lead monoxide, five percent of the dry weight of the portion taken for analysis.

The method of treatment shall be as follows :

A weighed quantity of the material which has been dried at 100 degree C and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 percent by weight of hydrogen chloride. This solution shall

thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filterate shall then be precipitated as lead sulphide and weighed as lead sulphate.

(c) "Suspension" means suspension from employment in any process specified in Paragraph 3 by written certificate in the Health Register Form No. 17 signed by the Certifying Surgeon who shall have power of suspension as regard all persons employed in any such process.

3. ***Exhaust draught***— The following process shall be carried on except under an efficient exhaust draught or under such other conditions as may be approved by the Chief Inspector —

(a) the mixing of raw materials to form a "batch";

(b) the dry grinding, glazing and polishing of glass or any article of glass;

(c) all process in which hydrofluoric acid fumes or ammoniacal vapours are given off;

(d) all process in the making of furnace moulds or "pots" including the grinding or crushing of used "pots";

(e) all process involving the use of a dry lead compound.

4. ***Prohibition relating to women and young persons***— No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 3 or at any place where such operations are carried on.

5. ***Floors and work-benches***— The floor and work-benches of every room in which a dry compound of lead is manipulated or in which any process is carried on giving off silica dust shall be kept moist and shall comply with the following requirements.

The floor shall be—

(a) of cement or similar material so as to be smooth and impervious to water;

(b) maintained in sound condition; and

(c) cleansed daily after being throughly sprayed with water at a time when no other work is being carried on in the room.

The work-benches shall —

(a) have a smooth surface and be maintained in sound condition; and

(b) be cleansed daily either after being thoroughly damped or by means of a suction cleaning apparatus at a time when no other work is being carried on thereat.

6. Use of hydrofluoric acid— The following provisions shall apply to rooms in which glass is treated with hydrofluoric acid —

(a) there shall be inlets and outlets of adequate size so as to secure and maintain efficient ventilation in all parts of the room;

(b) the floor shall be covered with guttaparcha and be tight and shall slope gently down to a covered drain;

(c) the workplaces shall be so enclosed in projecting hoods that openings required for bringing in the objects to be treated shall be as small as practicable; and

(d) the efficient exhaust draught shall be so contrived that the gases are exhausted downwards.

7. ***Storage and transport of hydrofluoric acid*** — Hydrofluoric acid shall not be stored or transported except in cylinders or receptacles made of lead or rubber.

8. ***Blowpipes*** — Every glass blower shall be provided with a separate blow pipe bearing the distinguishing mark of the person to whom it is issued and suitable facilities shall be readily available to every glass blower for sterilising his blow pipe.

9. ***Food, drinks, etc., prohibited in work-rooms*** — No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any room or work-place wherein any process specified in paragraph 3 is carried on.

10. ***Protective clothing***— The occupier shall provide, maintain in good repair and keep in a clean condition for the use of all persons employed in the processes specified in paragraph 3 suitable protective clothing, footwear, and goggles according to the nature of the work, and such clothing, footwear, *etc.,* shall be worn by the persons concerned.

11. ***Washing facilities*** — There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in the process specified in paragraph 3 —

(a) a wash place with either —

(i) a trough with a smooth impervious surface fitted with a waste pipe, without plug, and of sufficient length to allow of at least two feet for every five such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 2 feet; or

(ii) at least one wash basin for every five such persons employed at any time, fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available.

(b) a sufficient supply of clean towels made of suitable material renewed daily with a sufficient supply of soap or other suitable cleaning material and of nail brushes; and

(c) a sufficient number of stand pipes with taps — The number of location of such stand pipes be to the satisfaction of the Chief Inspector.

12. ***Medical examination***— *(a)* Every person employed in any process specified in Paragraph 3 shall be examined by the Certifying Surgeon within seven days preceding or following the date of his first employment in such process and thereafter shall be examined by the Certifying Surgeon once in every calendar month or at such other intervals as may be specified in writing by the Chief Inspector on a day of which due notice shall be given to all concerned.

(b) A Health Register in Form No. 17 containing the names of persons employed in any process specified in Paragraph 3 shall be kept;

(c) No person after suspension shall be employed in any process specified in Paragraph 3 without written sanction from the certifying Surgeon entered in or attached to the health register.

SCHEDULE V
GRINDING OR GLAZING OF METALS AND PROCESS INCIDENTAL THERETO

1. ***Definitions*** — For the purposes of this Schedule —

(a) "Grindstone" means a grindstone composed of natural or manufactured sandstone but does not include a metal wheel or cylinder into which blocks of natural or manufactured sandstone are fitted;

(b) "Abrasive Wheel" means a wheel manufactured of bonded emery or

similar abrasive;

(c) "Grinding" means the abrasion, by aid of mechanical power, of metal, by means of a grindstone or abrasive wheel;

(d) "Glazing" means the abrading, polishing or finishing, by aid of mechanical power, of metal, by means of any wheel buff, mop or similar appliance to which any abrading or polishing substance is attached or applied;

(e) "Racing" means the turning up, cutting or dressing of a revolving grindstone before it brought into use for the first time;

(f) "Hacking" means the chipping of the surface of a grindstone by a hack or similar tool;

(g) "Rodding" means the dressing of the surface of a revolving grindstone by the application of a rod, bar or strip of metal to such surface.

2. ***Exception***— (1) Nothing in this Schedule shall apply to any factory in which only repairs are carried on except any part thereof in which one or more persons are wholly or mainly employed in the grinding or glazing of metals.

(2) Nothing in this Schedule except Paragraph 4 shall apply to any grinding or glazing of metals carried on intermittently and at which no person is employed for more than 12 hours in any week.

(3) The Chief Inspector may by certificate in writing subject to such condition as he may specify therein, relax or suspend any of the provisions of this Schedule in respect of any factory if owing to the special methods of work or otherwise such relaxation or suspension is practicable without danger to the health or safety of the persons employed.

3. ***Equipment for removal of dust***— No racing, dry grinding or glazing shall be performed without —

(a) a hood or other appliance so constructed, arranged, placed and maintained as substantially to intercept the dust thrown off; and

(b) a duct of adequate size, air tight and so arranged as to be capable of carrying away the dust, which duct shall be kept from obstruction and shall be provided with proper means of access for inspection and cleaning, and where practicable, with a connection at the end remote from the fan to enable the Inspector to attach thereto any instrument necessary for ascertaining the pressure of air in the said duct; and

(c) a fan or other efficient means of producting a draught sufficient to extract

the dust :

Provided that the Chief Inspector may accept any other appliance that is in his opinion, is effectual for the interception, removal and disposal of dust thrown off as a hood, duct and fan would be.

4. ***Restriction of employment on grinding operations*** — Not more than one person shall at any time perform the actual process of grinding or glazing upon a grindstone, abrasive wheel or glazing appliance :

Provided that this paragraph shall not prohibit the employment of person to assist in the manipulation of heavy or bulky articles at any such grindstone, abrasive wheel or glazing appliance.

5. ***Glazing***— Glazing or other processes except processes incidental to wet granding upon a grindstone shall not be carried on in any room in which wet granding upon a grindstone is done.

6. ***Hacking and rodding*** — Hacking or rodding shall not be done unless during the process either *(a)* an adequate supply of water is laid on at the upper surface of the grindstone or *(b)* adequate appliances for the interception of dust are provided in accordance with the requirements of paragraph 3.

7. ***Examination of dust equipment***—*(a)* All equipment for the extraction or suppression of dust shall at least once in every six months be examined and tested by a competent person, and any defect disclosed by such examination and test shall be rectified as soon as practicable.

(a) A register containing particulars of such examination and test shall be kept in a form No. 24

SCHEDULE VI
MANUFACTURE AND TREATMENT OF LEAD AND CERTAIN COMPOUNDS OF LEAD

1. ***Exemptions*** — Where the Chief Inspector is satisfied that all or any of the provisions of this Schedule are not necessary for the protection of the persons employed, he may by certificate in writing exempt any factory from all or any of such provisions, subject to such conditions as he may specify therein.

2. ***Definitions***— For the purpose of this Schedule —

(a) "Lead Compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution

of hydrocloric acid a quantity of soluble lead compound exceeding, when calculated as lead monoxide, five percent of the dry weight of the portion taken for analysis. In the case of paints and similar products and other mixtures containing oil or fat the "dry weight" means the dry weight of the material remaining after the substance has been thoroughly mixed and treated with suitable solvents to remove oil, fats, varnish or other media.

The method of treatment shall be as follows :

A weighed quantity of the material which has been dried at 100 °C and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an acqueous solution of hydrochloric acid containing 0.25 percent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filterate shall then be precipitated as lead sulphide and weighed as lead sulphate.

(b) "Efficient exhaust draught" means localised ventilation affected by heat or mechanical means, for the removal of gas vapour, dust or fumes so as to prevent them (as far as practicable under the atmospheric conditions usually pervailing) from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fumes or dust originate.

3. ***Application*** — This Schedule shall apply to all factories or parts of factories in which any of the following operations are carried on —

(a) Work at a furnance where the reduction or treatment of zinc or lead ores is carried on;

(b) The manipulation, treatment or reduction of ashes containing lead, the desilverising of lead or the melting of scrap lead or zinc;

(c) The manufacture of solder or alloys containing more than ten percent of lead;

(d) The manufacture of any oxide, carbonate sulphate, chromate, acetate, nitrate or silicate of lead;

(e) Handing or mixing of lead tetra-ethyl;

(f) any other operation involving the use of a lead compound;

(g) The cleaning of work-rooms where any of the operations aforesaid are

carried on.

4. ***Prohibitions relating to women and young persons***— No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 3.

5. ***Requirement to be observed*** — No person shall be employed or permitted to work in any process involving the use of lead compounds if the process is such that dust or fume from a lead compound is produced therein, or the persons employed therein are liable to be splashed with any lead compound in the course of their employment unless the provisions of paragraph 6 to 14 are complied with.

6. ***Exhaust draught*** — Where dust, fume, gas or vapour is produced in the process, provision shall be made for removing them by means of an efficient exhaust draught so contrived as to operate on the dust, fume, gas or vapour as closely as possible to the point of origin.

7. ***Certificate of fitness*** — A person medically examined under paragraph 8 and found fit for employment shall be granted by a Certifying Surgeon a certificate of fitness in Form No. 27 and such certificate shall be in the custody of the manager of the factory. The certificate shall be kept readily available for inspection by any Inspector and the person granted such a certificate shall carry with him, while at work, a token giving reference to such certificate.

8. ***Medical examination*** — (1) The person so employed shall be medically examined by a certifying surgeon within 14 days of his first employment in such process and thereafter shall be examined by the Certifying Surgeon at intervals of not more than three months, and a record of such examinations shall be entered by the Certifying Surgeon in the special Certificate of fitness granted under paragraph 7.

(2) If at any time the Certifying Surgeon is of opinion that any person is no longer fit for employment on the grounds that continuance therein would involve special danger to health, he shall cancel the special certificate of fitness of that person.

(3) No person whose sepecial certificate of fitness has been cancelled shall be employed unless the Certifying Surgeon, after re-examination, again certifies him to be fit for employment.

9. ***Food, drinks, etc., prohibited in workrooms*** — No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work-room in which the process is carried on and no person shall remain in any such room during intervals for meals or rest.

10. ***Protective clothing*** — Suitable protective overalls and head coverings shall be provided, maintained and kept clean by the factory occupier and such overalls and head covering shall be worn by the person employed.

11. ***Cleanliness of work-rooms, tools, etc.*** — The rooms in which the persons are employed and all tools and apparatus used by them shall be kept in a clean state.

12. ***Washing facilities***— (1) The occupier shall provide and maintain for the use of all persons employed suitable washing facilities consisting of-

(a) a trough with smooth impervious surface fitted with a waste pipe without plug and of sufficient length to allow at least two feet for every ten persons employed at any one time, and having a constant supply of clean water from taps or jets above the through at intervals of not more than two feet; or

(b) at least one wash-basin for every ten persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of clean water;

together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleansing material and clean towels.

(2) The facilities so provided shall be placed under the charge of a responsible person and shall be kept clean.

13. ***Mess-room or canteen*** — The occupier shall provide and maintain for the use of the persons employed suitable and adequate arrangements for taking their meals. The arrangements shall consist of the use of a room separate from any workroom which shall be furnished with sufficient tables and benches, and unless a canteen serving hot meals is provided, adequate means of warming food. The room shall be adequately ventilated by the circulation of fresh air, shall be placed under the charge of a responsible person and shall be kept clean.

14. ***Cloak-room*** — The occupier shall provide and maintain for the use of persons employed, suitable accommodation for clothing not worn during working hours, and for the drying of wet clothing.

SCHEDULE VII

GENERATION OF GAS FROM DANGEROUS PETROLEUM

1. ***Prohibition relating to women and young persons*** — No woman or young person shall be employed or permitted to work in or shall be allowed to enter any building in which the generation of gas from dangerous petroleum is carried on.

2. ***Flame traps*** — The plant for generation of gas from dangerous petroleum and associated piping and fittings shall be fitted with at least two efficient flame traps so designed and maintained as to prevent a flash back from any burner to the plant. One of these traps shall be fitted as close to the plant as possible. The plant and pipes and valves shall be installed and maintained free from leaks.

3. ***Generating building or room*** — All plants for generation of gas from dangerous petroleum erected after the coming into force of the provisions specified in this Schedule, shall be erected outside the factory building proper in a separate well ventilated building (hereinafter referred to as the " generating building"). In the case of such plant erected before the coming into force of the provisions specified in this Schedule there shall be no direct communication between the room where such plants are erected (hereinafter referred to as "the generating room") and the remainder of the factory building. So far as practicable, all such generating rooms shall be constructed of fire resisting materials.

4. ***Fire extinguishers***—- An efficient means of extinguishing fires from dangerous petrol shall be maintained in an easily accessible position near the plant for generation of gas from dangerous petroleum.

5. ***Plant to be approved by Chief Inspector***— Gas from dangerous petroleum shall not be manufactured except in a plant for generating gas from dangerous, petroleum, the design and construction of which has been approved by the Chief Inspector.

6. ***Escape of dangerous petroleum***— Effective steps shall be taken to prevent dangerous petroleum escaping into any drain or sewer.

7. ***Prohibition relating to smoking, etc.*** — No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in the generating room or building or in the vicinity thereof and a warning notice in the language understood by the majority of the workers shall be posted in the factory prohibiting smoking and the carrying of matches, fire or naked light or

other means of producing light or spark into such room or building.

8. ***Assess to dangerous petroleum or container*** — No unauthorised person shall have access to any dangerous petroleum or to a vessel containing or having actually dangerous petroleum.

9. ***Electric fitness*** — All electric fittings shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conduits or be lead-sheathed.

10. ***Construction of doors*** — All doors in the generating room or building shall be constructed to open outwards or to slide and no door shall be locked or obstructed or fastened in such a manner that it cannot be easily and immediately opened from the inside while gas is being generated and any person is working in the generating room or building.

11. ***Repair of containers***— No vessel that has contained dangerous petroleum shall be repaired in a generating room or building and no repairs to any such vessel shall be undertaken unless live steam has been blown into the vessel and until the interior is thoroughly steamed out or other equally effective steps have been taken to ensure that it has been rendered free from dangerous petroleum or inflammable vapour.

Explanatory Notes — "Dangerous Petroleum" means dangerous petroleum as defined in the Petroleum Act, 1934.

SCHEDULE VIII

CLEANING OR SMOOTHING, ROUGHENING ETC, OF ARTICLES BY A JET OF SAND, METAL SHORT OR GRIT OR OTHER ABRASIVE PROPELLED BY A BLAST OF COMPRESSED AIR OR STEAM

BLASTING REGULATIONS

1. ***Definitions*** — For the purposes of this Schedule;

(a) "Blasting" means cleaning, smoothing, roughening, or removing of any part of the surface of any article by the use of an abrasive of a jet of sand, metal shot, or grit or other material propelled by a blast of compressed air or steam.

(b) "Blasting enclosoure" means a chamber, barrel, cabinet or any other enclosure designed for the performance of blasting therein.

(c) "Blasting chamber" means a blasting enclosure in which any person may enter at any time in connection with any work or otherwise,

(d) "Cleaning of casting" where done as an incidental or supplemental process in connection with the making of metal castings, means the freeing of the casting from adherent sand or other substance and includes the removal of cores and the general smoothing of a casting, but does not include the free treatment.

2. ***Prohibition of sand blasting*** — Sand or any other substance containing free silica shall not be introduced as an abrasive into any blasting apparatus and shall not be used for blasting :

Provided that this clause shall come into force two years after the coming into operation of this Schedule :

Provided further that no woman or young person shall be employed or permitted to work at any operation of sand blasting.

PRECAUTIONS IN CONNECTION WITH BLASTING OPERATION

3. ***Blasting to be done in blasting enclosure***— (1) Blasting shall not be done except in a blasting enclosure and no work other than blasting and any work immediately incidental thereto and clearing and repairing of the enclosure including the plants and appliances situated therein, shall be performed in a blasting enclosure. Every door, aperture and joint, of blasting enclosure, shall be kept closed and air tight while blasting is being done therein.

(2) Maintenance of blasting enclosure : Blasting enclosure shall always be maintained in good condition and effective measures shall be taken to prevent dust escaping from such enclosures, and from apparatus connected therewith, into the air of any room.

(3) Provision of separating apparatus : There shall be provided and maintained for and in connection with every blasting enclosure, efficient apparatus for separating, so far as practicable, abrasive which has been used for blasting and which is to be used again as an abrasive, from dust or particles of other materials arising from blasting; and no such abrasive shall be introduced into any blasting apparatus and used for blasting until it has been so separated:

Provided that this clause shall not apply, except in the case of blasting

chambers, to blasting enclosures constructed or installed before the coming into force of this Schedule, if the Chief Inspector is of opinion that it is not reasonably praticable to provide such separating apparatus.

(4) Provision of ventilating plant : There shall be provided and maintained in connection with every blasting enclosure efficient ventilating plant to extract by exhaust draught effected by mechanical means, dust produced in the enclosure. The dust extracted and removed shall be disposed of by such method in such manner that it shall not escape into the air of any room; and every other filtering or setling device situated in a room in which persons are employed, other than persons attending to such beg or other filtering or setling devices, shall be completely separated from the general air of that room in an enclosure ventilated to the open air.

(5) Operation of ventilating plant : The ventilating plant provided for the purpose of sub-paragraph (4) shall be kept in continuous operation whenever the blasting enclosure is in use whether or not blasting is actually taking place therein, and in the case of a blasting chamber it shall be in operation even when any person is inside the chamber for the purpose of cleaning.

(4) ***Inspection and Examination***— (1) Every blasting enclosure shall be specially inspected by a competent person at least once in every week in which it is used for blasting. Every blasting enclosure, the apparatus connected therewith and the ventilating plant, shall be thoroughly examined and in the case of ventilating plant, tested by a competent person at least once every month.

(2) Particulars of the result of every such inspection, eaxamination and test shall forthwith be entered in a register, which shall be kept in a form approved by the Chief Inspector and shall be available for inspection by any workman employed in or in connection with blasting in the factory. Any defect found on any such inspection, examination or test shall be immediately reported by the person carrying out the inspection, examination or test to the occupier, manager or other appropriate person and without prejudice to the foregoing requirements of this Schedule, shall be removed without avoidable delay.

5. ***Provision of protective helmets, gauntless and overalls***— (1) There shall be provided and maintained for the use of all persons who are employed in a blasting chamber, where in blasting or in any work connected therewith or in cleaning such a chamber, protective helmets of a type approved by a certificate

of the Chief Inspector, and every such person shall wear the helmet provided for this use while he is in the chamber and shall not remove it until he is outside the chamber.

(2) Each protective helmet shall carry a distinguishing mark indicating the person by whom it is intended to be used and no person shall be allowed or required to wear a helmet not carrying his mark or a helmet which has been worn by another person and has not since been thoroughly disinfected.

(3) Each protective helmet when in use shall be supplied with clean and not unreasonably cold air a rate of not less than 170 litre per minute.

(4) Suitable gauntlets and overalls shall be provided for the use of all persons while performing blasting or assisting at blasting and every such person shall so engaged wear the gauntlet and overall provided.

6. ***Precautions in connection with cleaning and other work*** — (1) Where any person is engaged upon cleaning of any blasting apparatus or blasting enclosure or of any apparatus or ventilating plant connected therewith or the surroundings thereof or upon any other work in connection with any blasting apparatus or blasting enclosure or with any apparatus or ventilating plant connected therewith so that he is exposed to the risk of inhaling dust which has arisen from blasting, all pratieable measures shall be taken to prevent such inhalation.

(2) In connection with any cleaning operation referred to in clause 5, and with the removal of dust from filtering or setting devices all practicable measures shall be taken to dispose of the dust in such a manner that it does not enter the air of any room. Vacuum cleaners shall be provided and used wherever practicable for such cleaning operations.

7. ***Storage accommodation for protective wear***— Adequate and suitable storage accommodation for the helmets, gauntlets and overalls required to be provided by clause 5 shall be provided outside and conveniently near to every blasting enclosure and such accommodation shall be kept clean. Helmets, gauntlets and overalls when not in actual use shall be kept in this accommodation.

8. ***Maintenance and cleaning of protective wear*** — All helmets, gauntlets, overalls and other protective devices or clothing provided and worn for the purpose of this schedule, shall be kept in good condition and so far as reasonably practicable shall be cleaned on every week day in which they are used, where

dust arising from the cleaning of such protective clothing or devices is likely to be inhaled all practicable measures shall be taken to prevent such inhalation. Vacuum cleaners shall, wherever practicable, be used for removing dust from such clothing and compressed air shall not be used for removing dust from any clothing.

9. ***Maintenance of vacuum cleaning plant***— Vaccum cleaning plant used for the purpose of this Schedule shall be properly maintained.

10. ***Restrictions in employment of young persons***— (1) No person under 18 years of age shall be employed in blasting or assisting at blasting or in any blasting chamber or in the cleaning of any blasting apparatus or any blasting enclosure or any apparatus or ventilating plant connected therewith or be employed on maintenance or repair work at such apparatus, enclosoure or plant.

(2) No persons under 18 years of age shall be employed to work regularly within six meters feet of any blasting enclosure unless the enclosure is in a room and he is outside that room where he is effectively separated from any dust coming from the enclosure.

11. ***Power to exempt or relax***— (i) If the Chief Inspector is satisfied that in any factory, or any class of factory, the use of sand or other substance containing free silica as an abrasive in blasting is necessary for a particular manufacture or process (other than the process incidental or supplement to making of metal castings) and that the manufacture or process cannot be carried on without the use of such abrasive or that owing to the special conditions or special method of work or otherwise any requirement of this Schedule can be suspended either temporarily or permanently, or can be relaxed without endangering the health of the persons employed or that application of any such requirements is for any reason impracticable or inappropriate, he may, with the previous sanction of the State Government, by an order in writing exempt the said factory or class of factory from such provisions of this Schedule, to such an extent and subject to such conditions and for such period as may be specified in the said order.

(ii) Where an exemption has been granted under sub-clause (i) a copy of the order shall be displayed at a notice board at a prominent place at the main entrance or entrances to the factory and also at the place where the blasting is carried on.

SCHEDULE IX

LIMING AND TANNING OF RAW HIDES AND SKINS AND PROCESSES INCIDENTAL THERETO

1. ***Cautionary notices*** — (1) Cautionary notice as to anthrax in the form specified by the Chief Inspector shall be affixed in prominent positions in the factory where they may be easily and conveniently read by the persons employed.

(2) A copy of warning notice as to anthrax in the form specified by the Chief Inspector shall be given to each person employed when he is engaged, and subsequently if still employed, on the first day of each calendar year.

(3) Cautionary notices as to the effects of chrome on the skin shall be affixed in prominent positions in every factory in which chrome solutions are used and such notices shall be so placed as to be easily and conveniently read by the persons employed.

(4) Notices shall be affixed in prominent places in the factory stating the position of the "First Aid" box or cupboard and the name of the person in-charge of such box or cupboard.

(5) If any person employed in the factory is illiterate, effective steps shall be taken to explain carefully to such illiterate person the contents of the notices specified in paragraphs 1,2 and 4 and if chrome solutions are used in the factory, the contents of the notice specified in paragraph 3.

2. ***Protective clothing*** — The occupier shall provide and maintain in good condition the following articles of protective clothing —

(a) waterproof footwear, leg coverings, aprons and rubber gloves for persons employed in processes involving contact with chrome solutions including the preparation of such solutions;

(b) protective footwear, aprons and gloves for persons employed in the handling of hides or skins other than in processes specified in clause *(a)*.

Provided that gloves shall not be required for persons fleshing by hand or where there is no risk of contact with lime, sodium sulphide or other caustic liquor.

3. ***Washing facilities, mess-room and cloak-room*** — There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed : —

(a) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimeters for every ten persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 centimeters; or

(b) at least one wash basin for every ten such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleansing material and clean towels;

(c) a suitable mess-room, adequate for the number remaining on the premises during the meal intervals, which shall be furnished with (1) sufficient tables and benches, and (2) adequate means for warming food and for boiling water;

The mess-room shall — (1) be separate from any room or shed in which hides or skins are stored, treated or manipulated, (2) be separate from the cloak-room, and (3) be placed under the charge of a responsible person;

(d) suitable accommodation for clothing not worn during working hours with adequate arrangements for drying the clothing if wet. The accommodation so provided shall be placed under the charge of a responsible person.

4. ***Food, drinks, etc., prohibited in work-rooms*** — No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work-room or shed in which hides or skins are stored, treated or manipulated.

5. ***First-aid arrangements***— The occupier shall —

(a) arrange for an inspection of the hands of all persons coming into contact with chrome solutions to be made twice a week by a responsible person;

(b) provide and maintain a sufficient supply of suitable ointment and impermeable waterproof plaster in a box readily accessible to the worker and used solely for the purpose of keeping the ointment and plaster.

SCHEDULE X
MANUFACTURE OF POTTERY

1. ***Definitions*** — For the purpose of this Schedule —

(a) "Pottery" includes earthenware, stoneware, porcelain, china tiles and any other articles made from clay or from a mixture containing clay and other materials such as quartz, flint, feldspar and gypsum.

(b) "Efficient exhaust draught" means localised ventilation effected by mechanical or other means, for the removal of dust or fume so as to prevent it from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove effectively dust or fume generated at the point where dust or fume originates.

(c) "Fettling" includes scalloping, towing, and sand papering, sand sticking, brushing or any other process of cleaning of pottery ware in which dust is given off.

(d) "Leadless glaze" means a glaze which does not contain more than one percent of its dry weight of a lead compound calculated as lead monoxide.

(e) "Low solubility glaze" means a glaze which does not yield to dilute hydrochloric acid more than five percent of its dry weight of a soluble lead compound calculated as lead monoxide when determined in the manner described below :-

A weighed quantity of the material which has been dried at 100 degree C and thoroughly mixed shall be continuoulsy shaken for one hour at the common temperature with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 percent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphide.

(f) "Ground or powdered flint or quartz" does not include natural sands;

(g) "Potter's shop" includes all places where pottery is formed by pressing or by any other process and all places where shaping, fettling or other treatement of pottery articles prior to placing for the biscuit fire is carried on.

2. ***Efficient exhaust draught*** — The following processes shall not be carried on without the use of an efficient exhaust draught —

(i) All processes involving the manipulation or use of a dry and unfritted lead compound.

(ii) The fettling operations of any kind, whether on greenware or biscuit; provided that this shall not apply to the wet fettling, and to the occasional finishing of pottery articles without the aid of mechanical power.

(iii) The sifting of clay dust or any other materials for making tiles or other articles by pressure, except where —

(a) this is done in a machine so enclosed as to effectually prevent the escape of dust; or

(b) the material to be sifted is so damp that no dust can be given off;

(iv) The pressing of tiles from the clay dust, an exhaust opening being connected with each press; this clause shall also apply to the pressing from clay dust or articles other than tiles, unless the material is so damp that no dust is given off;

(v) The fettling of tiles made from clay dust by pressure, except where the fettling is done wholly on, or with damp material; this clause shall also apply to the fettling of other articles made from clay dust, unless the material is so damp that no dust is given off;

(vi) The process of loading and unloading of saggars where handling and manipulation of ground and powdered flint, quartz, alumina or other materials are involved;

(vii) The brushing of earthenware biscuit, unless the process is carried on in a room provided with efficient general mechanical ventilation or other ventilation which is certified by Inspector of Factories as adequate, having regard to all the circumstances of the case;

(viii) Fettling biscuit-ware which has been fired in powdered flint or quartz except where this is done in machines so enclosed as to effectually prevent the escape of dust;

(ix) Where cleaning after the application of glaze by dipping or other process;

(x) Crushing and dry grinding of materials for pottery bodies and saggars, unless carried on in machines so enclosed as to effectively prevent the escape of dust or is so damp that no dust can be given off;

(xi) Sieving or manipulation of powdered flint, quartz, clay grog or mixture of these materials unless it is so damp that no dust can be given off;

(xii) Grinding of tiles on a power driven wheel unless an efficient water spray is used on the wheel;

(xiii) Lifting and conveying of materials by elevators and conveyor unless they are effectively enclosed and so arranged as to prevent escape of dust into the air in or near to any place where persons are employed;

(xiv) The preparation or weighing out of flow material, lawning of dry colours, colour dusting and colour blowing;

(xv) In mould making unless the bins or similar receptacles used for holding plaster of paris are provided with suitable covers;

(xvi)The manipulation of calcined material unless the material has been made and remains so wet that no dust is given off;

3. Each of the following processes shall be carried on in such a manner and under such condition so as to secure effectual separation from the other, and from wet processes —

(a) crushing and dry grinding or sieving materials, fettling, pressing of tiles, drying of clay and greenware, loading and unloading of saggars;

(b) all processes involving the use of a dry lead compound.

4. No glaze which is not a leadless glaze or low solubility glaze shall be used in a factory in which pottery is manufactured.

5. No woman or young person shall be employed or permitted to work in any of the operations specified in clause 2, or at any place where such operations are carried on.

6. The potter's wheel (Jolly and Jaggers) shall be provided with screens or so constructed as to prevent clay scrapings being thrown off beyond the wheel.

7. (1) All practical measures shall be taken by damping or otherwise to prevent dust arising during cleaning of floors.

(2) Damp saw-dust or other suitable material shall be used to render the moist method effective in preventing dust rising into the air during the cleaning process which shall be carried out after work has ceased.

8. The floors of potter's shops, slip houses, dipping houses and ware cleaning

rooms shall be hard, smooth and impervious and shall be thoroughly cleaned daily by a moist method by an adult male.

9. ***Medical Examination***— (1) All persons employed in any process included under clause 2 shall be examined by the Certifying Surgeon within 7 days preceding or following the date of their first employment in such process; thereafter all persons employed in any process included under clause 2 *(i)* and *(xiv)* shall be examined by the Certifying Surgeon once in every three calender months, and those employed in any process included in clause *(ii)* to *(xiii)* and *(xv)* and *(xvi)* once in every 12 months by the Certifying Surgeon. Records of such examinations shall be entered by the Certifying Surgeon in the Health Register and certificate of fitness granted to him under clause 10.

(2) If at any time the Certifying Surgeon is of opinion that any person employed in any process included in clause 2 is no longer fit for employment on the ground that continuance therein would involve damage to his health, he shall cancel the certificate of fitness granted to that person.

(3) No person whose certificate of fitness has been cancelled shall be re-employed unless the Certifying Surgeon after examination again, certifies him to be fit for employment.

10. Certificate of fitness — A person medically examined under clause *9* and found fit for employment shall be granted by the Certifying Surgeon a certificate of fitness in Form 5 and such certificate shall be in the custody of the manager of the factory. The certificate shall be kept readily available for inspection by any inspector and the person granted such a certificate shall carry with him while at work, a token giving reference to such certificate.

11. Protective equipment — (1) The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in process included under clause 2.

(2) The occupier shall provide and maintain suitable aprons of a 'waterproof or similar material, which can be sponged daily for the use of the dippers, dippers assistants, throwers, jolly workers, casters, mould makers and filter press and pug mill workers.

(3) Aprons provided in pursuance of clause 11 (2) shall be thoroughly cleaned daily by the wearers by sponging or other wet process. All overalls and head coverings shall be washed, cleaned and mended at least once a week and

this washing, cleaning or mending shall be provided for by the occupier.

(4) No person shall be allowed to work in emptying sacks of dusty materials, weighing out and mixing of dusty materials and charging of ball mills and plungers without wearing a suitable and efficient dust respirator.

12. ***Washing facilities***— (1) The occupier shall provide and maintain, in a cleanly state and in good repair for the use of all persons employed in any of the processes specified in clause 2, a wash place under cover, with either-

(a) (i) a trough with smooth impervious surface fitted with a waste pipe without plug, and sufficient length to allow at least two feet for every five such persons employed at any one time, and having a constant supply of clean water from taps or jets above the trough at intervals of not more than 60 centimeters; or

(ii) at least one tap or stand pipe for every five such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 4 feet apart;

and

(b) a sufficient supply of clean towels made of suitable material changed daily, with sufficent supply of nail brushes and soap.

13. Time allowed for washing — Before each meal and before the end of the day's work at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each person employed in any of the processes mentioned in clause 2.

14. ***Mess-room***— (1) There shall be provided and maintained for use of all persons remaining within the premises during the rest intervals, suitable mess-room providing accommodation of 0.93 sqare meter per head and furnished with—

(i) a sufficient number of tables and chairs or benches with back rest;

(ii) arrangements for washing utensils;

(iii) adequate means for warming food;

(iv) adequate quantity of drinking water.

(2) The room shall be adequately ventilated by the circulation of fresh air and placed under the charge of responsible person and shall be kept clean.

15. ***Food, drinks etc., prohibited in work-room***— No food, drink, pan and

supari, or tobacco shall be brought into, or consumed by any worker in any work-room in which any of the processes mentioned in clause 2 are carried on and no person shall remain in any such room during intervals for meal or rest.

16. ***Cloak-room, etc.*** — There shall be provided and maintained for use of all persons employed in any of the processes mentioned in caluse 2 —

(a) a cloak-room for clothing put off during working hours and such accommodation shall be separate from any mess-room;

(b) separate and suitable arrangements for the storage of protective equipment provided under clause 11.

17. These regulations shall not apply to a factory in which any of the following articles, but no other pottery, are made —

(a) unglazed or salt glazed bricks and tiles; and

(b) architectural terra-cotta made from plastic clay and either unglazed or glazed with a leadless glaze only.

18. ***Exemptions*** — If in respect of any factory the Chief Inspector of Factories is satisfied that all or any of the provisions of this Schedule are not necessary for the protection of the persons employed in such factory, he may, by a certificate in writing, exempt such factory from all or any of such provisions, subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector without assigning any reasons.

SCHEDULE XI

MANUFACTURES IN CHEMICAL WORKS AND PROCESSES INCIDENTAL THERETO

Application — These rules shall apply to all manufactures and processes incidental thereto carried on in chemical works. These rules shall be in addition to and not in derogation of any provisions of the Factories Act or any other rules-made thereunder or of any other Act or rules.

Definitions — 'Chemical works' means any factory or such parts of any factory as are named in Schedule (I) to this Schedule.

'Breathing Apparatus' means (1) a helmet of face-piece with necessary connections by means of which a person using it in a poisonous, asphyxiaing or irritant atmosphere breathes ordinary air, or (2) any other suitable apparatus

approved in writing by the Chief Inspector.

'Life-belt' means belt made of leather or other suitable materials which can be securely fastened round the body, with a suitable length of rope attached to it, each of which is sufficiently strong to sustain the weight of a man.

'Efficient exhaust draught' means localised ventilation effected by mechanical or other means for the removal of gas, vapour, fume, or dust to prevent it from escaping into the air of any place in which work is carried out.

'Surgeon' means a Certifying Surgeon appointed under Section 10 of the Factories Act, 1948.

'Suspension' means suspension by written certificate in the Health Register, signed by the Surgeon, from employment in any process mentioned in the certificate.

'Bleaching powder' means the blaching powder commonly called chloride of lime.

'Chlorate' means chlorate or perchlorate.

'Caustic' means hydroxide of pottassium or sodium.

'Caustic pot' means a metal pot fixed over furnace of flue and surrounded by brick-work, such as is commonly used for concentrating caustic liquor, whether such pot be used for concentrating or boiling caustic or other liquor.

'Chrome process' means the manufacture of chromate or bichromate of pottasium or sodium, or the manipulation, movement or other treatement of these substances in connection with their manufacture.

'Nitro or Amino process' means the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues, and the making of explosives with the use of any of these substances.

Exceptions — If the Chief Inspector is satisfied in respect of any factory or any process that, owing to the special conditions or special methods of work, or by reasons of the infrequency of the process or for other reasons, any of the requirements of these rules are not necessary for the protection of persons employed in any factory or process, he may by order in writing (which he may in his discretion revoke) exempt such factory or process from all or any of the provisions of these rules subject to such conditions as he may by such order prescribe.

PART I
APPLYING TO ALL WORKS IN SCHEDULE (I)
GENERAL

1. ***House-keeping*** *— (a)* Every part of the ways, works, machinery and plant shall be maintained in a clean and tidy condition.

(b) Any spillage of materials shall be cleaned up without delay.

(c) Floors, platforms, stairways, passages and gangways shall be kept free of temporary obstructions.

(d) There shall be provided easy means of access to all parts of the plant to facilitate cleaning, maintenance and repairs.

2. ***Improper use of chemicals*** *-— (a)* No chemicals or solvents shall be used by workers for any purposes apart from the processes for which they are supplied.

(b) Workers shall be instructed on the possible dangers arising from such misuse. These instructions shall further be displayed in bold letters in prominent places in the different sections.

3. ***Storage of food*** *— (a)* No food, drink, tobacco, pan or similar articles shall be stored or consumed on or near any part of the plant.

(b) ***Testing*** **-** Workers shall be instructed on the possible dangers, arising from the testing of materials, or of the use for drinking purposes of any vessel used, in or in connection with the manufacture of chemicals. These instructions shall further be displayed in bold letters in prominent places in the different sections.

4. ***Process hazards*** **—** Before commencing any large-scale experimental work, or any new manufacture, all possible steps shall be taken to ascertain definitely all the hazards involved both from the actual operations and the chemical reactions. The properties of the raw materials used, the final products to be made, and any by-products arising during manufacture, shall be carefully studied and provisions shall be made for dealing with any hazards including effects on workers, which may arise during manufacture.

The design of the buildings and plant shall be based on information so obtained.

5. ***Unauthorised personnel*** *— (a)* Unauthorised persons shall not be permitted to enter any section of the factory or plant where there are special dangers.

(b) ***Visitors*****—**Visitors shall be provided, where necessary, with suitable safety equipment and shall be accompanied round dangerous plant by a

responsible official.

6. ***Instrument*****—** All instruments, such as pressure gauges, thermometers, flow meters and weighing machines shall be tested at regular intervals by a competent person, and records of these tests shall be kept in a register.

7. ***Cocks and Valves*****—** Suitable valves shall be provided in all service lines at sufficiently short intervals for conveyance in blanking off, *etc.* All cocks and valves shall be operated at least once a month, and tested periodically by a competent person and records of these tests shall be kept in a register. A plan of all service installations shall be kept readily available for perusal.

8. ***Manhole*** **—** No manhole shall be opened for entry until effective fencing has been erected around it.

9. ***Emergency Instructions*** **—** Simple and special instructions shall be framed to ensure that effective measures will be carried out in cases of emergency, to deal with escapes of inflammable, poisonous or deleterious gases, vapours, liquids, or dusts. These instructions shall further be displayed in bold letters in prominent places in the different sections. All workers shall be trained and instructed in the action to be taken in such emergencies, and the general hazards of their employment.

10. ***Protection of Reaction Mixtures*****—** Suitable arrangements shall be made to ensure that no foreign matter of any sort can fall into reaction mixtures.

11. ***Electrical Apparatus*** **—** Electrical plant, fittings, and conductors, shall if exposed to a damp or corrosive atmosphere, be adequately protected. Periodic tests shall be carried out on all circuits.

12. ***Place of work*** *— (a)* Workers shall only be allowed in those places in which they have been given orders to work.

(b) In dangerous sections of a factory, the number of workers shall be kept to minimum compatible with the need of the process.

13. ***Packing, Storage and Transport of Chemicals*****—** Chemicals shall be packed and stored in containers suitable for the purpose and of adequate strength for storage or transport. All such containers shall be suitably labelled so that they will be stored and transported in such a manner as to ensure that, in the event of a spillage, they will neither produce a reacting mixture, nor cause the development of toxic or fire risks in contact with other products in its vicinity, or with walls, floors, or dust thereon.

FIRE AND EXPLOSION RISKS

14. ***Site*** *— (a)* Buildings and plant shall be sited with due regards to the dangers which may arise from the processes involved, and in particular shall be spaced at distance which are deemed safe for the fire and explosion risks connected with the proceses in adjacent buildings. Due consideration shall be given to the effect of any processes carried out in adjacent factories.

(b) ***Isolation of Buildings*** — Where special dangers exist, separate buildings shall be used for the different parts of a process. They shall be spaced at sufficient distances apart and shielded to prevent damage to each other in the event of fire or explosion, and shall be safeguarded by the provision of suitable blow-out panels or roofs. Where the risk of fire or explosion is considerable the building shall be divided by blast or protective screen walls.

(c) ***Fire Resistance*** — No combustible materials shall be used in the erection of working buildings, unless there are special reasons necessitating their use, when they shall be rendered fire-resistant. The roof shall be of light fire-resistant construction and floor shall be of impervious fire-resistant material and shall be regularly maintained in such condition.

15. ***Dangers of Ignition (including lighting installation)*** *— (a)* No internal combustion engine, and no electric motor or other electrical equipment, capable of generating sparks or otherwise causing combustion shall be installed or used in a building or danger zone. Electric conductor shall be fitted with screwed steel conduit.

(b) All hot exhaust pipes shall be installed outside a building and other hot pipes shall be suitably protected.

(c) Portable electric hand lamps shall not be used unless of an intrinsically safe type, and portable electric tools connected by flexible wires shall not be used, unless of the flame proof type.

(d) Where an inflammable atmosphere may occur the soles of footwear worn by workers shall have no metal on them, and the wheels of trucks or conveyors shall be of conductive non-sparking materials. Adequate precautions shall be taken to prevent the ingnition of explosive or inflammable substances by sparks emitted from locomotives or other vehicles operated in the factory or on public lines.

(e) No electric arc lamp, or naked light, fixed or portable, shall be used, and no person shall have in his possession any match or any apparatus of any kind for producing naked light or spark in or on, or about any part of the factory where there is liability to fire or explosion from inflammable gas, vapour or dust and all incandescent electric lights in such parts shall be in double air tight glass covers.

(f) Prominent notices in the language understood by the majority of the workers and legible by day and by night, prohibiting smoking, the use of naked lights and the carrying of matches or any apparatus for producing a naked light or spark, shall be affixed at the entrance of every room or place where there is the risk of fire or explosion from inflammable gas, vapour or dust. In the case of illiterate workers, the contents of the notices shall be fully and carefully explained to them when they commence work in the factory for the first time and again when they have completed one week in a factory.

(g) ***Non-sparking Tools*** - A sufficient supply of spades, scrapers and pails made from non-sparking material shall be provided for the use of persons employed in cleaning out or removing residues from any chamber, still, tank, or other vessel where an inflammable or explosive danger may occur.

Note — The risk is not always obvious and may arise, for example, through the production of hydrogen in acid tanks.

16. ***Static Electricity*** *—-(a)* All machinery and plant, particularly pipe lines and belt drives, on which static electricity is likely to accummulate shall be effectively earthed. Receptacles for inflammable liquids shall have metallic connections to the earthed supply tanks to prevent static sparking. Where necessary, humidity shall be controlled.

(b) Mobile tanker wagons shall be earthed during filling and discharge, and precautions shall be taken to ensure that earthing is effective before such filling or discharge takes place.

(c) ***Lighting condition*****—**Lighting protection apparatus shall be fitted where necessary and shall be maintained in good condition.

17. ***Process heating*** — The method of providing heat for a process shall be as safe as possible and where the use of naked flame is necessary, the plant shall be so constructed as to prevent any escaping inflammable gas, vapour or dust coming into contact with the flame, or exhaust gases or other hot agency likely to cause

ignition. So far as practicable, the heating medium shall be automatically controlled at a pre-determined temperature below the danger temperature.

18. ***Escape of materials*** — *(a)* Provision shall be made in plant, sewers, drains, flues, ducts, culverts and buried pipes to prevent the escape and spread of any liquid, gas, vapour, fume or dust likely to give rise to fire or explosion, both during normal working and in the event of accident or emergency.

(b) If escape occurs, such substances shall be removed expeditiously and efficiently at the point of liberation. The effluents shall be trapped and rendered safe outside the danger area.

19. ***Leakage of inflammable liquids*** — *(a)* Provision shall be made to confine by means of bound walls, sumps, *etc.,* possible leakages from vessel containing inflammable liquids.

(b) Adequate and suitable fixed fire-fighting appliances shall be installed in the vicinity of such vessels.

20. ***Cleaning of Empty Containers*** — *(a)* All empty containers which have held inflammable liquids and metal containers which have held sulphuric acid shall be rendered permanently safe as soon as practicable and shall not be repaired or destroyed until such cleaning has been completed.

Storage of Combustible Materials — (b) Combustible and inflammable materials shall not be stored in close proximity to chemicals which are liable to cause ignition.

(c) Rubbish shall be removed from building without delay and placed in special metal containers provided with close fitting lids. The contents shall be removed daily and suitably dealt with. Waste products containing inflammable or explosive materials shall not be placed on rubbish heaps but shall be destroyed in an appropriate manner.

21. ***Installing of Pipe Lines for Inflammable Liquids*** — All pipe lines for the transport of inflammable liquids shall be protected from breakage, shall be arranged so that there is no risk of mechanical damage from vehicles and shall be so laid that they drain throughout without the collection of deposits at any part. All flanged joints, bends and other connections shall be regularly inspected. Cocks and valves shall be so constructed that explosive residues cannot collect therein. The open and closed positions of all cocks and valves shall be clearly indicated on the outside.

22. ***Packing of Reaction Vessels*** — Packing and jointing materials for reaction vessels (including covers, manhole covers, and exhaust pipes) and in pipe lines and high or low temperature insulating material shall not contain material which are combustible or which react with the products of the plant.

23. ***Safety Valves*** — Every still and every closed vessel in which gas is evolved or into which gas is passed, and in which the pressure is liable to rise to a dangerous degree, shall have attached to it a pressure gauge, and a proper safety valve or other equally efficient means to relieve the pressure, maintained in good condition. Nothing in these Rules shall apply to metal bottles or cylinders used for the transport of compressed gases.

24. ***Vigorous or delayed reactions*** — Suitable provision, such as automatic and distant control shall be made for controlling the effects of unduly vigorous or delayed reactions. Automatic flooding or blanketing shall be provided for in the event of an accident.

25. ***Examination, testing and repair of plant*** — Examination, testing and repair of plant part which have been in contact with explosive and inflammable material or which is under pressure, shall only be carried out under proper supervision.

26. ***Alarm systems***—*(a)* Gravity or pressure feed systems of supplying inflammable materials to the various parts of the buildings or plant shall be fitted with alarm systems, automatic cut-offs or other devices to prevent overcharging or otherwise endangering the plant.

(b) The amount of inflammable material taken into a building in bulk containers at any one time shall be kept as low as practicable.

(c) Adequate steps shall be taken to prevent the escape of inflammable and explosive vapours from any container into the atmosphere of any building.

GAS, VAPOUR, FUME OR DUST RISKS

27. ***Escape of Gases, Etc****., —* *(a)* Effective steps shall be taken to prevent the escape of dangerous gases, vapours, fumes or dust from any part of the plant, by the total enclosure of the process involved or by the provision of efficient exhaust draught. Effective arrangements shall be made to ensure that in the event of failure of the control measure provided in compliance of the foregoing, the process shall stop immediately.

(b) In the event of any such escape, provision shall be made to trap the materials and render them safe.

28. ***Danger due to Effluents*** — *(a)* Adequate precautions shall be taken to prevent the mixing of effluents which may cause dangerous or poisonous gases to be evolved.

(b) Effluents which may contain or give rise in the presence of other effluents to such gases shall be provided with independent drainage system to ensure that they may be trapped and rendered safe.

29. ***Staging*** — *(a)* Staging shall not be erected over any open vessel unless the vessel is so constructed and ventilated as to prevent the emission of vapour or fumes about such staging;

(b) Where such staging is provided to give access to higher levels in large plants, effective means shall be provided at all levels with direct means of access to the outside of the room or building and thence to ground level;

(c) Such staging shall be fitted with suitable handrails and toeboards and the floors and staging shall be impervious and easily cleaned.

30. ***Instructions as regards risk*** — Before commencing work, every worker shall be fully instructed on the properties of the materials they have to handle, and of the dangers from any gas, fume, vapour or dust which may be evolved during the process. Workers shall also be instructed in the measures to be taken to deal with such an escape in the event of emergency.

31. ***Breathing Apparatus*** — *(a)* There shall be provided in every factory where dangerous gas, or fume is liable to escape sufficient supply of —

(i) breathing apparatus of an approved make for the hazards involved;

(ii) oxygen and suitable means of its administration; and

(iii) lifebelts.

The breathing apparatus and other appliances required by this Rule shall—

(i) be maintained in good order and kept in an ambulance room or in some other place approved in writing by the Chief Inspector; and (ii) be thoroughly inspected once in every month by a competent person, appointed in writing by the occupier, and a record of their condition shall be entered in a book provided for that purpose, which shall be produced when required by an Inspector.

(b) Workers shall be trained, and given a periodic refresher course in the

use of breathing apparatus and respirators;

(*c)* Respirators shall be kept properly labelled in clean dry light-proof cabinets, and if liable to be affected by fumes shall be protected by suitable containers. Respirators shall be dried and cleaned after use and shall be periodically disinfected.

32. ***Treatment of Persons*** — In every room or place wherever required in writing by the Chief Inspector there shall be affixed official cautionary notice regarding gassing burns. Such notice shall be legible by day and by night and shall be printed in the language understood by the majority of the workers.

33. ***Personal Protective Equipment***— *(a)* Suitable protective clothing shall be provided for the use of operators —

(i) when operating valves or cocks controlling fluids which by their nature, pressure or temperature would be highly dangerous if a blow-out occurred or when cleaning chokes in systems containing such fluids if pressure is likely to exit behind the chokes;

(ii) when there is danger of injury by absorption through the skin during the performance of normal duties or in the event of emergency;

(iii) whenever there is the risk of injury in handling corrosive substances, hot or cold articles and sharp or rough objects; and

(iv) when there is the risk of poisonous materials being carried away on their clothes.

(b) There shall be provided for the use of all persons employed in the processes specified in Schedule II to this Schedule an adequate supply of suitable protective equipment including gloves, overalls, and protective footwear, and of goggles and respirators. Respirators shall be of a type approved in writing by the Chief Inspector;

(c) Protective equipment shall be provided and stored in the appropriate place for use during abnormal conditions or in an emergency;

(d) Arrangements shall be made for the proper and efficient cleaning of all such protective equipment.

34. ***Cloak rooms*** — There shall be provided and maintained for the use of all persons employed in the processes specified in Schedule II to this Schedule a

suitable cloak room, for clothing put off during working hours and a suitable place separate from the cloak room, for the storage of overalls or working clothes. The accommodation so provided shall be placed in the charge of a responsible person, and shall be kept clean.

35. ***Special Bathing Accommodation*** — *(a)* There shall be provided for the use of all persons employed in the processes specified Schedule III to this Schedule separate sanitary conveniences and sufficient and suitable bathing facilities, which shall be to the satisfaction of the Chief Inspector.

(b) A bath register shall be kept containing the names of all persons employed in these processes and an entry of the date when each person takes a bath.

36. ***Entry into Vessels*** — *(a)* Before any person enters, for any purpose except that of rescue, any absorber, boiler, culvert, drain, flue, gas purifier, sewer, still, tank, tower, vitriol chamber or other place where there is reason to apprehend the presence of dangerous gas or fume, a responsible person appointed in writing by the occupier for the purpose, shall personally examine such place and shall certify in writing in a book kept for the purpose either that such place is isolated and sealed from every source of such gas or fume and is free from danger, or that it is not so isolated and sealed and free from danger. No person shall enter any such place which is certified not to be so isolated and sealed and free from danger unless he is wearing a breathing appratus, and (where there are no cross stays or obstructions likely to cause entangelement) a life-belt, the free and of the rope attached to which shall be left with a man outside, whose sole duty shall be to keep watch and to draw out the wearer if he appears to be affected by gas or fume. The belt and rope shall be so adjusted and worn that the wearer can be drawn up head foremost through any manhole or opening;

(b) A person entering for the purpose of rescue any such place for which a clearance certificate has not been issued shall wear breathing apparatus and a life-belt in the manner specified.

37. ***Examination and Repair of Plant*** — Where poisonous materials are likely to be present the examination and repair of plant and piping shall only be done under the supervision of a competent person, and after the plant and piping has been thoroughly cleaned and ventilated. When opening vessels and breaking joints in pipe lines, respirators, goggles and protective clothing shall be worn to

the extent required by the competent person.

38. ***Storage of Acid Carboys*** — Carboys containing nitric acid or "mixzed" acid shall be stored in open-sided sheds detached from other buildings, and placed on a flooring of standstone, brick, or other suitable inorganic materials. A passageway shall be provided and kept free from obstruction between every four rows of such carboys. An ample supply of water shall be available for washing away spilt acid and all precautions shall be taken to prevent workers being exposed to fumes.

CORROSIVE OR DELETERIOUS SUBSTANCES RISKS

39. ***Buildings*** — All buildings and plant shall be sited with due regard to possible dangers from accidental liberation or splashing of corrosive and deleterious liquids, and shall be so designed as to facilitate thorough washing and cleaning. The construction of staging and other parts of buildings shall be carried out with materials impervious and resistant to corrosion so far as practicable.

40. ***Leakage*** — *(a)* All plant shall be so designed and constructed as to obviate the escape of corrosive liquid. Where necessary, separate buildings, rooms, or protective structures shall be used for the dangerous stages of the process and the buildings shall be so designed as to localise any escape of liquid.

(b) Catch pits, bund walls, or other suitable precautions shall be provided to restrict the serious effects of such leakages. Catch pits shall be placed below joints in pipe-lines where there is danger involved to maintenance and other workers from such leakage.

(c) Passages and work-stations shall not be situated directly below any part of plant where there is risk of escape of dangerous liquid. Access to such parts shall, so far as practicable, be prohibited, and danger notices shall be affixed at suitable points.

41. ***Precautions against escape***— Adequate precutions shall be taken to prevent the escape of corrosive or deleterious substances and means shall be provided for rendering safe any such escape.

42. ***Drainage***— Adequate drainage shall be provided and shall lead to special treatment tanks where deleterious material shall be neutralised or otherwise rendered safe before it is discharged into ordinary drains or sewers.

43. ***Covering of Vessels***—*(a)* Every fixed vessel or structure containing any dangerous material, and not so covered as to eliminate all reasonable risk of accidental immersion in it of any portion of the body of a worker, shall be so constructed that there is no foothold on the top or the sides.

(b) Such vessel shall, unless its edge is at least 90 centimeters above the adjoining ground or platform, be securely fenced to a height of at least three 90 centimeters above such adjoining ground or platform.

(c) No plank or gangway shall placed across or inside any such vessel, unless such plank or gangway is at least 45 centimeters wide, and is securely fenced on both sides by rails spaced at 22 centimeters apart to a height of at least 90 centimeters, or by other equally efficient means.

(d) Where such vessels adjoin and the space between them, clear of any surrounding brick or other work, is either less than 45 centimeters in width or is 45 or more centimeters in width, but is not securely fenced on both sides to a height of at least 90 centimeters, secure barriers shall be so placed as to prevent passage between them :

Provided that paragraph *(b)* of this rule shall not apply to — (i) saturators used in the manufacture of Sulphate of Ammonia; and

(ii) that part of the sides of brine evaporating pans which require raking, drawing or filling.

44. ***Ventilation*** — Adequate ventilation shall be provided and maintained at all times in rooms or buildings where dangerous gas, vapour, fume or dust may be evolved.

45. ***Means of Escape*** — Adequate means of escape from rooms or buildings in the event of a leakage of corrosive liquids shall be provided and maintained.

46. ***Treatment of Personnel*** — In all places where (strong acids or dangerous corrosive liquids are used) —

(a) there shall be provided for use in an emergency —

(i) adequate and readily accessible means of drenching with cold water of persons and the clothing of persons, who have become splashed with such liquid;

(ii) adequate special arrangements to deal with any person who has been splashed with poisonous material that can be absorbed through the skin;

(iii) a sufficient number of eye-wash bottles filled with distilled water or

other suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times;

(b) Except where the manipulation of such corrosive liquids is so carried on as to prevent risk of personal injury from splashing or otherwise there shall be-provided for those who have to manipulate such liquids, sufficient and suitable goggles and gloves or other suitable protection for the eyes and hands. If gloves are provided they shall be collected, examined, and cleansed at the close of the day's work and shall be repaired or renewed when necessary.

47. ***Maintenance*** — *(a)* Before any examination or repair are carried out on plant or pipe lines, a competent person shall issue a clearance certificate permitting such examination or repairs.

(b) Adequate precautions shall be taken to liberate any pocket of gas or liquid which may have been formed in pipe lines, and which may cause corrosive spray at the point where dismantling takes place.

48. ***Washing Facilities***— (1) There shall be provided and maintained in every factory for the use of employed persons adequate and suitable facilities for washing which shall include soap and nail brushes or other suitable means of cleaning and facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.

(2) If female workers are employed, separate washing facilities shall be provided and so enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass, the entrance to such facilities shall bear conspicuous notice in the language understood by the majority of the workers "For Women Only" and shall also be indicated pictorially.

49. ***Mess-Room Facilities***— In every factory there shall be provided and maintained for the use of those remaining on the premises during the rest intervals, suitable and adequate mess room or canteen accommodation which shall be furnished with sufficient tables and chairs or benches with back rests and where sufficient drinking water is available.

50. ***Ambulance Room*** — *(a)* in every factory in which more than 250 persons are employed on the processes to which these rules apply there shall be provided and maintained in good order an Ambulance Room.

The Ambulance Room shall be a separate room used only for the purpose of treatment and rest. It shall have a floor space of not less than 9.3 square meter

and smooth, hard and impervious walls and floor, and shall be provided with ample means of natural and artificial lighting. It shall contain all the items shown in Schedule IV.

Where persons of both sexes are employed, arrangements shall be made at the Ambulance Room for their separate treatment.

The Ambulance Room shall be placed under the charge of a qualified nurse or other person trained in First Aid, who shall always be readily available during working hours and shall keep a record of all cases of accidents or sickness, treated in the room.

(b) In every factory there shall be provided and maintained in good condition a suitably constructed ambulance van for the purpose of removal of serious cases of accidents or sickness, unless arrangements have been made with hospital or other place in-telephonic communication with the factory for obtaining such a carriage immediately when required.

51. ***Medical Personnel*** — There shall be a wholetime Medical Officer in every factory employing 250 persons or more.

52. ***Medical Examination*** — In a chrome process or in a nitro or amino process —

(a) A Health Register containing the names of all persons employed in the process shall be kept in a form approved by the Chief Inspector;

(b) No person shall be newly employed for more than 14 days without a certificate of fitness granted after examination by the Certifying Surgeon, by a signed entry in the Health Register;

(c) Every person employed in the process shall be examined by the Certifying Surgeon once in each calendar month (or at such other intervals as may be prescribed in writing by the Chief Inspector) on a date/dates of which due notice shall be given to all concerned;

(d) Every person so employed shall present himself at the appointed time for examination by the Certifying Surgeon as provided in *(b)* and *(c)* of this rule;

(e) The Certifying Surgeon shall have power of suspension as regards to all persons employed and no person after suspension shall be employed without written sanction from the Certifying Surgeon and entered in the Health Register.

53. ***Duties of Workers*** — Every person employed shall —

(a) report to his foreman any defect in any fencing, breathing apparatus,

appliance or other requisite provided in pursuance of these rules, as soon as he becomes aware of such defect;

(b) use the articles, appliances or accommodation required by these rules for the purpose for which they are provided;

(c) wear the breathing apparatus and life-belt where required under Rule 36 *(a)* and *(b)*.

54. ***No person shall —***

(a) remove any fencing provided in pursuance of Rule 43 unless duly authorised; or

(b) stand on the edge or on the side of any vessel to which Rule 43 applies;

(c) pass or attempt to pass any barrier erected in pursuance of Rule 43;

(d) place across or inside any vessel to which Rule 43 applies any plank or gangway which does not comply with that Regulation or make use of any such plank or gangway while in such position;

(e) take a naked light or any lamp or matches or any apparatus for producing a naked light or spark into, or smoke in any part of the works where there is liability to explosion from inflammble gas, vapour or dust;

(f) use a metal spade, scraper or pail when cleaning out or removing the residues from any chamber, still, tank or other vessel which has contained sulphuric acid or hydrochloric acid or other substances, which may cause evolution of arseniuretted hydrogen;

(g) remove from a First Aid Box cupboard or from the Ambulance Room any First Aid appliance or dressing except for the treatment of injuries in the work.

SCHEDULE I

"Chemical Works" means any work or part of a work in which —

1. the manufacture or recovery of any of the following is carried on —

(a) Carbonates, chromates, chlorates, oxides or hydroxides of potassium, sodium, iron, aluminium, cobalt, nickel, arsenic antimony, zinc or magnesium;

(b) Ammonia and the hydroxide and salts of ammonium;

(c) Sulphurous, sulphuric, nitric, hydrochloric, hydrofluoric, hydriodic, hydrosulphuric, boric, phosphoric, oxalic, arsenious, arsenic, lactic, acetic, tartaric

or citric acids and their metallic or organic salts; and

(d) Cyanogen compounds.

2. a wet process is carried on —

(a) for the extraction of metal from ore or from any by-product or residual material; or

(b) in which electrical energy is used in any process of chemical manufacture.

3. Alkali waste or the drainage therefrom is subject to any chemical process for the recovery of sulphur, or for the utilisation of any constituent of such waste or drainage.

4. Carbon bisulphide is made or hydrogen sulphide is evolved by the decomposition of metallic sulphides or hydrogen sulphide is used in the production of such sulphides.

5. Bleaching powder is manufactured or chlorine gas is made or is used in any process of chemical manufacture.

6.(a) Gas-tar or coal-tar or any compound product or residue of such tars is distilled or is used in any process of chemical manufacture;

(b) synthetic colouring matters or their intermediates are made.

7. Refining of crude shale oil or any process incidental thereto is carried out.

8. Nitric acid is used in the manufacture of nitro-compounds.

9. Explosives are made with the use of nitro-compounds.

SCHEDULE-II

1. A nitro or amino process (overalls or suits working clothes and protective footwear).

2. Grinding raw materials in a chrome process (overall suits).

3. The crystal department and in packing in a chrome process (protective coverings).

4. Packing in a chrome process (respirators).

5. Any room or place in which chlorate is crystalised, ground or packed (clothing of woollen material and boots or overshoes, the soils of which have no metal on them).

6. Any room in which caustic is ground or crushed by machinery (goggles and gloves or other suitable protection for the eyes and hands.)

7. Bleaching powder chambers, or in packing charges drawn from such chambers (suitable respirators).

8. Drawing off of molten sulphur from sulphur pots in the process of carbon disulphide manufacture (overalls, face-shields, gloves and footwear of fireproof material).

SCHEDULE III

1. A nitro or amina process.
2. The crystal department and the packing room in a chrome process.
3. The process of distilling gas or coal tar (other than blast furnance tar) and any process of cheminal manufacture in which such tar is used.

SCHEDULE IV

(i) A glazed sink with hot and cold water always available;
(ii) A table with a smooth top;
(iii) Means for sterilizing instruments;
(iv) A couch;
(v) A stretcher;
(vi) Two buckets or containers with close fitting lids.
(vii) Two rubber hot water bags;
(viii) A kettle and spirit stove or other suitable means of boiling water;
(ix) Twelve plain wooden splints, $36'' \times 4'' \times \frac{1}{4}''$
(x) Twelve plain wooden splints, $14'' \times 3'' \times {}^{1}/_{4}''$
(xi) Six plain wooden splints $10'' \times 2'' \times {}^{1}/_{2}''$
(xii) Three woollen blankets;
(xiii) One pair artery forceps;
(xiv) One bottle'of brandy;
(xv) Two medium size sponges;
(xvi) Three hands towels;

(xvii) Two kidney trays;
(xviii) Four carbolic soaps
(xix) Two glass tumblers and two wine glasses;
(xx) Two clinical thermometers;
(xxi) Graduated measuring glass with teaspoon;
(xxii) One eye bath;
(xxiii) One bottle (2 Ibs.) carbolic lotion 1 in 20;
(xxiv) Two chairs;
(xxv) One screen;
(xxvi) One electric hand torch;
(xxvii) An adequate supply of anti-tetanus serum;
(xxviii) Two first aid boxes, each containing *(a)* 24 small sterilized dressings, *(b)* 12 medium size sterilized dressings, *(c)* 12 large size sterilized dressings, *(d)* 12 large size sterilized burn dressings, *(e)* 12 half ounce packets sterilized cotton wool, *(f)* one snake bite lancent, *(g)* one pair scissiors, *(h)* two (1 oz.) bottles of potassium permanganate crystals, *(i)* one (4 oz.) bottle containing a two percent alcoholic solution of iodine, *(j)* one (4 oz.) bottle of salvolatile having the dose and mode of administration indicated on the label, *(k)* 1 copy of the first aid leaflet issued by the Chief Advisor, Factories, Government of India.

PART II

APPLYING TO WORKS OR PARTS THEREOF IN WHICH

I. Caustic pots are used; or

II. Chlorate or bleaching powder is manufactured; or

III. (a) Gas tar or coal tar is distilled or is used in any process of Chemical manufacture; or

(b) A nitro or amino process is carried on; or

(c) A chrome process is carried on; or

IV. Crude shale oil is refined or processes incidental thereto are carried on; or

V. Nitric acid is used in the manufacture of nitro compounds; or

VI. The evaporation of brine in open pans and the stoving of salt are carried on; or

VII. The manufacture or recovery of hydrofluoric acid or any of its salts is carried on; and

VIII. Work at a furnace where the treatment of zinc ores is carried on.

1. ***Entry of Gas Tar or Coal Tar Still*** — Before any person enters a gas tar or coal tar still for any purpose except that of rescue, it shall be completely isolated from adjoining tar stills, either by disconnecting —

(a) The pipe leading from the swan neck to the condenser worm; or

(b) The waste gas pipe fixed to the worm and or receiver; and in addition, blank flanges shall be inserted between the disconnected parts, and the pitch discharge pipe or cock at the bottom of the still shall be disconnected.

2. ***Entry into Bleaching Powder Chambers*** — No person shall enter a chamber for the purpose of withdrawing the charge of bleaching powder unless and until

(i) The chamber is efficiently ventilated; and

(ii) The air in the chamber has been tested and found to contain not more than 2.5 grains of free chlorine gas per cubic foot.

A register containing details of all such tests shall be kept in a form approved by the Chief Inspector of Factories.

3. ***Special Precautions for Nitro and Amino Process — In a nitro or amino process —***

(a) If crystallised substances are broken or any liquor agitated by hand means shall be taken to prevent, as far as practicable, the escape of dust or fume into the air of any place in which any person is employed. The handles of all implements used in the operations shall be cleansed daily;

(b) Cartridges shall not be filled by hand except by means of a suitable scoop;

(c) Every drying stove shall efficiently ventilated to the outside air in such a manner that hot air from the stove shall not be drawn into any workroom;

(d) No person'shall enter a stove to remove the contents until a free current of air has been passed through it;

(e) Every vessel containing nitro or amino derivatives of phenol or of

benzene or its homologues shall, if steam is passed into or around it, or if the temperature of the contents be at or above the temperature of boiling water, be covered in such a way that steam or vapour shall be discharged into the open air at a height of not less than 25 feet from the ground or the working platform, and at a point where it cannot be blown back again into the workroom.

4. ***Precautions During Caustic Grinding, Etc.*** — (a) Every machine used for grinding or crushing caustic shall be closed; and

(b) Where any of the following processes are carried on —

(i) Grinding or crushing of caustic;

(ii) packing of ground caustic;

(iii) Grinding, sieving, evaporating or packing in a chrome process; and

(iv) Crushing, griding or mixing of material or cartridge filing in a nitro or amino process;

an efficient exhaust draught shall be provided.

5. ***Chlorate manufacture*** — *(a)* Chlorate shall not be crystallised, ground or packed except in a room or place not used for any other purpose, the floor of which room or place shall be of cement or other smooth, impervious and incombustible material, and shall be thoroughly cleansed daily;

(b) Wooden vessel shall not be used for the crystallisation of chlorate, or to contain crystallised or ground chlorate; provided that this regulation shall not prohibit the packing of chlorate for sale into wooden casks or other wooden vessels.

6. ***Restrictions on the employment of young persons and women*** — *(a)* Persons under 18 years of age and women shall not be employed in any process in which hydrofluoric acid fumes or amonical vapours are given off or in any of the following operations —

(i) Evaporation of brine in open pans;

(ii) Stoving of salt;

(iii) Work at a furnace where the treatment of zinc ores is carried

on;

(iv) The cleaning of workrooms where the process mentioned in (iii) is carried on.

(b) No person under 18 years of age shall be employed in a chrome process or in a nitro or amino process or in a process in which the following materials are used or where the vapour of such materials is given off;

Carbon bisulphide, chloride of sulphur, benzene, carbon tetrachloride, trichloroethlene, any carbon, chlorine compound, or any mixture containing any of such materials.

7. ***Duties of Employees***— Every person employed —

(a) In a process to which Rule 33 apply shall wear the protective clothing, footwear, respirators, goggles or gloves provided under Rule 33 and shall deposit overalls or suits or working clothing so provided, as well as clothing put off during working hours, in the place provided under Rule 34.

(b) In processes to which Rule 35 applies shall carefully wash the hands and face before partaking of any food or leaving the premises;

(c) In any process to which Part II of these rules applies shall use protective appliances supplied in respect of any process in which he is engaged.

SCHEDULE XII
PRINTING PRESSES AND TYPE FOUNDRIES AND CERTAIN LEAD PROCESSES CARRIED THEREIN

1. ***Exemption*** — Where the Chief Inspector is satisfied that all or any of the provisions of the Schedule are not necessary for the protection of persons employed he may by certificate in writing exempt any factory from all or any of such provisions subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector.

2. ***Definitions*** **— In these regulations —**

"Lead material" means materials containing not less than five percent of lead;

"Lead process" means —

(a) the melting of lead or any lead material for casting and mechanical composing; and

(b) the recharging of machines with used lead material; or

(c) any other work including removal of dross from melting pots, cleaning of plungers; and

(d) manipulation, movement or other treatment of lead material.

"Efficient exhaust draught" means localised ventilation effected by heat or mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove gas, vapour, fume or dust at the point where they originate.

3. ***Exhaust Draught***— None of the following processes shall be carried on except with an efficient exhaust draught —

(a) melting lead material or slugs;

(b) heating lead material so that vapour containing lead is given off; or, unless carried on in such a manner as to prevent free escape of gas, vapour, fumes or dust into any place in which work is carried on or, unless carried on in electrically heated and thermostatically controlled melting pots;

Such exhaust draught shall be effected by mechanical means and so contrived as to operate on the dust, fume, gas or vapour given off as closely as may be at its point of origin.

4. ***Prohibition Relating to Women and Young Persons***— No women or young person shall be employed or permitted to work in any lead process.

5. ***Separation of certain processes***— Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one aother and from any other process —

(a) Melting of lead or any lead material;

(b) Casting of lead ingots;

(c) Mechanical composing.

6. ***Container for Dross*** **—** A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptacle shall be kept covered while in the work-room near the machine except when the dross is being deposited therein.

7. ***Floor of Work-Room*** — The floor of every work-room where lead process is carried on shall be —

(a) Of cement or similar material so as to be smooth and impervious to water;

(b) Maintained in sound condition; and

(c) Shall be cleaned throughout daily after being thoroughly damped with water at a time when no other work is being carried on at the place.

8. ***Mess-Room*** **—** There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable mess-room which shall be furnished with sufficient tables and benches.

9. ***Washing Facilities*** — There shall be provided and maintained in a cleanly state and in good repair for the use of all person employed in a lead process—

(a) a wash place with either —

(i) a trough with a smooth impervious surface fitted with a waste pipe without plug; and of sufficient length to allow at least 60 Centimeters for every five such persons employed at any one time and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 Centimeters; or

(ii) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available; and

(b) a sufficient supply of clean towels made of suitable material renewed daily with a sufficient supply of soap or other suitable cleansing material.

10. ***Medical Examination***—*(a)* Every person employed in lead process shall be examined by the Certifying Surgeon within 14 days of his first employment in such processes and thereafter shall be examined by the Certifying Surgeon at intervals of not more than 3 months, and a record of such examination shall be entered by the Certifying Surgeon in the special certificate of fitness in Form No. 27;

(b) A Health Register containing names of all persons employed in any lead process shall be kept in Form No. 17;

(c) No person after suspension shall be employed in a lead process without the written sanction from the Certifying Surgeon, entered in the Health Register.

11. ***Food, Drinks, Etc., Prohibited in Work-Room*** — No food, drinks, pan and superi or tobacco shall be consumed or brought by any worker into any work room in which any lead process in carried on.

SCHEDULE XIII

COMPRESSION OF OXYGEN AND HYDROGEN PRODUCED BY THE ELECTROLYSIS OF WATER

1. The room in which electrolyser plant is installed shall be separate from the plant for storing and compressing the oxygen and hydrogen and also the electric generator room.

2. ***The purity of oxygen and hydrogen shall be tested by a competent person at hourly intervals at the following points —***

(i) In the electrolyser room;

(ii) At the gas holder in-let; and

(iii) at the suction end of the compressor.

The purity figures shall be entered and signed by the person carrying out such tests in the register :

Provided, however, that if the electrolyser plant is fitted with automatic recorder of purity of oxygen and hydrogen with alarm lights, it shall be sufficient if the purity of the gases is tested at hourly intervals at the suction end of the compressor only.

3. The oxygen and hydrogen gases shall not be compressed if their purity as determined under clause 2 above falls below 98 percent at any time.

4. There shall be at least two gas holders for each kind of gas compressed and the gas holder for same gas shall be provided with suitable arrangements to ensure that no gas holder is connected to the compressor and to the electrolyser at the same time, and only one gas holder is connected to the compressor line at any one time.

5. The bell of any gas holder shall not be permitted to go within 30 c.m. (12 inches) of its lowest position when empty, and a visual and an audible warning signal shall be fitted to the gas holder to indicate that this limit **is** reached.

6. The water and caustic soda used for making electrolytes shall be chemically pure within pharmaceutical limits.

7. Electrical connections at the electrolyser cells and at the electric generator terminals shall be so constructed as to preclude possibility of wrong connections leading to the reversal of polarity and in addition an automatic device shall be

provided to cut off power in the event of reversal of polarity owing to wrong connections either at the switch board or at the electric generator terminals.

8. Oxygen and hydrogen gas pipes shall be painted with distinguishing colours and in the event of leakage at the joints of the hydrogen gas pipe, the pipe after reconnection shall be purged of all air before drawing in hydrogen gas.

9. All electrical wiring and apparatus in the electrolyser room shall be of flame-proof construction or enclosed in flame-proof fittings and no naked light or flame shall be allowed to be taken either in the electrolyser room or where compression and filling of the gases is carried on and such warning notices shall be exhibited in prominent places.

10. No part of the electrolyser plant and the gas holders and compressor shall be subjected to welding, brazing, soldering or cutting until steps have been taken to remove any explosive substance from that part and render the part safe for such operations and after the completion of such operations no explosive substances shall be allowed to enter that part until the metal has cooled sufficiently to prevent risk of explosion.

11. No work or operation, repair or maintenance shall be undertaken except under the direct supervision of a person who by his training, experience and knowledge of the necessary precautions against risk of explosion is competent to supervise such work. No electric generator after erection or repairs shall be switched on to the electrolysers unless the same is certified by the competent person under whose direct supervision erection or repairs are carried on to be in a safe condition and the terminals have been checked for the polarity as required by Rule 7.

12. Every part of the electrolyser plant and the gas holders and compressor shall have a regular schedule of overhaul and checking and every defect noticed shall be rectified forthwith.

[SCHEDULE XIV]

MANUFACTURE, HANDLING AND USE OF BENZENE AND SUBSTANCES CONTAINING BENZENE.

1. ***Application :-*** This schedule shall apply in respect of factories or parts thereof in which benzene or substances containing benzene are manufactured, handled or used.

2. ***Definitions :-*** For the purpose of this schedule -

(a) "substances containing benzene" means substances wherein benzene content exceeds 1 per cent by volume ;

(b) "substitute" means a chemical which is harmless or less harmful than benzene and can be used in place of benzene ;

(c) "enclosed system" means a system which will not allow escape of benzene vapours to the working atmosphere ; and

(d) "efficient exhaust draught" means localised ventilation, effected by mechanical means for the removal of gases, vapours and dusts or fumes so as to prevent them from escaping into air of any workroom. No draught shall be deemed to be efficient if it fails to remove smoke generated at the point where such gases, vapours, fumes or dusts originate.

3. ***Prohibition and substitutions :*** (1) Use of Benzene and substances containing benzene, is prohibited in the following process :-

(a) Manufacture of vernishes, paints and thinners ; and

(b) Cleaning and degreasing operations.

(2) Benzene or substances containing benzene shall not be used as a solvent or diluent unless the process in which it is used is carried on in an enclosed system or unless the process is carried on in a manner which is considered equally safe as if it were carried out in an enclosed system.

(3) Where suitable substitutes are available, they shall be used instead of benzene or substances containing benzene. This provision, however shall not apply to the following process :-

(a) production of benzene ;

(b) process where benzene is used for chemical synthesis ; and

(c) motor spirits (used as fuel)

(4) The Chief Inspector may, subject to confirmation by the State Government, permit exemptions from the percentage laid down in sub-paragraph

2(a) and also from the provisions of sub-paragraph (3) of this paragraph temporarily under conditions and within limits of time to be determined after consultation with the employers and workers concerned.

4. ***Protection against inhalation.-*** (1) The process involving the use of benzene or substances containing benzene shall as far as practicable be carried out in an enclosed system.

(2) Where, however, it is not practicable to carry out the process in an enclosed system, the workroom in which benzene or substances containing benzene are used shall be equipped with an effeicient exhaust draught or other means for the removal of benzene vapours to prevent their excape into the air of the workroom so that the concentration of benzene in the air does not exceed 10 parts per million by volume or 30 milligrams per cubicmeter.

(3) Air analysis for the measurement of concentration of benzene vapours in air shall be carried out every 8 hours or at such intervals as may be directed by the Chief Inspector at places where process involving use of benzene is carried on and the result of such analysis shall be recorded in a register specially maintained for this purpose. If the concentration of benzene vapours in air as measured by air analysis, exceeds 10 parts per million by volume or 30 milligrams per cubicmeter, the Manager shall forthwith report the concentration to the Chief Inspector stating the reasons for such increase.

(4) Workers who for special reasons are likely to be exposed to concentration of benzene in the air of the workroom exceeding the maxium referred to in sub-paragraph (2) shall be provided with suitable respirator or face masks. The duration of such exposure shall be limited as far as possible.

5. ***Measures against skin contact. -*** (1) Workers who are likely to come in contact with liquid benzene or liquid substances containing benzene shall be provided with suitable gloves, aprons, boots and where necessary-vapour tight chemical goggles, made of materials not effected by benzene or its vapours.

(2) The protective wear referred to in sub-paragraph (1) shall be maintained in good condition and inspected regularly.

6. Prohibition relating to employment of women and young persons. No women or young person shall be employed or permitted to work in any workroom involving exposure to benzene or substances containing benzene.

7. ***Labelling :-*** Every container holding benzene or substances containing benzene shall have the word "Benzene" and approved danger symbols clearly

visible on it and shall also display information on benzene content warning anout toxicity and warning about inflammability of the chemical.

8. ***Improper use of benzene :-*** (1) The use of benzene or substances containing benzene by workers for cleaning their hands or their work clothing shall be prohibited.

(2) Workers shall be instructed on the possible dangers arising from such misuse.

9. ***Prohibition of consuming food, etc. in workroom :-*** No worker shall be allowed to store or consume food or drink in the workroom in which benzene or substances containing benzene are manufactured, handled or used. Smoking and chewing tobacco or pan shall be prohibited in such workrooms.

10. ***Instructions as regards risks :-*** Every workers on his first employment shall be fully instructed on the properties of benzene or substances containing benzene which he has to handle and of the dangers involved. Workers shall also be instructed on the measures to be taken to deal with in an emergency.

11. ***Cautionary notices :-*** Cautionary notices in the form specified in appendix and printed in the language easily read and understood by the majority of the workers shall be displayed in prominent places in the workrooms where benzene or substances containing benzene are manufactured, handled or used.

12. ***Washing facilities, cloakroom and messroom :-*** In factories in which benzene or substances containing benzene are manufactured, handled or used, the occupier shall provide and maintain in a clean state and in good repair -

(a) Washing facilities under cover, of the standard of at least one tap for every 10 persons having constant supply of water with soap and a clean towel provided individually to each worker if so ordered by the Inspector ;

(b) A cloakroom with lockers for each worker, having two compartments one for street-clothing and one for work-clothing; and

(c) a messroom furnished with tables and benches with means for warming food, provided that where a canteen or other proper arrangements exist for the workers to take their meals, the requirements of messroom shall be dispensed with.

13. ***Medical examination :-*** (1) Every worker who is to be employed in processes involving use of benzene or substances containing benzene, shall undergo.

(3) (a) a thorough pre-employment medical examination including a blood

test for fitness for employment by a certifying surgeon ; and

(b) periodical medical examination including blood test and other biological tests at intervals of every 6 months by the factory medical officer with the assistance of a laboratory.

(2) Certificates of pre-employment medical examination and periodical medical examination including test shall be entered in a health register in Form-17, which shall be produced on demand by an Inspector.

(3) (a) If the factory medical officer on examination at any time is of the opinion that any worker has developed signs symptoms of benzene exposure, be shall make a record of his findings in the said register and inform the manager in writings.

(b) on receipt of the information from the factory medical officer, the manager of the factory shall sent the worker so found exposed, to the certifying surgeon who shall, after satisfying himself with the findings of the factory medical officer and conducting necessary examinations, issue orders of temporary shifting of the worker or suspension of the worker in the process.

(4) The medical examination shall be arranged by the occupier or manager of the factory and the worker so examined shall not bear any expenses for it.

APPENDIX
CAUTIONARY NOTICE BENZENE AND SUBSTANCES CONTAINING BENZENE

1. ***Hazards :***

(a) Benzene and substances containing benzene are harmful.

(b) Prolonged or repeated breathing of benzene vapours may result in acute or chronic poisoning.

(c) Benzene can also be absorbed through skin which may cause skin and other diseases.

2. ***Preventive measures :***

(a) Avoid breathing of benzene vapours.

(b) Avoid prolonged or repeated contact of benzene with the skin.

(c) Remove benzene soaked or wet clothing promptly.

(d) If any time you are exposed to high concentration of benzene vapours and exhibit signs and symptoms such as dizziness, difficulty in breathing, excessive excitation and losing of consciousness, immediately inform your factory

manager.

(e) Keep all the containers of benzene closed.

(f) Handle, use and process benzene and substances containing benzene carefully in order to prevent their spillage on floor.

(g) Maintain good housekeeping.

3. ***Protective equipment:***

(a) Use respiratory protective equipment in places where benzene vapours are present in high concentration.

(b) In emergency, use self generating oxygen mask or oxygen or air cylinder masks.

(c) Wear hand gloves, aprons, goggles and gum boots to avoid contact of benzene with your skin and body parts.

4. ***First aid measures in case of acute benzene poisoining :***

(a) Remove the clothing immediately if it is wetted with benzene.

(b) If liquid benzene enters eyes, flush thoroughly for atleast 15 minutes with clean running water and immediately secure medical attention.

(c) In case of unusual exposure to benzene vapour, call a physician immediately. Until he arrives, do the following :-

(i) If the exposed person is concious -(aa) Move him to fresh air in open.

(bb) Lay down without a pillow and keep him quiet and warm.

(ii) If the exposed persons is unconscious -

(aa) Lay him down preferably on the left side with the head low.

(bb) Remove any false teeth, chewing-gum, tobacco or other foreign objects which may be in his mouth.

(cc) Provide him artificial respiration in case difficulty is-being experienced in breathing.

(dd) In case of shallow breathing or cyanosis (blueness of skin, lips, ears, finger nail beds), he should provided with medical oxygen or oxygen carbon dioxide mixture. If needed, he should be given artificial respiration. Oxygen should be administered by a trained person only.

SCHEDULE XV

PROCESS OF EXTRACTING OILS AND FATS FROM VEGETABLES AND ANIMAL SOURCES IN SOLVENT EXTRACTION PLANTS.

1. ***Definations :-*** For the purposes of this Schedule :-

(a) "Solvent extraction plant" means a plant in which the process of extracting oil and fats from vegetable and animal sources by use of solvents is carried on.

(b) "Solvent" means an inflammable liquid such as pentan hexane and heptanes used for the recovery of vegetable oil.

(c) "flamesproof enclousure" as applied to electrical machinery or appratus means an enclosure that will with-stand when covers or other access doors are properly secured an internal explosion of the flammable gas or vapour which may enter or which may originate inside the enclosure without suffering damage and without communicating internal inflammation or explosion to the external flammable gas or vapour.

(d) "competent person" for the purpose of this schedule shall be at least a member of the Institution of Engineers (India) or an Associate Member of the said Institution with 10 years experience in a responsible position as may be approved by the Chief Inspector. Provided that a graduate in mechanical engineering or chemical technology with specialised knowledge of oil and fats and with a minimum experiance of 5 years in a solvent extraction plant shall also be considered to be competent person :

Provided further that the State Government may accept any other qualifications if in its opinion they are equivalent to the qualifications aforesaid.

2. ***Location and layout :-***

(1) No solvent extraction plant will be permitted to be constructed or extended within a distance of 30 metre from the nearest residential locality.

(2) A 1.5 metre high continous wire fencing shall be provided around the solvent extraction plant upto a minimum distance of 1.5 metres from the plant.

(3) No person shall be allowed to carry any matches or an open flame or fire inside the areas bound by the fencing.

(4) Boiler houses and other buildings where open flame processed are carried on shall be located at least 30 meters away from the solvent extraction plant.

(5) If godown or preparatory processes are at a distance of less than 30 meters from the solvent extraction plant there shall be at least 15 metres distance from the plant and a continous barrier wall of noncombustible material 1.5 metres high shall be erected at a distance of not less than 15 metres from the solvent extraction plant so that it extends to at least 30 metres of vapour traval around its ends from the plant to the possible source of ignition.

3. ***Electrical Installations :***

(1) All electrical motors and wiring and other electrical equipment installed for house in solvent extraction plant shall be of flameproof construction.

(2) All metal parts of the plant and building including various tanks and containers where solvents are stored or are present and all parts of electrical equipements not required to be energised shall be properly bonded together and connected to earth so as to avoid accidental rise in the electrical potential of such parts above the earth potential.

4. ***Restriction on smoking :-*** Smoking shall be strictly prohivited within 15 metres distance from solvent extraction plant. For this purpose, "No smoking" signs shall be permanently displayed in the area.

5. ***Precautions against friction :-***

(1) All tools and equipment including ladders, chains and other lifting tackle required to be used in solvant extraction plant shall be of non-sparking type.

(2) No machinery or equipment in solvent extraction plant shall be belt driven.

(3) No person shall be allowed to enter and work in the solvent extraction plant if wearing clothes made of nylon or such other fibre that can generate static electrical charge or wearing footwear which is likely to cause sparks by friction.

6. ***Fire fighting apparatus :-***

(1) Adequate number of portable fire extinguisheres suitable for use against flammable liquid fires shall be provided in the solvent extraction plant.

(2) An automatic water spray sprinkler system on a wet pipe or open head deluge system with sufficient supply of storage water shall be provided over solvent extraction plant and throughout the building housing such plant.

7. ***Precautions against power failure :-*** Provision shall be made for the automatic cutting off of steam in the event of power failure and also for emergency over head water supply for feeding water by gravity to condensers which shall come into play automatically with the power failure.

8. ***Magnetic separators :-*** Oil cake shall be fed to the extractor by conveyer through a hopper and magnetic separator shall be provided to remove any pieces of iron during its transfer.

9. ***Venting :-*** (1) Tanks containing solvents shall be protected with emergency venting to relieve excessive internal pressure in the event of fire.

(2) All emergency relief vents shall terminate at least 6 metres above the ground and be so located that vapours will not re-enter the building in which solvent extraction plant is located.

10. ***Waste water :-*** Process waste water shall be passed through a flash evaporator to remove any solvent before it is discharged into a sump which should be located within the fenced area but not closer than 8 metres to the fence.

11. ***Ventilation :-*** The solvant extraction plant shall be well ventilated and if the plant is housed in a building the building shall be provided with mechanical ventilation with provision for at least six air changes per hour.

12. ***House keeping :-***

(1) Solvents shall not be stored in an area covered by solvent extraction plant except in small quantities which shall be stored in approved safety cans

(2) Waste, materials such as oily rags, other wastes and absorbants used to wipe off solvent and paints and oil shall be deposited in approved containers and removed from the premises at least once a day.

(3) Space within the solvant extraction plant and within 15 metres from the plant shall be kept free from combustible materials and any spills of oil or solvent shall be cleaned up immediately.

13. ***Eaxmination and Repaires :-*** The solvent extraction plant shall be examined by the competent person to determine any weakness or corrosion and wear once in every 12 months. Report of such examination shall be supplied to the Inspector with his observation as to whether or not the plant is in safe condition to work.

(2) No repairs shall be carried out to the machinery or plant except under the direct supervision of the competent person.

(3) Facility shall be provided for purging the plant with inert gas or steam before opening for cleaning or repairs and before introducing solvent after repairs.

14. ***Operating personnel*** :- The operation of the plant and machinery in the solvent extraction plant shall be in the charge of such duly qualified and trained

persons as are certified by the competent person to be fit for the purpose and no other person shall be allowed to operate the plant and machinery.

15. ***Employment of women and young persons:-*** No women or young persons shall be employed in the solvent extraction plant.

16. ***Vapour detection*** :- Suitable type of flameproof and portable combustible gas indicator shall be provided and maintained in good working order and a schedule of routine sampling of atmosphere at various locations as approved by the chief Inspoctor shall be drawn out and entered in a register maintained for the purpose.

SCHEDULE XVI

MANIPULATION OF STONE OR ANY OTHER MATERIAL CONTAINING FREE SILICA

1. ***Application*** — This Schedule shall be applied to all factories or parts of factories in which manipulation of stone or any other material containing free silica is carried on.

2. ***Definitions*** — For the purpose of this Schedule —

(a) "manipulation" means crushing, breaking, chipping, dressing grinding, sieving, mixing, grading or handling of stone or any other material containing free silica or any other operation involving such stone or material;

(b) "stone or any other material containing free Silica" means a stone or any other solid material containing not less than 5% by weight of free silica.

3. ***Precautions in manipulation*** — No manipulation shall be carried out in a factory or part of a factory unless one or more of the following measures, namely —

(a) damping the stone or other material being processed;

(b) providing water spray;

(c) enclosing the process;

(d) isolating the process; and

(e) providing localised exhaust ventilation; are adopted so as to effectively control the dust in any place in the factory where any person is employed, at a level equal to or below the maximum permissible level for silica dust as laid down in Table - 2 appended to Rule - 128 of Model Rule.

Provided that such measures as above are not necessary if the process or operation itself is such that the level of dust created and prevailing does not exceed permissible level referred to.

4. ***Maintenance of Floors***— (1) All floors or places where fine dust is likely to settle on and where on any person has to work or pass shall be of impervious rnaterial and maintained in such condition that they can be thoroughly cleaned by a moist method or any other method which would prevent dust being air borne in the process of cleaning.

(2) The surface of every floor of every work room or place where any work is carried on or where any person has to pass during the course of his work shall be cleaned of dust once at least during each shift after being sprayed with water or by any other suitable method so as to prevent dust being airborne in the process of cleaning.

5. ***Prohibition relating to young persons*** — No young person shall be employed or permitted to work in any of the operations involving manipulation or at any place where such operations are carried out.

6. ***Medical facilities and records of examination and tests*** — (1) The occupier of every factory to which the Schedule applies shall —

(a) employ a qualified medical officer for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories and

(b) Provide to the said medical officer all the necessary facilities for the purpose referred to in clause (1).

(2) The record of medical examination and appropriate tests carried out by the said medical officer shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

7. ***Medical examination by certifying surgeon*** — (1) Every worker employed in the processes specified in paragraph 1 shall be examined by a certifying surgeon within 15 days of his first employment. Such medical examination shall include pulmonary function tests and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such

employment by the certifying surgeon.

(2) Every worker employed in the said processes shall be re-examined by a certifying surgeon at least once in every twelve months. Such examination shall, wherever the certifying surgeon considers appropriate, include all the tests as specified in sub-paragraph (1) except chest X-ray which will be once in 3 years.

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in Form 28. The record of re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the Manager of the Factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 17.

(4) The certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes.

(6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed; or permitted to work in the said processes unless the certifying surgeon, after further examination, again certifies him fit for employment in those processes.

8. ***Exemptions***— If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or in-frequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate in writing, which he may in his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

SCHEDULE XVII

HANDLING AND PROCESSING OF ASBESTOS, MANUFACTURE OF ANY ARTICLE OF ASBESTOS, AND ANY OTHER PROCESS OF MANUFACTURE OR OTHERWISE IN WHICH ASBESTOS IS USED IN ANY FORM.

1. ***Application*** — This Schedule shall apply to all factories or parts of factories in which any of the following processes is carried on —

(a) breaking, crushing, disintegrating, opening, grinding, mixing or seiving of asbestos and any other processes involving handling and manipulation of asbestos incidental thereto;

(b) all process in the manufacture of asbestos textiles including preparatory and finishing processes;

(c) making of insulation slabs or sections, composed wholly or partly of asbestos, and processes incidental thereto;

(d) making or repairing of insulating mattresses, composed wholly or partly of asbestos, processes incidental thereto;

(e) manufacture of asbestos cardboard and paper;

(*f*) manufacture of asbestos cement goods;

(g) application of asbestos by spray method;

(h) sawing, grinding, turning, abrading and polishing in dry state of articles composed wholly or partly of asbestos;

(i) cleaning of any room, vessel, chamber, fixture or appliance for the collection of asbestos dust; and

(j) any other processes in which asbestos dust is given off into the work environment.

2. ***Definition***— For the purpose of this Schedule —

(a) "asbestos" means any fibrous silicate mineral and any admixture containing actionlite, amosite, anthophyllite, dthrysotile, crocidolite, tremolite or any mixture thereof, whether crushed or opened;

(b) "asbestos textiles" means yarn or cloth composed of asbestos or asbestos mixed with any other material;

(c) "approved" means approved for the time being in writing by the Chief Inspector;

(d) "breathing apparatus" means a helmet or face piece with necessary connection by means of which a person using it breathes air free from dust, or any other approved apparatus;

(e) "efficient exhaust draught' means localised ventilation by mechanical means for the removal of dust so as to prevent dust from escaping into air of any place in which work is carried on. No draught shall be deemed to be efficient which fails to control dust produced at the point where such dust originates;

(f) "prepairing" means crashing, disintegrating, and any other processes in or incidental to the opening of asbestos;

(g) "protective clothing" means overalls and head covering which (in either case) will when worn exclude asbestos dust.

3. ***Tools and Equipment***— (1) Any tools or equipment used in processes to which this Schedule applies shall be such that they do not create asbestos dust above the permissible limit or are equipped with efficient exhaust draught.

4. ***Exhaust draught***— (1) An efficient exhaust draught shall be provided and maintained to control dust from the following processes and machines-

(a) manufacture and conveying machinery namely —

(i) preparing, grinding or dry mixing machines;

(ii) carding, card waste and ring spinning machines and looms;

(iii) machines or other plant fed with asbestos; and

(iv) machines used for the sawing, grinding, turning, drilling, abrading or polishing, in the dry state of articles composed wholly or partly of asbestos.

(b) cleaning and grinding of the cylinders or other parts of a carding machine;

(c) chambers, hoppers or other structures into which loose asbestos is delivered or passes;

d) work-benches for asbestos waste sorting or for other manipulation of asbestos by hand;

(e) workplaces at which the filling or emptying of sacks, skips or other portable containers, weighing or other process incidental thereto which is effected by hand, is carried on;

(f) sack cleaning machines;

(g) mixing and blending of asbestos by hand; and

(h) any other process in which dust is given off in-to the work environment.

(2) Exhaust ventilation equipment provided in accordance with sub-paragraph (1) shall, while any work of maintenance or repair to the machinery, apparatus or other plant or equipment in connection with which it is provided is being carried on, be kept in use so as to produce an exhaust draught which prevents the entry of asbestos dust into the air of any work place.

(3) Arrangements shall be made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air of any workroom.

(4) The asbestos bearing dust removed from any workroom by the exhaust system shall be collected in suitable receptacles or filter bags which shall be isolated from all work areas.

(5) Testing and examination of ventilating systems— (1) All ventilating systems used for the purpose of extracting or suppressing dust as required by this Schedule shall be examined and inspected once in every week by a responsible person. It shall be thoroughly examined and tested by a competent person once in every period of 12 months. Any defects found by such examinations or test shall be rectified forthwith.

(2) A register containing particulars of such examination and testes, and the state of the plant and the repairs or alteration (if any) found to be necessary shall be kept and shall be available for inspection by an Inspector.

6. Segregation in case of certain process-mixing or blending by the hand of asbestos, or making or repairing of insulating mattresses composed wholly or partly of asbestos shall not be carried on in any room in which any other work is done.

7. ***Storage and distribution of loose asbestos***— (1) All loose asbestos shall while not in use, be kept in suitable closed receptacles which prevent the escape of asbestos dust therefrom; such asbestos shall not be distributed within a factory except in such receptacles or in a totally enclosed system of conveyance.

8. ***All Asbestos sacks*** — (1) sacks used as receptacles for the purpose of transport of asbestos within the factory shall be constructed of impermeable materials and shall be kept in good repair.

(2) A sack which has contained asbestos shall not be cleaned by hand beating but by a machine, complying with paragraph 3.

9. ***Maintenance of floors and workplaces*** — (1) In every room in which any of the requiremants of this Schedule apply —

(a) the floors, work-benches, machinery and plant shall be kept in a clean state and free from asbestos debris and suitable arrangements shall be made for the storage of asbestos not immediately required for use; and

(b) the floors shall be kept free from any meterials, plant or other articles not immediately required for the work carried on in the room which would obstruct the proper cleaning of the floor.

(2) The cleaning as mentioned in sub-para (1) shall so far as is practicable, as carried out by means of vaccum cleaning equipment so designed and constructed and so used that asbestos dust neither escapes nor is discharged into the air of any work place.

(3) When the cleaning is done by any method other than that mentioned in sub-paragraph (2), the persons doing cleaning work and any other person employed that room shall be provided with respiratory protective equipment and protective clothing.

(4) The vaccum cleaning equipment used in accordance with provisions of sub-paragraph (2), shall be properly maintained and after each cleaning operation, its surfaces kept in a clean state and free from asbestos waste and dust,

(5) Asbestos waste shall not be permitted to remain on the floors or other surfaces at the work place at the end of the working shift and shall be transferred without delay to suitable receptacles. Any spillage of asbestos waste occuring during the course of the work at any time shall be removed and transferred to the receptacles maintained for the purpose without delay.

10. ***Breathing Apparatus and protective clothing***— (1) An approved breathing apparatus and protective clothing shall be provided and maintained in good conditions for use of every person employed —

(a) in chambers containing loose asbestos;

(b) in cleaning, dust setling or filtering chambers of apparatus;

(c) in cleaning the cylinders, including the doffer cylinders, or other parts of a carding machine by means of hand strickes,

(d) in filling, beating, or levelling in the manufacture or repair of insulating mattresses; and

(*e)* in any other operation or circumstances in which it is impracticable to adopt technical means to control asbestos dust in the work environment within the permissible limit.

(2) Suitable accommodation in conveniently accessible position shall be provided for the use of persons when putting on or taking off breathing apparatus and protective clothing provided in accordance with this rule and for the storage of such apparatus and clothing when not in use.

(3) All breathing apperates and protective clothing when not in use shall be stored in the accommodation provided in accordance with sub-paragraph above.

(4) All protective clothing in use shall be de-dusted under an efficient exhaust draught or by vaccum cleaning and shall be washed at suitable intervals. The cleaning Schedule and procedure should be such as to ensure the efficiency in protecting the wearer.

(5) All breathing apparatus shall be cleaned and disinfected at suitable intervals and thoroughly inspected once in every month by a responsible person.

(6) A record of the cleaning and maintenance and of the condition of the breathing apparatus shall be maintained in a register provided for that purpose which shall be readily available for inspection by an Inspector.

(7) No person shall be employed to perform any work specified in sub-paragraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has been fully instructed in the proper use of that equipment.

(8) No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another person unless it has been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed in the proper use of that equipment.

11. ***Separate accommodation for personal clothing*** — A separate accommodation shall be provided in a conveniently accessible position for all person employed in operations to which this Schedule applied for storing of personal clothing. This should be separated from the accommodation provided

under sub-paragraph (2) of paragraph (10) to prevent contamination of personal clothing.

12. ***Washing and bathing facilities***— (1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the processes covered by the Schedule, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 15 persons employed.

(2) The washing places shall have standpipes placed at intervals of not less than one metre.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided:

Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector.

(6) Sufficient supply of soap and nail brushes shall be provided.

13. ***Messroom***— (1) There shall be provided and maintained for use of all workers employed in the factory covered by this Schedule, remaining on the premises during the rest intervals, a suitable messroom which shall be furnished with—

(a) sufficient tables and benches with back rest, and

(b) adequate means for warming food.

(2) The messroom shall be placed under the charge of a responsible person and shall be kept clean.

14. ***Prohibition of employment of young persons***— No young person shall be employed in any of the process covered by this Schedule.

15. ***Prohibition relating to smoking*** — No person shall smoke in any area where processes covered by this Schedule are carried on. A notice in the language understood by majority of the workers shall be pasted in the plant prohibiting smoking at such areas.

16. ***Cautionary Notices***— (1) Cautionery notices shall be displayed at the approaches and along the perimeter of every asbestos processing area to warn all persons regarding —

(a) hazards to health from asbestos dust;

(b) need to use appropriate protective equipment;

(c) prohibition of entry to unauthorised persons, or authorised persons but without protective equipment.

(2) Such notices shall be in the language under-stood by the majority of the workers.

17. ***Air Monitoring*** — To ensure the effectiveness of the Control measures, monitoring of asbestos fibre in air shall be carried out once atleast in every shift and the record of the results so obtained shall be entered in a register specially maintained for the purpose.

18. ***Medical facilities and records of medical examinations and tests***— (1) The occupier of every factory or part of the factory to which the Schedule applies, shall —

(a) employ qualified medical practitioner for medical surveillance of the workers covered by this Schedule whose employment shall be subject to the approval of the Chief Inspector of factories;

(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause *(a)*.

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspectors.

19. ***Medical examination by certifying surgeon*** — (1) every worker employed in the processes specified in paragraph 1 shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include pulmonary function tests, tests for detecting asbestos fibres in sputum and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the certifying surgeon.

(2) Every worker employed in the process referred to sub-paragraph (1) shall be re-examined by a certifying surgeon at least once in every twelve calendar months. Such examinations shall wherever the certifying surgeon considers appropriate include all the tests specified in sub-paragraph (1) except chest X-ray which will be carried out once in 3 years.

(3) The certifying surgeon after examining a worker shall issue a certificate of Fitness in Form 28. The record of examination and re-examination carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2) including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his finding in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said processes.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the certifying surgeon, after examination, again certifies him fit for employment in those processes.

20. ***Exemptions*** — If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this Schedule, is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate in writing, which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify there in.

SCHEDULE XVIII

HANDLING OR MANIPULATION OF CORROSIVE SUBSTANCES

1. ***Definitions*** — For the purposes of this Schedule —

(a) "corrosive operation" means an operation of manufacturing, storing, handling, processing, packing or using any corrosive substance in a factory; and

(b) "corrosive substance" includes sulphuric acid, nitric acid, hydrochloric acid, carbolic acid, phosphoric acid, liquid chlorine, liquid bromine, ammonia,

sodium hydroxide and postassium hydroxide and a mixture thereof, and any other substance which the State Government by notification in the Official *Gazette* specify to be a corrosive substance.

2. ***Flooring —*** The floor of every workroom of a factory in which corrosive operation is carried on shall be made of impervious, corrosion and fire resistant material and shall be so constructed as to prevent collection of any corrosive substance. The surface of such flooring shall be smooth and cleaned as often as necessary and maintained on a sound condition.

3. ***Protective equipment***— (1) The occupier shall provide for the use of all persons employed in any corrosive operation suitable protective wear for hands and feet, suitable aprons, face shields, chemical safety goggles, and respirators. The equipments shall be maintained in good order and shall be kept in clean and hygienic condition by suitably treating to get rid of the ill effects of any absorbed chemicals and by disinfecting. The occupier shall also provide suitable protective creams and other preparations wherever necessary.

(2) The protective equipment and preparations provide shall be used by the persons employed in any corrosive operation.

4. ***Water facilities*** — Where any corrosive operation is carried on, there shall be provided as close to the place of such operations as possible a source of clean water at a height of 210 centimeters from a pipe of 1.25 centimeters diameter and fitted with a quick acting valve so that in case of injury to the worker by any corrosive substance, the injured part can be thoroughly flooded with water. Whenever necessary in order to ensure continous water supply, a storage tank having a minimum length, breadth and height of 210 centimeters, 120 centimeters and 60 centimeters respectively or such dimensions as are approved by the Chief Inspector shall be provided as the source of clean water.

5. ***Cautionery notice*** — A cautionery notice in the following form and printed in the language which majority of the workers employed understand, shall be displayed prominently close to the place where a corrosive operations is carried out and where it can be easily and convently read by the workers. If any worker is illiterate effective steps shall be taken to explain carefully to him the contents of the notice so displayed.

CAUTIONARY NOTICE
DANGER

Corrosive substances cause severe burns and vapours thereof may be extremely hazardous. In case of contact, immediately flood the part affected with plenty of water for at least 15 minutes.

GET MEDICAL ATTENTION QUICKLY

6. ***Transport***— (1) Corrosive substances shall not be filled, moved or carried except in containers and when they are to be transported they shall be placed in crates of sound construction and of sufficient strength.

(2) A container with a capacity of 11.5 litres or more of a corrosive substance shall be placed in a receptacle or crate and then carried by more than one person at a heigth below the waist line unless a suitable rubber wheeled truck is used for the purpose.

(3) Containers for corrosive substances shall be plainly labelled.

7. ***Devices for handling corrosives***— (1) Suitable tilting or lifting device shall be used for emptying Jars, carboys and other containers of corrosives.

(2) Corrosive substance shall not be handled by bare hands but by means of a suitable scoop or other device.

8. ***Opening of Valves*** — Valves fitted to containers holding a corrosive substance shall be opened with great care. If they do not work freely, they shall not be forced open. They shall be opened by a worker suitably trained for the purpose.

9. ***Cleaning tanks, stills etc.***— (1) In cleaning out or removing residues from stills or other large chambers used for holding any corresive substance, suitable implements made of wood or other material shall be used to prevent production of arseniureted hydrogen (arsine).

(2) Whenever it is necessary for the purpose of cleaning or other maintenance work for any worker to enter chamber, tank, vat, pit or other confined space where a corrosive substance had been stored all possible precautions required under Section 36 of the Act shall be taken to ensure the worker's safety.

(3) Wherever possible, before repairs are undertaken to any part of equipment in which a corrosive substance was handled, such equipment or part thereof shall be freed of any adhering corrosive substance by adopting suitable

methods.

10. ***Storage***— (1) Corrosive substance shall not be stored in the same room with other chemicals, such as turpentine, carbides, matallic powders and combustible materials, the accidental mixing with which may cause a reaction which is either violent or gives rise to toxic fumes and gases.

(2) Pumping or filling overhead tanks, receptacles, vats or other containers for storing corrsive substance shall be so arranged that there is no possibility of any corrosive substance overflowing and causing injury to any person.

(3) Every container having a capacity of twenty litres or more and every pipeline, valve, and fitting used for storing or carrying corrosive substance shall be thoroughly examined every year for finding out any defect and defects so found out shall be removed forth with. A register shall be maintained of every such examination made and shall be produced before the Inspector whenever required.

11. ***Fire extinguishers and fire fighting equipment***— An adequate number of suitable type of fire extinguishers or other fire fighting equipment, depending on the nature of chemicals stored, shall be provided, such extinguishers or other equipment shall be regularly tested and refilled. Clear instructions as to how the extinguishers or other equipment should be used, printed in the language which majority of the workers employed understand, shall be affixed near each extinguishers or other equipment.

12. ***Exemption***— If in respect of any factory on an application made by the manager, the Chief Inspector is satisfied that owing to the exceptional circumstances, or the infrequency of the process or for any other reason to be recorded by him in writing, all or any of the provisions of this Schedule are not necessary for the protection of the persons employed therein, he may by a certificate in writing, which he may at any time revoke, exempt the factory from such of the provisions and subject to such condition as he may specify therein.

SCHEDULE XIX
MANUFACTURE OR MANIPULATION OF MANGANESE AND ITS COMPOUNDS

1. ***Application*** — This Schedule shall apply to every factory in which or in any part of which any manganese process is carried on.

2. *Definition* — For the purposes of this Schedule —

(a) "manganese process" means processing, manufacture or manipulation of manganese or any compound of manganese or any mixture containing manganese;.

(b) "first employment" means first employment in any manganese process and includes also re-employment in any manganese process following any cessation of employment for a continuous period exceeding 3 calendar months;

(c) "manipulation' means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping or otherwise handling of manganese, or a compound of manganese, or any ore or any mixture containing manganese; and

(d) "efficient exhaust ventilation" means localized ventilation effected by mechanical means for the removal of dust or fume, mist at its source of origin so as to prevent it from escaping into the atmosphere of any place where any work is carried on. No draught shall be deemed to be efficient which fails to remove the dust or fume or mist at the point where it is generated and fails to prevent it from escaping into and spreading into the atmosphere of a workplace.

3. *Isolation of a process* — Every managanese process which may give rise to dust vapour or mist containing manganese, shall be carried on in a totally enclosed system or otherwise effectively isolated from other processes so that other plants and processes and other parts of the factory and persons employed on other processes may not be effected by the same.

4. *Ventilation of process* — No process in which any dust, vapour or mist containing manganese is generated shall be carried out except under an efficient exhaust ventilation which shall be applied as near to the point of generations as practicable.

5. *Personal protective equipment* — (1) The occupier of the factory shall provide and maintain in good and clean condition suitable overalls and head coverings for all persons employed in any manganese process and such overalls and head coverings shall be worn by the persons while working on a manganese process.

(2) The occupier of the factory shall provide suitable respiratory protective equipment for use by workers in emergency to prevent inhalation of dusts, fumes or mists, Sufficient number of complete sets of such equipment shall always be kept near the work place and the same shall be properly maintained and kept

always in a condition to be used readily.

(3) The occupier shall provide and maintain for the use of all persons employed, suitable accommodation for the storage and make adequate arrangements for cleaning and maintenance of personal protective equipment.

6. *Prohibition relating to women and young persons* — No women or young persons shall be employed or permitted to work in any manganese process.

7. *Food, drinks etc. prohibithed in the work rooms* — No food, drink, pan and supari or tobacco shall be allowed to be brought into or consumed by any worker in any workroom in which any manganege process is carried on.

8. *Messroom* — There shall be provided and maintained for the use of the persons employed in a manganese process a suitable messroom which shall be furnished with sufficient tables and benches and adequate means for warming of food. The messroom shall be placed under the charge of a responsible person and shall be kept clean.

9. *Washing facilities*— There shall be provided and maintained in a clean state and in good condition, for the use of persons employed on manganese process —

(a) a wash place under cover, with either —

(i) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimeters for every ten such persons employed at any one time, and having a constant supply of water taps or jets above the trough at intervals of not more than 60 centimeters; or

(ii) at least one wash basin for every such persons employed at any one time, fitted with a waste pipe and plug having a constant supply of water; and

(b) sufficient supply of soap or other suitable cleaning material and nail brushes and clean towels.

10. *Cloakroom* — If the Chief Inspector so requires there shall be provided and maintained for the use of persons employed in manganese process a cloakroom for clothing put off during working hours with adequate arrangements for drying the clothing.

11. *Cautionary placard and instructions*— Cautionary notices in the form specified in appendix and printed in the language of the majority the workers employed shall be affixed in prominent places in the factory where they can be

easily and conveniently read by the workers and arrangement shall be made by the occupier to instruct periodically all workers employed in a manganese process regarding the health hazards connected with their duties and the best preventive measures and methods to protect themselves. The notices shall always be maintained in a legible condition.

12. ***Medical examination***— (1) Every person employed in a manganese process shall be medically examined by certifying surgeon within 14 days of his first employment and thereafter at intervals of not more than three months.

(2) If a person medically examined is found fit for employment on a manganese process the certifying surgeon shall grant a certificate of fitness in Form 27 which shall be kept in the custody of the manager of the factory. The certificate shall be readily produced by the manager whenever required by any Inspector, and the person granted such a certificate shall be provided with a token made of metal with the number of the certificate inscribed there on and the said person shall always carry the said token while at work.

(3) If a person is found unfit for work in any manganese process, the certifying surgeon shall grant a certificate to that effect and such person shall not be allowed to work in any manganese process.

(4) *(a)* If the certifying surgeon finds that any worker who had been granted a certificate of fitness at a previous medical examination was no longer fit to be employed on any manganese process, he may revoke the previous certificate and no person whose certificate of fitness has been revoked shall be allowed to work on any manganese process;

(b) The certifying surgeon may require such person to be produced before him for fresh medical examination after such period as he may specify in writing on the revoked certificate and in the health register.

(5) If the certifying surgeon is of the opinion that a person had become permanently unfit for employment on any manganese process, he shall make an entry to that effect in the certificate and in the health register and no such person shall be allowed to work in any manganese process.

(6) If the certifying surgeon is of the opinion that any special expert examination or test is necessary for a proper diagnosis in a doubtful case he may direct the manager and or the occupier to get the worker examined by such expert or to get such tests carried out as may be specified by him and the manager or the

occupier as the case may be shall comply with the direction given within a specified time and the report of examination or test as the case may be brought before the certifying surgeon.

(7) If the certifying surgeon is of the opinion that any person is not fit for employment in any manganese process but is fit to be employed on any other work he may advise the manager or the occupier to employ the said person on such other job as may be safe for him. The certifying surgeon may also advise the worker to undergo such treatment as he may consider necessary.

(8) If any person has any doubt regarding the diagnosis or decision of the certifying surgeon he may make an appeal to the Chief Inspector of Factories and the Chief Inspector may refer the case to the Medical Inspector of Factories or to a Medical committee constituted by him for this purpose of which Medical Inspector of Factories shall be a member. The decision of the Medical Inspector or the committee as the case may be shall be final in the matter.

13. ***Exemption***— If in respect of any factory, the Chief Inspector is satisfied that owing to any exceptional circumstances, or infrequency of the process, or for any other reason, application of all or any of the provisions of this Schedule is not necssary for the protection of the persons employed in such factory he may by an order in writing which he may at his discretion revoke, exempt such factory from all or any of the provisions on such conditions and for such period as he may specify in the said order.

APPENDIX
CAUTIONARY NOTICE
MANGANESE AND MANGANESE COMPOUNDS

1. Dust, fumes and mists of manganese and its compounds are toxic when inhaled or when ingested.
2. Do not consume food or drink near the work place.
3. Take a good wash before taking meals.
4. Keep the working area clean.
5. Use the protective clothing and equipment provided.
6. When required to work in situations where dusts, fumes or mists are

likely to be inhaled, use respiratory protective equipment provided for the purpose.

7. If you get severe headaches, prolonged sleeplessness or abnormal sensations on the body, report to the manager who would make arrangements for your examination and treatment.

SCHEDULE XX
MANUFACTURE OR MANIPULATION OF DANGEROUS PESTICIDES

1. ***Application*** — This Schedule shall apply in respect of all factories or any part thereof in which the process of manufacture or manipulation of dangerous pesticide hereinafter referred to as the said manufacturing process is carried on

2. ***Definition***— For the purpose of this Schedule —

(a) "dangerous pesticides" means any product proposed or used for controlling, destroying or repelling any pest or for preventing growth or mitigating effects of such growth including any of its formulations which is considered toxic under and is covered by the Insecticides Act, 1968 and the rules made thereunder and any other product, as may be notified from time to time by the State Government;

(b) "manipulation" includes mixing, blending, formulating, filling, emptying, packing or otherwise handling;

(c) "efficient exhaust draught" means localised mechanical ventilation for removal of smoke, gas, vapour, dust, fume or mist so as to prevent them from escaping into the air of any work room in which work is carried on. No exhaust draught shall be considered efficient if it fails to remove smoke generated at the point where such gas, fume, dust, vapour or mist originates from the process;

(d) "first employment'shall mean first employment in any menufacturing process to which this Schedule applies and shall also include re-employment in the said manufacturing process following any cessation of employment for a continous period exceeding three calendar months; and

(e) "suspension" means suspension from employment in any process wherein a dangerous pesticide is manipulated, by written certificate in the health register in Form 17 signed by the certifying surgeon who shall be competent to

suspend all persons employed in such process.

3. ***Instruction to workers :*** Every worker on his first employment shall be fully instructed on the properties including dangerous properties of the chemical handled in the said manufacturing process and the hazards involved.

The employees shall also be instructed in the measures to be taken to deal with emergency. Such instructions shall be repeated periodically.

4. ***Cautionary notice and placards :*** Cautionary notices and placards in the form specified in appendix to this Schedule and printed in the language of the majority of the workers shall be displayed in all work places in which said manufacturing process is carried on so that they can be easily and conveniently read by the workers. Arrangements shall be made by the occupier and the manager of the factory to periodically instruct the workers regarding the health hazards arising in the said manufacturing process and methods of protection. Such notices shall include brief instructions regarding the periodical clinical tests required to be undertaken for protecting health of the workers.

5. ***Prohibition relating to employment of women or young persons :*** No woman or young person shall be employed or permitted to work in any room in which the said manufacturing process is carried on or, in any room in which dangerous pesticide is stored.

6. ***Food, drinks and smoking prohibited***— (1) No food, drink, tobacco, pan and supari shall be brought into or consumed by any worker in any workroom in which the said manufacturing process is carried out.

(2) Smoking shall be prohibited in any workroom in which the said manufacturing process is carried out.

7. ***Protective clothing and protective equipment*** — (1) Protective clothing consisting of long pants and shirts or overalls with long sleeves and head coverings shall be provided for all workers employed in the said manufacturing process.

(2)(a) Protective equipment consisting of rubber gloves, gum boots, rubber aprons, chemical safety goggles and respirators shall be provided for all workers employed in the said manufacturing process;

(b) Gloves, boots, aprons shall be made from synthetic rubber where a pesticide contains oil.

(3) Protective clothing and equipment shall be worn by the workers supplied with such clothing and equipment.

(4) Protective clothing and equipment shall be washed daily from inside and outside if the workers handle pesticides containing nicotine or phosphorous and shall be washed frequently if handling other pesticides.

(5) Protective clothing and equipment shall be maintained in good repair.

8. ***Floors and work benches***— (1) Floors in every workroom where dangerous pesticides are manipulated shall be of cement or other impervious material giving a smooth surface.

(2) Floors shall be maintained in good repair, provided with adequate slope leading to a drain and thoroughly washed once a day with hose pipe.

(3) Work-benches where dangerous pesticides are manipulated shall be made of smooth, non-absorbing material preferably stainless steel and shall be cleaned at least once daily.

9. ***Spillage and waste*** — (1) If a dangerous pesticide during its manipulation splashes or spills on the workbench, floor or on the protective clothing worn by a worker, immediate action shall be taken for thorough decontamination of such areas or articles.

(2) Cloth, rags, paper or other material soaked or soiled with a dangerous pesticide shall be deposited in a suitable receptacle with tight fitting cover. Contaminated waste shall be destroyed by burning at least once a week.

(3) Suitable deactivating agents, where available, shall be kept in a readily accessible place for use while attending to a spillage.

(4) Easy means of access shall be provided to all parts of the plant for cleaning, maintenance and repairs.

10. ***Empty containers used for dangerous pesticides***— Containers used for dangerous pesticides shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded or destroyed.

11. ***Manual handling***— (1) A dangerous pesticide shall not be required or allowed to be manipulated by hand except by means of a long handled scoop.

(2) Direct contact of any part of the body with a dangerous pesticide during its manipulation shall be avoided.

12. ***Ventilation***— (1) In every workroom or area where a dangerous pesticide is manipulated, adequate ventilation shall be provided at all times by the circulation of fresh air.

(2) Unless the process is completely enclosed, the following operations during manipulation of a dangerous pesticide shall not be undertaken without an efficient exhaust draught —

(a) emptying a container holding a dangerous pesticide;

(b) blending a dangerous pesticide;

(c) preparing a liquid or powder formulation containing a dangerous pesticide; and

(d) changing or filling a dangerous pesticide into a container, tank hopper or machine or small sized containers.

(3) In the event of a failure of the exhaust draught provided on the above operation, the said operations shall be stopped forthwith.

13. ***Time allowed for washing***— (1) Before each meal and before the end of the day's work at least ten minutes in addition to the regular rest interval shall be allowed for washing to each worker engaged in the manipulation of dangerous pesticide.

(2) Every worker engaged in the manipulation of dangerous pesticides shall have a thorough wash before consuming any food and also at the end of the day's work.

14. ***Washing and bathing facilities***— (1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the factory where the said manufacturing process is carried on, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 5 persons employed.

(2) The washing places shall have standpipes placed at intervals not less than one metre.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided, provided that such towles shall be supplied individually for each worker if so ordered by the Inspector.

(5) Sufficient supply of soap and nail brushes shall be provided.

15. ***Cloakroom*** — There shall be provided and maintained for the use of all workers employed in the factory where the said manufacturing process is carried

on —

(a) a cloakroom for clothing put off during working hours with adequate arrangements for drying clothing, if wet; and

(b) separate and suitable arrangements for the storage or protective clothing provided under paragraph 7.

16. ***Messroom***— (1) There shall be provided and maintained for the use of all workers employed in the factory in which the said manufacturing process is carried on and remaining on the premises during the rest intervals, a suitable messroom which shall be furnished with —

(a) sufficient tables and benches with back rest; and

(b) adequate means for warming food.

(2) The messroom shall be placed under the charge of a responsible person and shall be kept clean.

17. ***Manipulation not to be undertaken*** — Manufacture or manipulation of pesticides shall not be undertaken in any factory unless a certificate regarding its dangerous nature or otherwise is obtained from the Chief Inspector.

18. ***Medical examination*** — (1) Every worker employed in the said manufacturing process shall be examined by the certifying surgeon within seven days of the first employment and no worker shall be allowed to work unless certified fit for such employment by the certifying surgeon.

(2) Every worker employed in the said manufacturing process shall be re-examined by a certifying surgeon atleast once in 6 calender months.

(3) Due notice shall be given to the certifying surgeon and the conerned workers regarding the arrangements for examination of workers employed in the said manufacturing process after obtaining the consent regarding the arrangement from the certifying surgeon.

(4) Health register in Form 17 containing name of all workers employed in the said manufacturing process shall be maintained.

(5) No worker after suspension shall be employed without written sanction from the certifying surgeon entered in-or attached to the health register

19. ***Medical facilities***— (1) The occupier shall engage a qualified medical practitioner approved by the Chief Inspector who shall examine and when necessary treat on the premises of the factory, all workers who are employed in

the said manufacturing process, for effects of excessive absorption of the dangerous pesticides atleast once a week.

(2) The occupier shall make necessary arrangements to ensure quick availability of qualified medical practitioner in emergency.

(3) The occupier shall provide medicines and antidotes and other equipment required for treatment of excessive absorption of dangerous pesticides.

(4) Records of such examinations and treatment and tests shall be maintained in a form approved by the Chief Inspector and shall be made available to Inspector.

(5) The Chief Inspector may order suitable clinical test or tests to be carried out at specified intervals in respect of workers in any factory where such manufacturing process is carried on. Charges of such test or tests shall be borne by the employer.

(6) Every worker in any factory where the said manufacturing process is carried on shall undergo the prescribed examinations, tests and treatments.

20. ***Exemption*** — If in respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstances or the infrequency of the said manufacturing process or any other reason which he shall record in writing all or any of the provisions of this Schedule are not necessary for the protection of the workers employed in the factory, he may by a certificate in writing exempt such factory, from all or any of the provisions on such condition as he may specify therein, such certificate may at any time be revoked by the Chief Inspector recording his reasons therefor.

APPENDIX
CAUTIONARY NOTICE
INSECTICIDES AND PESTICIDES

1. Chemicals handled in this plant are poisonous substances.
2. Smoking, taking food or drinking, chewing tobacco in this area is prohibited. No food stuff or drink shall be brought in this area.
3. Some of these chemicals may be absorbed through skin and may cause poisoning,
4. A good bath shall be taken at the end of the shift.

5. A good wash shall be taken before meals.
6. Protective clothing and equipment supplied shall be used while working in this area.
7. Containers of pesticides shall not be used for keeping food stuffs.
8. Spillage of the chemicals on any part of the body or on the floor or work bench shall be immediately washed away with water.
9. Clothing contaminated due to splashing shall be removed immediately.
10. Scrupulous cleanliness shall be maintained in this area.
11. Do not handle pesticides with bare hands, use scoops provided with handle.
12. In case of sickness like nausea, vomitting, giddiness, the manager should be informed who will make necessary arrangement for treatment.
13. All workers shall report for the prescribed medical tests regularly to protect their own health.

SCHEDULE XXI
MANUFACTURING PROCESS OR OPERATION IN CARBON DISULPHIDE PLANTS

1. ***Application*** — This Schedule shall apply to all electric furnances in which carbon disulphide is generated and all other plants where Carbon disulphide after generation is condensed, refined and stored. This Schedule is in addition to and not in derogation of any of the provisions of the Act and Rules made there under.

2. ***Construction, installation and operation*** — (1) The buildings in which electric furnances are installed and carbon disulphide after generation is condensed and refined shall be segregated from other parts of the factory and shall be of open type to ensure optimum ventilation and the plant layout shall be such that only a minimum number of workers are exposed to the risk of any fire or explosion at any one time.

(2) Every electrical furnance and every plant in which carbon disulphide is condensed, refined and stored with all thier fittings and attachments shall be of

good construction, sound material and of adequate strength to sustain the internal pressure to which the furnance or the plant may be subjected to and shall be so designed that carbon disulphide liquid and gas are in closed system during their normal working.

(3) The electric furnace supports shall be finely grouted about 60 centimeters in concrete or by other effective means.

(4) Every electric furnancre shall be installed and operated according to manufacturers instructions and these instructions shall be clearly imparted to the personnel incharge of construction and operation.

(5) The instructions regarding observance of correct furnace temparature, sulphur dose, admissible current or power consumption and periodical checking of charcoal level be stricitly complied with.

3. ***Electrodes***— (1) Where upper ring electrodes made of steel are used in the electric furnace, they shall be of seamless tube construction and shall have arrangement for being connected to cooling water system through a siphon built in the electrodes or through a positive pressure water-pump.

(2) The arrangement for cooling water referred to in sub-paragraph (1) shall be connected with automatic alarm system which will actuate in the event of interruption of cooling water in the electrodes and give visible and audible alarm signals in the control room and simultaneously stop power supply for the furnace operation and to stop the further supply of water. The alarm system and the actuating device shall be checked every day.

4. ***Maintenance of charcoal level*** — When any electric furnace is in operation, it shall be ensured that the electrodes are kept covered with charcoal bed.

5. ***Charcoal separator***— A cyclone type of charcoal separator shall be fitted on the offtake pipe between the electric furnace and sulphur separator to prevent entry of pieces of charcoal into the condensers and piping.

6. ***Rupture discs and safety seal*** — (1) At least two rupture discs of adequate size which shall blow off at a pressure twice the maximum operating pressure shall be provided on each furnace and shall either be mounted directly on the top of the furnace or each through an independent pipe as close as possible to the furnace.

(2) A safety water seal shall be provided and tapped from a point between

the charcoal separator and the sulphur separator.

7. *Pyrometer and manometers*— (1) Each electric furnace shall be fitted with adequate number of pyrometers to give an indication of the temperature as correctly as reasonably practicable at various points in the furnace. The dials for reading the temperatures shall be located in the control room.

(2) Manometers or any other suitable devices shall be provided for indicating pressure.

(a) in the offtake pipe before and after the sulphur separator; and

(b) in primary and secondary condensers.

8. *Check valves* — All piping carrying carbon disulphide shall be fitted with check valves at suitable positions so as to prevent gas from flowing back into any electric furnace in the event of its shut down.

9. *Inspection and maintenance of electric furnaces*— (1) Every electric furnace shall be inspected internally by a competent person —

(a) before being placed in service after installation;

(b) before being placed in service after reconstruction; or repairs; and

(c) periodically every time the furnace is opened for cleaning or deashing or for replacing electrodes.

(2) When an electric furnace is shut down for cleaning or deashing.

(a) the brick lining shall be checked for continuity and any part found defective removed;

(b) after removal of any part of the lining referred to in (7) the condition of the shell be closely inspected; and

(c) any plates forming shell found corroded to the extent that safety of the furnace is endangered shall be raplaced.

10. *Maintenance of records* — The following hourly records shall be maintained in a log book —

(a) manometer readings at the points specified in sub-paragraph 7 (2);

(b) gas temperature indicated by pyrometers at all other vital points near the sulphur separator and primary and secondary condensers;

(c) water temperature and flow of water through the siphon in the electrodes; and

(d) primary and secondary voltages and current and energy consumed.

11. *Electrical apparatus, wiring and fittings* — All buildings in which carbon disulphide is refined or stored shall be provided with electrical apparatus, wiring and fitting which shall afford adequate protection from fire and explosion.

12. *Prohibition relating to smoking*— No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in buildings in which carbon disulphide is refined or stored and a notice in the language understood by a majority of the workers shall be posted in the plant prohibiting smoking and carrying of matches, fire or naked light or other means of producing naked light of spark into such rooms.

13. *Means of escape* — Adequate means of escape shall be provided and maintained to enable persons to move to a safe place as quickly as possible in case of an emergency. At least two independent staircases of adequate width shall be provided in every building housing the furnaces at reasonable intervals at opposite ends. These shall always be kept clear of all obstructions and so designed as to afford easy passage.

14. *Warning in case of fire* — There shall be adequate arrangements for giving warnings in case of fire or explosion which shall operate on electricity and in case of failure of electricity, by some mechanical means.

15. *Fire-fighting equipment*— (1) Adequate number of suitable fire extinguishers or other fire-fighting equipment shall be kept in constant readiness for dealing with risks involved and depending on the amount and nature of materials stored.

(2) Clear instructions as to how the extinguishers or other eqipment should be used printed in the language which the majority of the workers employed understand, shall be affixed to each extinguisher or other equipment and the personnel trained in their use.

16. *Bulksulpher*— (1) Open or semi-enclosed spaces for storage of bulk sulpher shall be sited with due regard to the dangers which may arise from sparks given off by nearby locomotives, *etc.,* and precautions shall be taken to see that flames, smoking and matches and other sources of ignition do not come in contact with the clouds of dust arising during handling of bulk sulphur.

(2) All enclosures for bulk sulphur shall be of noncombustible construction, adequately ventilated and so designed as to provide a minimum of ledges on

which dust may lodge.

(3) The bulk sulphur in the enclosures shall be handled in such a manner as to minimise the formation of dust clouds and no flame, smoking and matches or other sources of ignition shall be employed during handling and nonsparking tools shall be used whenever sulphur is shovelled or otherwise removed by hand.

(4) No repairs involving flames, heat or use of hand or power tools shall be made in the enclosure where bulk sulphur is stored.

17. ***Liquid sulphur*** — Open flames, electric sparks and other sources of ignition, including smoking and matches, shall be excluded from the vicinity of molten sulphur.

18. ***Training and supervision***— (1) All electric furnaces and all plants in which carbon disulphide is condensed, refined or stored shall be under adequate supervision at all times while the furnaces and plant are in operation.

(2) Workers incharge of operation and maintenance of electric furnaces and the plants shall be properly qualified and adequately trained.

19. ***Washing facilities***— (1) The occupier shall provide and maintain in a clean state and in good repair, for the use of all persons employed, wash place under cover with at least one tap or standpipe, having a constant supply of clean water for every five such persons, the taps or stand pipes being spaced not less than 120 centimeters apart with a sufficient supply of soap and clean towels, provided that towels shall be supplied individually to each worker if so ordered by the Inspector.

(2) All the workers employed in the sulphur storage, handling and melting operation shall be provided with a nail brush.

20. ***Personal protective equipment*** — (1) Suitable goggles and protective clothing consisting of overalls without pockets, gloves and foot wear shall be provided for the use of operators —

(a) when operating valves or cocks controlling fluids *etc.;*

(b) drawing off of molten sulphur from sulphur pots; and

(c) handling charcoal or sulphur.

(2) Suitable respirators protective equipment shall be provided and stored in the appropriate place for use during abnormal conditions or in an emergency.

(3) Arrangements shall be made for proper and efficient cleaning of all such protective equipment.

21. ***Cloakrooms*** — There shall be provided and maintained for the use of all persons employed in the processes a suitable cloakroom for clothing put off during work hours and a suitable place separate from the cloakroom for the storage of overalls or working clothes. The accommodation so provided shall be placed in the charge of a responsible person and shall be kept clean.

22. ***Unauthorised persons***— Only maintenance and repair personnel, person directly connected with the plant operation and those accompanied by authorised persons shall be admitted into the plant.

SCHEDULE XXII
MANUFACTURING OR MANIPULATION OF CARCINOGENIC DYE INTERMEDIATES

1. ***Application*** — This Schedule shall apply in respect of all factories or any part thereof where processes in which the substances mentioned in paragraph 3 and 4 are formed, manufactured, handled or used and the processes incidental thereto in the course of which these substances are formed, are carried on. The processes indicated in this paragraph shall be referred to hereinafter as "the said processes" and such a reference shall mean any or all the processes described in this paragraph.

2. ***Definitions*** — For the purpose of this Schedule the following defination shall apply, unless the context otherwise requires —

(a) "controlled substances" means chemical substances mentioned in paragraph 4 of this Schedule;

(b) "first employment" means first employment in the said processes and also re-employment in such processes following any cessation of employment for a continuous period exceeding three calendar months;

(c) "efficient exhaust draught" means localised ventilation effected by mechanical means for the removal of gas, vapour, dust or fume so as to prevent them from escaping into the air of any place in which work is carried on. No draught, shall be deemed to be efficient which fails to remove smoke generated at the point where such gas, vapour, fume or dust originates; and

(d) "prohibited substances" means chemical substances mentioned in paragraph (3) of this Schedule.

3. *Prohibited substances* — For the purpose of this Schedule the following chemical substances shall be classified as "prohibited substances" except when these substances are present or are formed as a by-product of a chemical reaction in a total concentration not exceeding one percent —

(a) beta-naphthylamine and its salts;

(b) benzidine and its salts;

(c) 4-amino biphenyl and its salts;

(d) 4-nitro diphenyl and its salts; and

(e) any substance containing any of these compounds.

4. *Controlled substances* — For the purpose of this Schedule, the following chemical substances shall be classified as "controlled substances"—

(a) alpha-napthylamine or alpha-naphthylamine containing not more than one percent of betanaphthylamine either as a by-product of chemical reaction or otherwise, and its salts;

(b) ortho-tolidine and its salts;

(c) dianisidine and its salts;

(d) dichlorobenzidine and its salts;

(e) auramine; and

(f) magneta.

5. *Prohibition of employment* — No person shall be employed in the said processes in any factory in which any prohibited substance is formed, manufactured, processed, handled, or used except as exempted by the Chief Inspector as stipulated in paragraph 23.

6. *Requirements for processing or handling controlled substances* — (1) Wherever any of the controlled substances referred to in paragraph 4 are formed, manufactured, processed, handled, or used, all practical steps shall be taken to prevent inhalation, ingestion or absorption of the said controlled substance by the workers while engaged in processing that substance, and its storage or transport within the plant, or in cleaning or maintenance of the concerned equipment, plant, machinery and storage areas.

(2) As far as possible all operations shall be carried out in a totally enclosed system. Wherever such enclosure is not possible, efficient exhaust draught shall be applied at the point where the controlled substances are likely to escape into the atmosphere during the process.

(3) The controlled substances shall be received in the factory in tightly closed containers and shall be kept so except when these substances are in process or in use. The controlled substances shall leave the factory only in tightly closed containers of appropriate type. All the containers shall be plainly labelled to indicate the contents.

7. *Personal protective equipment*— (1) The following items of personal protective equipment shall be provided and issued to every worker employed in the said processes —

(a) long trousers and shirts or overalls with full sleeves and head coverings. The shirt or overall shall cover the neck completely; and

(b) rubber gum-boots.

2. The following items of personal protective equipment shall be provided in sufficient numbers for use by workers employed in the said process when there is danger of injury during the performance of normal duties or in the event of emergency —

(a) rubber hand-gloves;

(b) rubber aprons; and

(c) airline respirators or other suitable respiratory protective equipment.

(3) It shall be the responsibility of the manager to maintain all items of personal protective equipment in a clean and hygienic condition and in good repair.

8. *Prohibition relating to employment of woman and young persons* -No women or young person shall be employed or permitted to work in any room in which the said processes are carried on.

9. *Floors of workroom*— The floor of every workroom in which the said processes are carried on shall be *(a)* smooth and impervious to water provided that asphalt or tar shall not be used in the composition of the floor, *(b)* maintained in a state of good repair, *(c)* with a suitable slope for easy draining and provided with gutters and *(d)* thoroughly washed daily with the drain water being led into

a sewer through a closed channel.

10. ***Disposal of empty containers***— Empty containers used for holding controlled substances shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discharged.

11. ***Manual handling***— Controlled substances shall not be allowed to be mixed, filled, emptied or handled except by means of a scoop with a handle. Such scoop shall be thoroughly cleaned daily.

12. ***Instruction regarding risk***— Every worker in his first employment in the said processes shall be fully instructed on the properties of the toxic chemicals to which he is likely to be exposed to, of the dangers involved and the precautions to be taken. Workers shall also be instructed on the measures to be deal with an emergency.

13. ***Cautionary placards***— Cautionary placards in the form specified in appendix attached to this Schedule and printed in the language of the majority of the workers employed in the said processes shall be affixed in prominent places frequanted by them in the factory, where the placards can be easily and conveniently read. Arrangements shall be made by the manager to instruct periodically all such workers regarding the precautions contained in the cautionary placards.

14. ***Obligations of the workers*** **—** It shall be the duty of the persons employed in the said processes to submit themselves for the medical examination including exfoliative cytology of urine by the certifying surgeon or the qualified medical practitioner as provided for under these rules.

15. ***Washing and bathing facilities***— (1) The following washing and bathing facilities shall be provided and maintained in clean state and in good repair for the use of all workers employed in the said processes :–

(a) a wash place under cover having constant supply of water and provided with clean towels, soap and nail brushes and with at least one stand pipe for every five such workers;

(b) 50 percent of the stand pipes provided under clause shall be located in bathrooms where both hot and cold water shall be made available during the working hours of the factory and for one hour thereafter;

(c) the washing and bathing facilities shall be in close proximity of the area housing the said processes;

(d) clean towels shall be provided individually to each worker; and

(e) in addition to the taps mentioned under clause, one stand pipe and in which warm water is made available shall be provided each floor.

(2) Arrangement shall be made to wash factory uniforms and other work clothes everyday.

16. ***Food, drinks, etc. prohibited in workroom*** **—** No worker shall consume food, drink, pan, supari and tobacco or shall smoke in any workroom in which the said processes are carried on and no worker shall remain in any such room during intervals for meals or rest.

17. ***Cloakroom***— There shall be provided and maintained in a clean state and in good repair for the use of the workers employed in the said processes *(a)* a cloakroom with lockers having two compartments one for street clothes and the other for work clothes, and *(b)* a place separate from the locker room and the messroom, for the storage of protective equipment provided under paragraph. The accommodation so provided shall be under the care of a responsible person and shall be kept clean.

18. ***Messroom***— There shall be provided and maintained for the use of workers employed in the said processes who remain on the premises during meal intervals, a messroom which shall be furnished with tables and benches and provided with suitable means for warming food.

19. ***Time allowed for washing***— Before the end of each shift 30 minutes shall be allowed for bathing for each worker who is employed in the said processes. Further atleast 10 minutes shall be allowed for washing before each meal in addition to the regular time allowed for meals.

20. ***Restriction on age of persons employed*** — No worker under the age of 40 years shall be engaged in the factory in the said processes for the first time after the date on which the Schedule come into force.

21. ***Medical examination***— (1) Every worker employed in the said processes shall be examined by a certifying surgeon within 14 days of his first employment. Such examination shall include tests which the certifying surgeon may consider appropriate and shall include exfelative cytology of the urine. No worker shall be allowed to work after 14 days of his first employment in the factory unless certified fit for such employment by the certifying surgeon.

(2) Every worker employed in the said processes shall be re-examined by a certifying surgeon atleast once in every six calender months. Such examination shall include tests which the certifying surgeon may consider appropriate but shall include exfelative cytology of the urine

(3) A person medically examined under sub-paragraph (1) shall be granted by the certifying surgeon a certificate of fitness in Form No. 28. Record of each re-examination carried out under sub-paragraph (2) shall be entered in the certificate. The certificate shall be kept in the custody of the manager of the factory.

22. ***Medical facilities***— (1) The occupier of every factory in which the said processes are carried on shall engage a qualified medical practitioner for medical surveillance of the workers employed in such processes. His appointment shall be subject to approval of the Chief Inspector of the factories,

(2) The occupier shall provide to him all the necessary facilities for the purpose referred to in sub-paragraph (1)

(3) A record of medical examination and appropriate tests carried out by the qualified medical practitioner shall be maintained in a form approved by the Chief Inspector.

23. ***Exemptions - Prohibited substances***— (1) The Chief Inspector may by a certificate in writing (which he may at his direction revoke at any time), subject to such conditions, if any, as may be specified therein exempt any process in the course of which any of the prohibited substances is formed, processed, manufactured, handled, or used, from the provisions of paragraph (5) if he is satisfied that the process is carried out in a totally enclosed and hermetically sealed system in such a manner that the prohibited substance is not removed from the system except in quantities no greater than that required for the purpose of control of the process or such purposes as is necessary to ensure that the product is free from any of the prohibited substances.

(2) The Chief Inspector may allow the manufacture, handling or use of benzidine hydrochloride provided that all the processes in connection with it are carried out in a totally enclosed system in such a manner that no prohibited substance other than benzodine hydrochloride is removed there from except in quantities not greater than that required for the purpose of control of the processes or such purposes as is necessary to ensure that the product is free from prohibited

substance and that adequate steps are taken to ensure that benzidine hydrochloride is, except while not in a totally enclosed system, kept wet with not less than one part of water to two parts of benzidine hydrochloride at all times.

24. ***Exemptions-general*** — If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for the protection of the workers in the factory, the Chief Inspector may by a certificate in writing (which he may in his discretion revoke at any time), exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

APPENDIX

CAUTIONARY PLACARD / NOTICE

Carcinogenic dye intermediates —

(1) Dye intermediates which are nitro amino derivatives or aromatic hydrocarbons are toxic. You have to handle these chemicals frequently in this factory.

(2) Use the various items of protective wear to safeguard your own health.

(3) Maintain scrupulous cleanliness at all times. Thoroughly wash hands and feet before taking meals.

(4) Wash off any chemical falling on your body with soap and water. If splashed with a solution of the chemical, remove the contaminated clothing immediately. These chemicals are known to produce cyanosis. Contact the medical officer or appointed doctor immediately and get his advice.

(5) Handle the dye intermediates only with long handled scoops, never with bare hands.

(6) Alcoholic drinks should be avoided as they enhance the risk of poisoning by the chemicals.

(7) Keep your food and drinks away from work place. Consuming food, drinks or tobacco in any form at the place of work is prohibited.

(8) Serious effects from work with toxic chemicals may follow after many years. Great care must be taken to maintain absolute cleanliness of body, clothes, machinery and equipment.

SCHEDULE XXIII
OPERATIONS INVOLVING HIGH NOISE LEVELS

1. ***Application*** — This Schedule shall apply to all operations in any manufacturing process having high noise level.

2. ***Definitions*** — For the purpose of this Schedule —

(a) "noise" means any unwanted sound;

(b) "high noise level" means any noise level measured on the A-weighted scale is 90 db of above;

(c) "Decibel" means one-tenth of "Bel" which is the fundamental division of a logarithmic scale used to express the ratio of two specified or implied quantities, the number of "Bels" denoting such a ratio being, the logarithm to the base of 10 of this ratio. The noise level (or the sound pressure level) corresponds to a reference pressure of $20 \times l0^{-6}$ newtons per square meter or 0.0002 dynes per square centimeter which is the threshold of hearing, that is the lowest sound pressure level necessary to produce the sensation of hearing in average healthy listeners. The decibel in abbreviated from is dB.

(d) "Frequency" is the rate of pressure variations expressed in cycle per second or hertz.

(e) "dBA" refers to sound level in decibels as measured on a sound level meter operating on the A-weighting network with slow meter response.

(f) "A-weighting" means making graded adjustments in the intensities of sound of various frequencies for the purpose of noise measurements, so that the sound pressure level measured by an instrument reflects the actual response of the human ear to the sound measured.

3. ***Protection against noisem*** — (1) In every factory, suitable engineering control or administrative measures shall be taken to ensure, so far as is reasonably practicable, that no worker is exposed to sound levels exceeding the maximum permissible noise exposure levels specified in Tables 1 and 2.

TABLE 1
Permissible exposure in cases of continuous noise

Total time of exposure (continuous or a number of short time exposures) per day in hours.	Sound pressure level in dBA
(1)	(2)
8	90
6	92
4	95
3	97
2	100
$1\,1/2$	102
1	105
$3/4$	107
$1/2$	110
$1/4$	115

Notes — l.No. exposure in excess of 115 dBA is to be permitted.

2. For any period of exposure falling in between any figure and the next higher and lower figure as indicated in column 1, the permissible sound pressure level is to be determined by extrapolation on proportionate basis.

TABLE 2
Permissible exposure levels of impulsive or impact noise

Peak sound pressure level or impacts in dB	Permited number of impulses perday
(1)	(2)
140	100
135	315
130	1000
125	3,160
120	10,000

Notes - 1. No exposure in excess of 140 dB peak sound pressure level is permitted.

2. For any peak sound pressure level falling in between any figure and the next higher or lower figure as indicated in column 1, the permitted number of impulses or impacts per day is to by determined by extrapolation on a proportionate basis.

(2) For the purposes of this Schedule, if the variations in the noise level involve maxima at intervals of one second or less, the noise is to be considered as a continuous one and the criteria given in Table 1 would apply in other cases, the noise is to be considered as impulsive or impact noise and the criteria given in Table 2 would apply.

(3) When the daily exposure is composed of two or more periods of noise exposure at different levels their combined effect should be considered rather than the individual effect of each. The mixed exposure should be considered to exceed the limit value if the sum of the fractions.

$$\frac{C_I}{T_1} + \frac{C_2}{T_2} + \ldots\ldots\ldots\ldots \frac{C_n}{T_n} \text{ exceeds unity,}$$

Where the C_I, C_2 *etc.* indicate the total time of actual exposure at a specified noise level and Tl, T2 etc., denote the time of exposure permissible at that level. Noise exposure of less than 90 dBA may be ignored in the above calculation.

(4) Where it is not possible to reduce the noise exposure to the levels specified in sub-rule (1) by reasonably practicable engineering control or administrative measures, the noise exposure shall be reduced to the greatest extent feasible by such control measures, and each worker so exposed shall be provided with suitable ear protectors so as to reduce the exposure to noise the level specified in sub-rule (1).

(5) Where the ear protectors provided in accordance with sub-paragraph (4) and worn by a worker cannot still attenuate the noise reaching near his ear, as determined by substructing the attenuation value in dBA of the ear protectors concerned from the measured sound pressure level, to a level permissible under Table 1 or Table 2 as the case may be, the noise exposure period shall be suitable reduced to correspond to the permissible noise exposure specified in sub-paragraph (1).

(6) In all cases where the prevailing sound levels exceed the permissible levels specified in sub-paragraph (1) there shall be administered an effective hearing conservation programme which shall include among other hearing conservation measures, pre-employment and periodical auditory surveys conducted on workers exposed to noise exceeding the permissible levels, and rehabilitation of such workers either by reducing the exposure to the noise levels or by transferring them to place where noise levels are relatively less or by any other suitable means.

(7) Every workers employed in areas where the noise exceeds the maximum permissible exposure levels specified in sub-rule (1) shall be subjected to an auditory examination by a certifying surgeon within 14 days of his first employment and there after, shall be re-examined at least once in every 12 months. Such initial and periodical examination shall include tests which the certifying surgeon may consider appropriate, and shall include determination of auditory thresholds for pure tones of 125,250,500,1000, 2000,4000 and 8000 cycles per second.

SCHEDULE : XXIV

MANUFACTURE OF RAYON BY VISCOSE PROCESS.

1. ***Definitions*** — For the purpose of this Schedule,—

(a) "approved" means approved for the time being in writing by the Chief Inspector;.

(b) "breathing apparatus" means a helmet or face piece with necessary connections by means of which the person using it in a poisonous, asphyxiating or irritant atmosphere breathes unpolluted air; or any other approved apparatus;

(*c)* "churn" means the vessel in which alkali cellulose pulp is treated with carbon disulphide;

(d) "dumping" means transfer or cellulose xanthenes from a dry churn to a dissolver;

(e) "efficient exhaust draught" means localised ventilation by mechanical means for the removal of any gas or vapour, so as to prevent it from escaping into the air of any place in which work is carried on. No draught shall be deemed to be efficient if it fails to control effectively any gas or vapour generated at the point where such gas or fume originates;

(f) "fume process" means any process in which carbon disulphide or hydrogen sulphide is produced, used or given off;

(g) "life belt" means a belt made of leather or other suitable material which can be securely fastened round the body with a suitable length of rope attached to it, each of which is sufficiently strong to sustain the weight of a man;

(h) "protective equipment" means apron, goggles, face shields, foot wear, gloves and overalls made of suitable materials.

(2) ***Ventilation***— (1) In all workrooms where a fume process is carried on, adequate ventilation by natural or mechanical means shall be provided so as to control, in association with other control measures, the concentration of carbon-disulphide and hydrogen sulphide in the air of every work environment within the permissible limits.

(2) Notwithstanding the requirements in sub-paragraph (1) an efficient exhaust draught shall be provided and maintained to control the concentration

of carbon-sulphide and hydrogen sulphide in the air at the following locations—

(a) dumping hoppers of dry churns,

(b) spinning machines,

(c) trio rollers and cutters used in staple fibre spinning,

(d) hydro-extractors for yarn cakes,

(e) after trestment processes, and

(f) spin baths.

(3) In so far as the spinning machines and trio rollers and cutters used in staple fibre spinning are concerned, they shall be, for the purpose of ensuring the effectiveness of the exhaust draft to be provided as required in sub-paragraph (1) enclosed as fully practicable and provided with suitable shutters in sections to enable the required operations to be carried out without giving rise to undue quantities of carbon-disulphide and hydrogen sulphide to the work environment.

(4) No dry churn shall be opened after completion of reaction without initially exhausting the residual vapours of carbon-di-sulphide by operation of suitable and efficiant arrangement for exhausting the vapour which shall be continued to be operated as long as the churn is kept opened.

(5) Whenever any ventilation apparatus normally required for the purpose of meeting the requirements in sub-paragraphs (2), (3) and (4) is ineffective, fails, or is stopped for any purpose whatsoever, all persons shall be required to leave the work areas where the equipment or process specified in the above said sub-paragraphs are in use, as soon as possible, and in any case not later than 15 minutes after such an occurrence.

(6) *(a)* All ventilatina systems provided for the purpose as required in sub-paragraphs (2), (3) and (4) shall be examined and inspected once every week by a competent person once in every period of 12 months. Any defects found by such examinations or test shall be rectified forthwith.

(b) A register containing particulars of such examinations and tests, and the state of the systems and the repairs or alternations found to be necessary shall be kept and shall be available for inspection by an Inspector.

3. ***Waste from spinning machines*** — Waste yarn from the spinning machines

shall be deposited in suitable containers provided with close fitting, covers. Such waste shall be disposed off as quickly as possible after decontamination.

4. ***Lining of Dry churns***— The inside surface of all dry churns shall be coated with a non-sticky paint so that cellulose xanthenes will not stick to the surface of the churn. Such coating shall be maintained in good condition.

5. ***Air monitoring***— (1) To ensure the effectiveness of the control measures, monitoring of carbon-di-sulphide and hydrogen sulphide in air shall be carried out once atleast in every shift and the record of the resuits so obtained shall be entered in a register specially maintained for the purposes.

(2) For the purpose of the requirement in sub-paragraph (1) instaneous gas detector tubes shall not be used. Samples shall be collected over a duration of not less than 10 minutes and analysed by an approved method. The locations where such monitoring is to be done shall be as directed by the inspector.

(3) If the concentration of either carbon disulphide or hydrogen sulphide exceeds the permissible limits for such vapour gas as laid down in Rule 128 of the Model Rule suitable steps shall be taken for controlling the concentration in air of such contaminants. A report of such occurrences shall be sent to the Chief Inspector forthwith.

6. ***Prohibition to remain in fume process room*** — No person during his intervals for meal, or rest shall remain in any room where in fume process is carried on.

7. ***Prohibition relating to employment of young persons*** — No young person shall be employed or permitted to work in any fume process or in any room in which any such process is carried on.

8. ***Protective equipment***— (1) The occupier shall provide and maintain in good condition protective equipment as specified in the Table for use of persons employed in the processes referred to therein.

TABLE

Process	Protective equipment
(1)	(2)
1. Dumping	Overalls, face shields, gloves and foot wear-all made of suitable material.
2. Spinning	Suitable aprons, gloves and foot wear.
3. Process involving or likely to involve contact with viscose solution.	Suitable gloves and footwear,
4. Handling of sulphur	Suitable chemical goggles.
5. Any other process involving contact with hazardous chemicals	Protective equipment as may be directed by the Chief Inspector by an order in writing.

(2) A suitable room, rooms or lockers shall be provided exclusively for the storage of all the protective equipment supplied to workers and no such equipment shall be stored at any place other than the room, rooms or lockers so provided.

9. ***Breathing apparatus***— (1) There shall be provided in every factory where fume process is carried on, sufficient supply of —

(a) breathing apparatus,

(b) oxygen and a suitable appliances for its administration, and

(c) life belts.

(2) *(i)* The breathing apparatus and other appliances referred to in sub-paragraph (1) shall be maintained in good condition and kept in appropriate locations so as to be readily available.

(ii) The breathing apparatus and other appliances referred to in clause *(a)* and *(b)* of sub-paragraph (1) shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person,

(iii) A record of the maintenance of the condition of the breathing apparatus and other appliances referred to in sub clause (1) shall be entered in a register

provided for that purpose which shall be readily available for inspection by an Inspector.

(3) Sufficient number of workers shall be trained and periodically retrained in the use of breathing apparatus and administering artificial respiration so that at least two such trained persons would be available during all the working hours in each room in which fume processes is carried on.

(4) Breathing apparatus shall be kept properly labeled in clean, dry, light proof cabinets and if liable to be affected by fumes, shall be protected by placing them in suitable containers.

(5) No person shall be employed to perform any work specified in sub-paragraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has fully instructed in the proper use of that equipment.

(6) No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another person unless it had been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed in the proper use of that equipment.

10. ***Electric fittings*** — All electric fittings in any room in which carbon-disulphide is produced, used or given off or is likely to be given off into the work environment, other than a spinning room, shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conduits or be lead-sheathed.

11. ***Prohibition relating to smoking, etc.*** — No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in a room in which fume process is carried on. A notice in the language understood by the majority of the workers shall be posted in prominent locations in the plant prohibiting smoking and carrying of match fire or naked light or other means of producing naked light or spark into such rooms.

12. ***Washing and bathing facilities***— (1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the process covered by the Schedule, adequate washing and bathing places having a constant supply of water under cover at the rate of one such places for every 25 persons employed.

(2) The washing places shall have stand pipes placed at intervals of not

less than one metre.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided.

(5) Sufficient supply of soap and nail brushes shall be provided.

13. ***Rest Room***— (1) A rest room shall be provided for the workers engaged in doffing operations of filament yarn spinning process.

(2) Such rest room shall be provided with fresh air supply and adequate sitting arrangement.

14. ***Cautionary notice and instructions***— (1) The following cautionary notice shall be prominently displayed in each fume process room

"CAUTIONARY NOTICE"

1. Carbon disulphide (CS_2) and Hydrogen Sulphide (H_2S) which may be present in this room are hazardous to health.

2. Follow safety instructions.

3. Use protective equipment and breathing apparatus as and when required.

4. Smoking is strictly prohibited in this area.

(1) This notice shall be in a language understood by the majority of the worker and displayed where it can be easily and conveniently read. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed.

(2) Arrangement shall be made to instruct each worker employed in any room in which a fume process is carried on regarding the health hazards connected with their work and the prevention measures and methods to protect themselves. Such instructions shall be given on his first employment and repeated periodically.

(3) Simple and special instructions shall be framed to ensure that effective measures will be carried out in case of emergency involving escape of carbondisuphide and hydrogen Sulphide. Those instruction shall be displayed in the concerned areas and workers shall be displayed and trained in the actions to be taken in such emergencies.

15. ***Medical facilities and records of examinations and tests*** — (1) The

occupier of each factory to which this Schedule applies, shall—

(a) employ a qualified medical officer for medical surveillance of the workers employed in the fume process whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) provided to the said medical officer all the necessary facilities for the purpose referred to in clause *(a)*.

(2) The record of medical examination and appropriate tests carried out by the said medical officer shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

16. ***Medical Examination by the certifying surgeon*** — (1) Every worker employed in the fume process shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include tests for estimation of exposure co-efficient and cholesterol, as well as electrocardiogram (EEG) and Central Nervous System (CNS) tests. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the certifying surgeon.

(2) Every worker employed in the fume process shall be re-examined by a certifying surgeon at least once in every twelve calendar months. Such examination shall, whenever the certifying surgeon considers appropriate, include all the tests as specified in sub-paragraph (1).

(3) The certifying surgeon after examining a worker shall issue a certificate of fitness in Form 28. The record of re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the Manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2) including the nature and the results of the tests, shall also be enterel by the certifying surgeon in a health register in Form 28.

(4) The Certificates of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the fume process on the ground that continuance therein would involve special danger to the health of the worker, shall make a record of his findings in the said certificate and health register. The entry of his

findings in those documents should also include the period for which he considers that the said person is unfit for work in the fume process.

(6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the fume process unless the certifyings surgeon, after further examination again certifies him fit for employment is such process.

17. ***Examptions*** — If in respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the process or for any other reason, all or any of the provisions of this Schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate in writing, which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

SCHEDULE : XXV

MANUFACTURE , STORING, HANDLING AND USE OF HIGHLY FLAMMABLE LIQUIDS AND FLAMMABLE COMPRESSED GASES.

1. ***Application*** — These rules will be applicable to all factories where highly flammable liquides or flammable compressed gases are manufactured, stored, handled or used.

2. ***Definition*** — For the purpose of this Schedule, —

(a) "highly flammable liquid" means any liquid including its solution emulsion or suspension which when tested in a manner specified by Sections 14 and 15 of the Petroleum Act, 1934, *(30 of 1934)* gives of flammable vapours at a temperature less than 32 degrees centigrade,

(b) "Flammable compressed gas" means flammable compressed gas as defined in Section 2 of the Static and Mobile pressure vessels (unfired) Rules 1981 framed under the Explosives Act, 1884.

3. ***Storage*** — (1) Every flammable liquid or flammable compressed gas used in every factory shall be stored in suitable fixed storage tank or in suitable closed vessel located in a safe position under the ground, in the open or in a store room of adequate fire resistant construction.

(2) Except as necessary for use, operation or maintenance of every vessel

or tank which contains or had contain a highly flammable liquid or flammable compressed gas shall be always kept closed and all reasonably practicable steps shall be taken to contain or immediately drain off to a suitable container any spill or leak that may occur.

(3) Every container vessel, tank, cylinder, or store room used for storing highly flammable compressed gas shall be clearly and in bold letters marked "Danger-Highly Flammable Liquid" or " Danger-Flammable Compressed Gas".

4. ***Enclosed systems for conveying highly flammable liquids*** — Whenever it is reasonably practicable, highly flammable liquids shall be conveyed within a factory in totally enclosed systems consisting of pipe lines, pumps and similar appliances form the storage tank or vessel to the point of use. Such enclosed systems shall be so designed installed operated and maintained as to avoid leakage or the risk of spilling.

5. ***Preventing Formation of Flammable Mixture with Air*— Wherever there** is a possibility, for leakage or spill of high flammable liquid or flammable compressed gas from an equipment, pipe line, valve, joint or other part of a system, all practicable measure shall be taken to contain, drain off or dilute such spill or leakage as to prevent formation of flammable mixture with air.

6. ***Prevention of Ignition***— (1) In every room, work place or other location where highly flammable liquid or flammable combustible gas is stored conveyed, handled or used or where there is danger of fire or explosion from accumulation of highly flammable liquid or flammable compressed gas in air, all practicable measure shall be taken to exlcude the sources of ignition. Such precautions shall include the following —

(a) All electrical apparatus shall either be exclude from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;

(b) effective measure shall be adopted for prevention of accumulation of static charges to a dangerous extent;

(c) No person shall wear or be allowed to wear any foot wear having iron or steal nails or any other exposed ferrous materials which is likely to cause sparks by friction;

(d) Smoking, lighting or carrying of matches, lighters or smoking materials

shall be prohibited;

(e) Transmission belts with iron fasteners shall not be used; and

(f) All other precautions as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat

7. ***Prohibition of smoking*** — No person shall smoke in any place where highly flammable liquid or flammable compressed gas is present in circumstances that smoking would give rise to a risk of fire. The occupier shall take all practicable measures to ensure compliance with this requirement including display of a bold notice indicating prohibition of smoking at every place where this requirement applies.

8. ***Fire Fighting*** — In every factory where highly flammable liquid or flammable compressed gas is manufactured, stored, handled or used, appropriate and adequate means of fighting a fire shall be provided.

The adequancy and suitability of such means which expression includes the fixed and portable fire extingushing systems, extingushing material, procedures and the process of fire fighting, shall be to the standards and levels prescribed by the Indian standards applicable, and in any case not inferior to the stipulations under Model Rules 69.

9. ***Exemptions*** — If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this Schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate in writing, which he may at his discreation revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

FORM NO. 28
PRESCRIBED UNDER SCHEDULE XXII TO RULE 94.
Certificate of Fitness

Serial number.

I certify that I have personally examined (name) .....
.....
.....
son of (father's name) .....
residing at (address).....
who is desirous of being employed as (designation) .....
.....in (process, department and factory).....
.....
and that his age, as nearly as can be ascertained from my examination, is.....
.....years, and that he is, in my opinion, fit/ unfit for employment in the above mentioned factory as mentioned above,

2. He may be produced for further examination after a period of.....

3. The serial number of the previous certificate is .....

Signature of left hand thum immpression of person examined

Signature of Certifying Surgeon.
Date :

(1)	(2)	(3)	(4)
I certify that I examined the persons mentioned above on	I extend this certificate until (If Certificate is not extended, the period for which the worker is considered unfit for work is to be mentioned)	Signs and symptoms observed during examination	Signature of the certifying Surgeon

FORM NO. 29
PRESCRIBED UNDER SCHEDULE XVII TO RULE 94.
Certificate of Fitness for Dangerous Operations

1.	Serial number :	Serial number :
2.	Name of the person examined.	I certify that I have personally examined (name) .....
3.	Father's name	son of (father's name) ....
4.	Sex.	residing at (address) .....
5.	Address.....	.....
6.	Name of the factory in which emplyed/in which wishes to be employed.	who is desirous of being employed as.....in (name of factory).....
7.	Process of department in which employed/wishes to be employed.	in (department and process).....
8.	Whether certificate granted.	and that as nearly as can be ascertained from my examination, is fit/unfit for employment at the above noted factory.
9.	Whether declared unfit and certificate refused.	2. He is fit to be employed and may be employed on some other non-hazardous operation such as.....
10.	Reference number of previous certificate granted or refused.	3. He may be produced for further examination after period of.....
	Signature or left hand thumb impression of person examined.	4. He is advised following further examination..... .....
	Signature of Certifying Surgeon	5. He is adviced following treatment.....

6. The serial number of the previous certificate is.
Signature or left hand thumb impression of person examined.

Signature of Certifying Surgeon.

Notes — 1. The counterfoil should be retained by the Certifying Surgeon and maintained in a bound book or in a file.

2. The paragraph which does not apply may be cancelled.

95. ***Notification of accidents*** — (1) *Fatal and serious*—When there occurs in any factory an accident to any worker which results in *(a)* death, or *(b)* such injury that there is no reasonable prospect that he will be able to resume his employment in the factory within 20 days, such accidents shall be called in all prescribed communications "Fatal" or "Serious" as the case may be, and the manager of the factory shall give notice of the occurrence forthwith by telephone, telegram or special messenger to —

(i) the Chief Inspector of Factories, Assam, Guwahati and the Senior Inspector of Factories, in charge Zonal Factory Office or the Inspector of Factories, in charge of Dist. Factories Office as the Case may be.

(ii) the District Magistrate or, if the District Magistrate by order so directs the Sub-divisional Officer;

(iii) the Commissioner for Workmen's Compensation appointed under Section 20 of the Workmen's Compensation Act, 1923;

(iv) in the case of fatal accidents only, the officer-in-charge of the Police Station within the local limits of which the factory is located; and

(v) the relatives of the injured or deceased person.

Report by special messenger shall be in Form No. 18 and those sent by telephone or telegram shall be confirmed within 48 hours by a written report in that form.

(2) ***Minor*** — When there occurs in any factory an accident to any worker less

serious than those described in sub-rule (1) but which prevents or is likely to prevent him from resuming his employment in the factory within 48 hours after the accident occurred, such accident shall be recorded by the manager of the factory and reported by him in Form No. 18 as soon as practicable, but in any case within 72 hours of its occurrence, to the authorities mentioned in clauses (i), *(ii)* and *(iii)* of sub-rule (1). Such accidents shall be called in prescribed communications "minor accident"

(3) ***Supplementary reports*** — *(a)* When an accident which has been reported to the Inspector as either "Serious" or "Minor" afterwards proves to be "Fatal" the manager of the factory shall make the necessary correction in the supplementary report which shall be sent forthwith to the authorities mentioned in clauses *(i), (ii)* and *(iv)* of sub-rule (1).

(b) When an accident which has been reported to the Inspector as "Minor" afterwards proves to be "Serious" or when one reported as "Serious" afterwards proves to be "Minor", the manager of the factory shall make the necessary correction in a supplementary which shall be sent forthwith to the authorities mentioned in clauses *(i), (ii)* and *(iii)* of sub-rules (1).

(4) ***Site of fatal accident*** — Where loss of life has immediately resulted from an accident, the place where the accident occurred shall be left as it was immediately after the accident until the expiration of at least three days after the time when the notice required under sub-rule (1) was given, or until the visit to the place by an Inspector, whichever first happens, unless compliance with this sub-rule would tend to increase or continue the danger.

(5) ***Explosions, fire and accidents to plant*** — When there occurs in any factory any explosion, fire, collapse of buildings, or serious accident to the machinery or plant whether or not attended by personal injury or disablement, such occurrence shall be reported by the manager of the factory within five hours of its occurrence to the authorities mentioned in clauses *(i)* and *(ii)* of Rule 95 (1). Such reports shall be in Form No. 18-A.'

96. ***Notice of poisoning or disease*** — A notice in Form No. 19 should be sent forthwith both to the Chief Inspector and to the Certifying Surgeon, by the manager of a factory in which there occurs a case of lead, phosphorous, mercury, manganese, arsenic, carbon disulphate or benzene poisoning; or poisoning by nitrous fumes, or by halogens or halogen derivatives of the hydrocarbons of the

aliphatic series; or of chrome ulceration, anthrax, silicosis, toxic anaemia, toxic jaundice, primary opitheliomatous cancer of the skin, or pathological manifestations due to radium or other radio-active substances or X-rays.

CHAPTER X
Supplemental

97. ***Procedure in appeals*** — (1) An appeal presented under Section 107 shall lie to the Chief Inspector, or in cases where the order appealed against is an order passed by that officer, to the State Government or to such authority as the State Government may appoint in this behalf and shall be in the form of a memorandum setting forth concisely the grounds of objection to the order and bearing Court-fees stamps in accordance with Article 11 of Schedule II to the Court-fees Act, 1870, and shall be accompanied by a copy of the order appealed against.

(2) ***Appointment of assessors*** — On receipt of the memorandum of appeal, the appellate authority shall if it thinks fit or if the appellant has requested that the appeal should be heard with the aid of assessors, call upon the body declared under sub-rule (3) to be representative of the industry concerned, to appoint an assessor within a period of 14 days. If an assessor is nominated by such body, the appellate authority shall appoint a second assessor itself. It shall then fix a date for the hearing of the appeal and shall give due notice of such date to the appellant and to the Inspector whose order is appealed against, and shall call upon the two assessors to appear upon such date to assist in the hearing of the appeal.

(3) The appellant shall state in the memorandum presented under sub-rule (1) whether he is a member of one or more of the following bodies —

1. The Indian Tea Association.
2. The Assam Tea Planters Association.
3. The Assam Rice Mills Association.
4. The Assam Oil Mills Association.

The body empowered to appoint the assessor shall —

(a) if the appellant is a member of one of such bodies, be that body;

(b) if he is a member of two such bodies, be the body which the appellant desires should appoint such assessor; and

(c) if the appellant is not a member of any of the aforesaid bodies or if he

does not state in the memorandum which of such bodies he desires should appoint the assessors, by the body which the appellate authority considers to be the best fitted to represent the industry concerned.

4. ***Remuneration of assessors*** — An assessor appointed in accordance with the provisions of sub-rules (2) and (3) shall receive for the hearing of the appeal, a fee to be fixed by the appellate authority, subject to a maximum of fifty rupees per diem. He shall also receive the actual travelling expenses. The fees and travelling expenses shall be paid to the assessor by Government but where assessors have been appointed at the request of the appellant and the appeal has been decided wholly or partly against him the appellate authority may direct that the fees and travelling expenses of the assessor shall be paid in whole or in part by the appellant.

98. ***Display of notices*** — The abstract of the Act and of the Rules required to be displayed in every factory shall be in Form No. 20.

99. ***Returns*** — The manager of every factory shall furnish to the Inspector or other officer appointed by the State Government in this behalf the following returns, namely—

(1) ***Annual return*** — On or before the 15th January of each year, an annual return in duplicate in Form No. 21.

(2) ***Annual return of holidays*** — Before the end of each year a return giving notice of all the days on which it is intended to close the factory during the next ensuring year. This return shall be submitted whether the factory is or is not working during the year preceding the return relates:

Provided that the State Government may dispense with this return in the case of any specified factory or of any class of factories or of the factories in any particular area:

Provided further that the annual return of holidays shall be dispensed with in case of all factories —

(a) which regularly observed Sundays as holidays; or

(b) which regularly observe a fixed day in the week as a holiday; or

(c) which observe holidays according to a list approved by the Chief Inspector.

Provided further that where the Manager of any factory makes any departure

from such holidays or list of holidays as aforesaid, prior intimation shall be given to the Chief Inspector.

(3) ***Half-yearly return*** — The Manager of every factory shall furnish to the Chief Inspector on or before the 15th July and 15th January of each year, a half-yearly return in duplicate in Form No. 22 :

Provided that in the case of a factory in which work is carried on only during certain period or periods of the year the Manager shall if so required by the State Government or if the State Government so directs through the Chief Inspector, submit the annual or half-yearly return, as the case may be, within 15 days after the close of that period or after close of the last of these periods in the year as the case may be.

(4) ***Leave with wages — Annual Return*** — The Manager of every factory shall furnish to the Chief Inspector, not later than 1st February of the year subsequent to that to which it relates, a return in Form No. 21.

(5) ***Compensatory holidays — Annual Return*** — The Manager of every factory shall furnish to the Chief Inspector, not later than the 1st February of the year subsequent to that which it relates, a return in Form No. 21.

(6) ***Canteen — Annual Return —*** The Manager of every factory, notified by the State Government, wherein more than two hundred and fifty workers are ordinarily employed shall furnish to the Chief Inspector not later than 15th January of the year subsequent to that to which it relates, a return in Form No, 21.

(7) ***Creche — Annual Return*** — The Manager of every factory wherein more than thirty women workers are ordinarily employed and providing a creche shall furnish to the Chief Inspector not later than 1st February of the year subsequent to that to which it relates, a return in Form No. 21.

(8) ***Shelter, Rest Rooms and Lunch Rooms*** — *Annual Return* — The Manager of every factory wherein more than 150 workers are ordinarily employed shall furnish to the Chief Inspector not later than 15th January of the year subsequent to that to which it relates a return in Form No. 21.

100. ***Service of notice*** — The despatch by post under registered cover of any notice or order shall be deemed sufficient service on the occupier, owner or manager of a factory of such notice or order.

101. ***Information required by the Inspector —*** The occupier, owner or manager of a factory shall furnish any information that an Inspector may require

for the purpose of satisfying himself whether any provision of the Act has been complied with or whether any order of an Inspector has been duly carried out. Any demand by an Inspector of any such information, if made during the course of an inspection, shall be complied forthwith if the information is available in the factory, brief made in writing shall be complied with within seven days of the receipt thereof.

102. ***Muster-roll*** — The Manager of every factory shall maintain a muster-roll of all the workers employed in the factory in Form No. 25 showing *(a)* the name of each worker, *(b)* the nature of his work, and *(c)* the daily attendance of the worker:

Provided that, if the daily attendance is noted in the Register of Adult workers in Form No. 12, or the particulars required under this rule are noted in any other register, a separate muster-roll required under this rule need not be maintained.

103. ***Register of accident and dangerous occurrences —*** The Manager of every factory shall maintain a Register of all accidents and dangerous occurrences which occur in the factory in Form No. 26 showing the —

(a) Name of injured person (if any);

(b) Date of accident or dangerous occurrence;

(c) Date of report in Form No. 18 to Inspector;

(d) Nature of accident or dangerous occurrence;

(e) Date of return of injured person to work;

(f) Number of days of absence from work of injured person.

104. ***Maintenance of Inspection Book***—The Manager of every factory shall maintain a bound inspection book and shall produce it when so required by the Inspector or Certifying Surgeon.

105. The occupier or Manager of every factory shall report to the Inspector any intended closure of the factory or any section or department thereof immediately it is decided to do so, intimating the reason for the closure, the number of workers on the register on the date of report, the number of workers likely to be effected by the closure and the probale period of the closure. An intimation should also be sent to the Inspector as soon as the factory or the section or department of the factory, as the case may be, starts working again.

106. (1) The following precautions shall be taken when fabrics are processed

in polymerising of curing machine for fixing prints by the Emulsion Technique, namely —

(i) Printed fabrics shall be thoroughly dried by passing them over drying cans or through a hot flue or other equally effective means, before the same are allowed to pass through the polymerising machine;

(ii) the exhaust flap or damper shall be provided with a hole or opening so that at least 2/3 of it is always open;

(iii) infra-red ray heaters of the machines shall be cut off while running the prints;

(iv) the electrical heaters shall be connected to a separate circuit and shall be provided with an isolation switch so as to ensure that it is completely cut off in an emergency;

(V) the electrical heater shall be so located that if there is any dropping of the solvent due to condensation, it does not directly come in contact with the heaters;

(vi) the drive of the exhaust fan shall be interlocked with the main drive of the machine in such a way that if the exhaust motor stops, the machine including all heating devices shall also stop;

(vii) the electrical heater shall have thermostats to regulate the temperature so that the heater shall automatically cut off, if the temperature rises above the pre-set value;

(viii) adequate flaps shall be provided on top of the machine which can open and let of the fumes outside the work-room in case of an explosion or in case any pressure is built up;

(ix) filter gauze shall be cleaned at least once a week;

(x) exhaust dust shall be cleansed at least once a week;

(xi) tension of the V belt drive of the fans shall be checked every week.

(2) The machine shall be examined, under the direct supervision of a responsible person, designated by the occupier or manager, who by his experience and knowledge of necessary precaution, against risks of explosions, is fit to supervise such work.

(3) A register shall be maintained in which the details of the various checks carried under sub-rules (2), shall be entered and every entry therein shall be signed by the person making the checks.

CHAPTER XI
Forms Prescribed Under the Rules
FORM NO. 1
[PRESCRIBED UNDER RULE 3]

Application for permission to construct, extend or take into use any building as a factory

1. Applicant's name.....

Applicant's calling.....

Applicant's address.....

2. Full name and postal address of factory.....

3. Situation of the factory —

State.....

District.....

Town or village.....

Nearest Railway Station or Steamer ghat.....

4. Particulars of plant to be installed .....

Date..... Signature of applicant

Note—This application shall be accompanied by the following documents -

(a) a flow chart of the manufacturing process supplemented by a brief description of the process in its various stages;

(b) plans, in duplicate, drawn to scale, showing —

(i) the site of the factory and immediate surrounding including adjacent buildings and other structures, roads, drains, *etc;*

(ii) the plan, elevation and necessary cross-section of the various buildings, indicating all relevant details relating to natural lighting, ventilation and means of escape in case of fire. The plans shall also clearly indicate the position of plant and machinery, aisles and passageways;

(c) such other particulars as the Chief Inspector of Factories may desire.

FORM NO. 2
[PRESCRIBED UNDER RULES 4 AND 7]

1. Full name of factory with factory licence number, if already registered before.....

2. *(a)* Full postal address and situation of the factory.....

(b) Full address to which communication relating to the factory should be sent.....

3. Nature of manufacturing process / processes —

(a) Carried on in the factory during the last 12 months (in the case of the factories already in existence).....

(b) to be carried on in the factory during the next 12 months (in the case of all the factories).....

4. Names and values of principal products manufactured during the last 12 months.....

5. (i) Maximum number of workers proposed to be employed on any one day during the year.....

(ii) Maximum number of workers employed on any one day during the last 12months.....

(iii) Number of workers to be ordinarily employed in the factory.....

6. *(i)* Nature and total amount of power (H. P.) installed or proposed to be installed.....

(ii) Maximum amount of power (H. P.) proposed to be used .....
.....

7. Full name and residential address of the person who shall be the manager of the factory for the purpose of the Act.....

8. Full name and residential address of the occupier —

(i) the proprietor of the factory in case of private firm / proprietory

concern.....

(ii) directors in case of a public limited liability Company/Firm.....

(iii) where a managing agent has been appointed the name of managing agents and Directors thereof.....

(iv) shareholders in case of a private company where no managing agents have been appointed.....

(v) the Chief Administrative Head in case of a Government or local fund factory.....

9. Full name and address of the owner of the premises or building (including the precincts thereof) referred to in Section 63...

10. In the case of a factory constructed or extended after date of the commencement of the Rules —

(a) reference number and date of approval of the plans for site, whether for old or new building and for construction or extension of a factory by the State Government / Chief Inspector.

(b) reference number and date of approval of the arrangements, if any, made for the disposal of trade waste and effluents and the name of the authority granting such approval.

11. Amountof Rs,..... (Rupees.....).

(i) paid in..... Treasury on..... vide chalan No..... (enclosed).

(ii) Transmitted by crossed cheque/postal Order No..... dated..... on the bank/of the post office drawn in favour of the Chief Inspector of Factories.

Signature of occupier

Date.....

Signature of Manager

Date.....

Note — 1. This form should be completed in ink in block letters or typed.

2. If power is not used at the time of filling up this form, but is introduced later, the fact should be communicated to the Chief Inspector immediately.

3. If any of the persons named against Item 8 is minor, the fact should be clearly stated.

4. In case of a factory where a managing agent or agents have been appointed as occupier under the Indian Companies Act, 1913 (VII of 1913) information required in Item 8 should be supplied only in respect of that person or persons.

* Now see the Companies Act, 1956 *(1 of 1956)*.

FORM NO. 3

******

FORM NO. 4
[PRESCRIBED UNDER RULES 5]

Registration and Licence to work a Factory

Registration No..... Fee Rs.....

Serial No.....

Licence is hereby granted to .....valid only for the premises described below for use as a factory employing not more than..... persons on any one day during the year and using motive power not exceeding ..... H.P., subject to the provisions of the Factory Act, 1948, and the Rules made thereunder.

This licence shall remain in force till the 31st day of December, 20.....

Guwahati — Chief Inspector of Factories
Assam

Description of the licensed premises

The licensed premises shown on plan No. ..... dated ..... are situated in ..... and consist of.....

Date of renewal	Date of expiry	Signature of licensing authority

FORM NO. IV
ANNUAL RETURNS
WAGES AND DEDUCTIONS FROM WAGES
Return for the ending 31st December, 20.....

1. (a) Name of the Factory or Establishment and postal address:
2. Number of days worked during the year;
3. (a) Number* of mandays worked during the year :

.....

Person earning less than Rs..... per month

Adults .....
Children **Total**

.....

**(b) Average daily number of persons employed during the year

.....

Persons earning less than Rs..... per month

Adult .....
Children **Total**

.....

(c) Gross amount paid as remuneration to persons getting less than Rs. ..... per month including deductions under Section 7(2)..... which the amount due to profit sharing bonus is and that due to money value of concessions ***is

4. Total wages paid including deduction under Section 7(2) own the following accounts.

Persons earning less than Rs. per month

(a) Basic wages including overtime wages and non-profit sharing bonus.
(b) Dearness and other allowances in cash.
(c) Arrears of pay in respect of previous year paid during the year.

.....
Total

5. Deductions - Number of cases and amount realised

.....

Persons earning less than

Rs. per month
Number of cases Amount Realised.
(Rs.)

.....

(a) Fines
(b) Deduction for damage or loss
(c) Deduction for breach of contract

.....
Total

6. Fines Fund
(i) Balance of fines fund in hand at the begining of the year
Rs. .....

(ii) Disbursement from fines fund -

.....

Purpose Amount
(Rs)

(a)
(b)
(c)
(d)

.....
Total

(iii) Balance of fines fund in hand at the end of the year Rs.....

Signature
Date: Designation

.....

*This is the aggregate of attendances during the year.

** The average daily number of persons employed during the year is obtained by dividing the aggregate number of attendances during the year by the number of working days.

*** The money value of concessions should be obtained by taking the difference of the price paid by the employer and the actual price paid by the employees for supplies of essential commodities given free or at concessional rates.

Note — This return should be sent to the prescribed authority by 15th February of succeeding year.

FORM NO. 5
[PRESCRIBED UNDER RULE 14]
Certificate of Fitness

1. Serial No. ..... Serial No. .....
Date ..... Date .....
2. Name .....
3. Father's name .....
4. Sex .....
5. Residence ..... I, hereby certify that I have personally examined (name).....
..... son/daughter of..... residing at..... who is desirous
6. Date of birth, if ..... of being employed in a factory, and that his/her age, as nearly
available and/or ..... as can be ascertained from my examination, is..... years,
certified age ..... and that he/she is fit for employment in factory as an adult/
7. Physical fitness ..... child.
8. Descriptive marks.....
9. Reason for —
(1) refusal of certificate ..... His/Her descriptive marks are .....
or
(2) certificate being revoked .....
Thumb-impression
Initial of Certifying Surgeon Thumb-impression Certifying Surgeon

Note — Exact details of cause of physical disability should be clearly stated.

FORM NO. 6

[PRESCRIBED UNDER RULE 22]

Humidity Register

Department .....

Hygrometer Distinctive mark or number.....

Position in Department .....

Readings of Hygrometer

Date, Month,	Year,	Between7 and 9 a. m.		Between 11 a.m. and 2p.m. (but not in the rest period)		Between 4 and 5-30 p.m.		If no humidity insert none	Remarks
		Dry bulb	Wet bulb	Dry bulb	Wet bulb	Dry bulb	Wet bulb		
1st									
2nd									
3rd									
4th									
5th									
6th									
7th									
8th									
9th									
10th									
11th									
12th									
13th									
14th									
15th									
16th									
17th									
18th									
19th									
20th									
21st									
22nd									
23rd									
24th									
25th									
26th									
27th									
28th									
29th									
30th									
31st									

(Signed).....

Certified that the above entries are correct.

(Signed) .....

FORM NO. 7

[PRESCRIBED UNDER RULE 16]

Record of lime washing, painting, etc.

Parts of Factory, e.g., Name of room	Parts limewashed, painted, varnisher or oiled, e, g., walls, celings, wood work etc.	Treatment, whether lime washed, painted, varnished or oiled	Date on which limewashing, painting varnishing or oiling was carried out (according tothe English Calendar)			Remarks
			Date	Month	Year	
1	2	3	4	5	6	7

Signature of Manager

FORM NO. 8

[PRESCRIBED UNDER RULE 56]

Report of examination of pressure vessels

1. Name of occupier (or Factory).....
2. Situation and address of factory .....
3. Name, description and distinctive number of pressure vessel.....
4. Name and address of manufacturer .....
5. Nature of process in which it is used.....
6. Particulars of vessel:

   (a) Date of construction .....

   (b) Thickness of walls .....

   (c) Date on which the vessel was first taken into use .....

   (d) Safe working pressure recommended by the manufacturer.....

(The history should be briefly given, and the examiner should state whether he has seen the last/previous report).....

7. Date of last hydraulic test (if any) and pressure applied .....
8. Is the vessel in open, or otherwise exposed to weather or to damp ? ....
9. What parts (if any) were inaccessible ? .....
10. What examination and tests were made? (specify pressure if hydraulic test was carried out).....
11. Condition of vessel (state any defects materially) affecting the safe working pressure or the safe working of the vessel) | External..... Internal.....
12. Are the required fittings and appliance provided in accordance with the rules for pressure vessels ? .....
13. Are all fittings and appliances properly maintained and in good conditions?.....
14. Repairs (if any) required, and period within which they should be executed and other condition which the person making the examination thinks it necessary to specify for securing safe working .....
15. Safe working pressure, calculated from dimensions and from the thickness and other data ascertained by the present examination, due allowance being made for conditions of working if unusual on exceptionally severe (state minimum thickness of walls measured during the examination).....
16. Where repairs affecting the safe working pressure are required state the working pressure.....
    (a) Before the expiration of the period specified in (14) .....
    (b) After the expiration of such period if the required repairs have not been completed .....
    (c) After the completion of the required repairs .....

I certify that on ..... the pressure vessel described above was thoroughly cleaned and (so far as its construction permits) made accessible for thorough examination and for such test as were necessary for thorough examination and that on the said date, I thoroughly examined this pressure vessel, including its fittings, and that the above is a true report of my examination.

Signature.....
Qualification .....
Address.....
Date.....

If employed by a Company or Association, give name and address.

FORM NO. 9

[PRESCRIBED UNDER RULE 76]

Register of Compensatory Holidays

1	Serial No,
2	Number in the register of workers
3	Name & residential address of the worker
4	Group or relay No.
5	Number & date of exempting order
6	Year
7	January to March
8	April to June
9	July to September
10	October to December
11	January to March
12	April to June
13	July to September
14	October to December
15	Lost rest days carried to the next year
16	Remarks

Weekly days lost due to the exempting order in

Date of compensatory holiday goven in

FORM NO. 10

[PRESCRIBED UNDER RULE 77]

Overtime muster roll for exempted workers- Month ending..... 200 .....

1.	No. in Register
2.	Name and residential address of the worker
3.	Department
4.	Date on which overtime has been worked
5.	Extent of overtime on each occassion
6.	Total overtime worked or production in case of piece workers
7.	Normal hours
8.	Normal rate of pay
9.	Overtime rate of pay
10.	Normal earning
11.	Overtime earning
12.	Cash equivalent of advantages accruing through the concessional sale of food-grain and other articles
13.	Total earning
14.	Date on which overtime payments made

FROM NO. 11

[PRESCRIBED UNDER RULES 78 AND 84]

Notice of periods of work for Adult and Children

Name of factory .....
Place .....
District .....

					Period of work								
					Monday to Friday								
Nature of work	Group Number	No. of workers in each group	Shift No.	Relay No.	Men			Women			Children		
					1st period	2nd period	3rd period	1st period	2nd period	3rd period	1st period	2nd period	3rd period
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Date on which this notice is first exhibited .....20 Signature of Manager

FROM NO. 12

[PRESCRIBED UNDER RULES 79]

Register of Adult Workers

							No. and date of certificate if an adolesscent		
1.	Serial No.	2.	Name and residential address of workers	3.	Fathers name	4.	Name of work	5.	Letter of Group as in Form 11
6.	Number of relay, if working in shifts	7.	No. of certificate and date			8.	Token No. giving reference to the certificate	9.	Remarks

FROM NO. 13

[PRESCRIBED UNDER RULES 79]

Register of Adult Workers for Factories exempted from Section 61 of the Act under Rule 83

Name of factory ..... Week ending ..... 20 .....

Serial No.	Name and residential address of the workers	Nature of work	Group No.	Period of work	Actual times of starting and stopping for each period														Record of Transfers from one group to another	Progressive total of compensatory holidays	Progressive total of lost rest day	Remarks
					Sunday		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday					
					In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
				Ist 2nd 3rd 4th																		

Note — (1) When a worker is transferred from one group to another, the group to which he has been transferred shall be shown against his name in the Remarks column.

(2) The grant of a weekly holiday may be indicated by an entry of "H" and that of a compensatory holiday by "CH" for the purposes of the Factories (Holidays) Rules.

FROM NO. 14

[PRESCRIBED UNDER RULES 85]

Register of Child Workers

1.	Serial No.
2.	Name and residential address of workers
3.	Fathers name
4.	Date of first employment
5.	No. of certificate and its date
6.	Token number giving reference to certificate
7.	Letter of Groups as in Form No. 11
8.	No. of relay, if working in shifts
9.	Remarks

FROM NO. 15

[PRESCRIBED UNDER RULES 86]

Register of Leave with Wages

Serial No. ..... Adult/Child .....

Department ..... Name .....

Serial No. in the Adult/Child workers Father's Name .....

Date of entry into service ..... Date of discharge .....

Name of Factory Date and amount of payment made in lieu of leave due

1	Calendar year of service		
2	Wage period or periods during one month immediately preceeding leave from ..... to		
3	Wages earned during the wage period in Col. 2 and the number of days worked during the period		
4	Number of day's work performed		
5	Number of days of lay off	No. of days worked during calendar year	
6	Number of days of maternity leave		
7	Number of days of leave enjoyed		
8	Total of colums. 4 to 7		
9	Balance of leave from preceeding year	Leave to credit	
10	Leave earned during the year mentioned in Col. 1		
11	Total of colums 9 and 10		
12	Whether leave in accordance with schemes under Section 9 (8) was refused		
13	Leave enjoyed from ..... to		
14	Balance of leave to credit		
15	Normal rate of wages		
16	Cash equivalent of advantage accruing through concessional sale of foodgrains and other articles		
17	Rate of wages for the leave period (Total of Cols. 15 and 16)		
18	Remarks		

FORM NO. 16

[PRESCRIBED UNDER RULE 87]

Leave Book

(Profomma of the Leave Book shall be the same as "Register of Leave with Wages" (Form No. 15) but shall be made out separately for each worker on a thick bound sheet.)

FORM NO. 17

[PRESCRIBED UNDER RULE 14]

Health Register

(In respect of persons employed in occupations declared to be dangerous operations under Section 87)

Name of Certifying Surgeon :

(a) Mr..... From..... To .....

(b) Mr..... From..... To .....

(c) Mr..... From..... To .....

Serial No.	Works No.	Name of worker	Sex	Age (birth day)	Date of employment on present work	Date of leaving or transfer to other works	Reason for leaving, transfer or discharge	Nature of job or occupation	Raw material or by-product handled	Dates of Medical Examination by Certifying Surgeon / Result of Medical Examination	If suspended from work, state period of suspension with detailed reason	Recertified fit to resume duty on (with signature of Certifying Surgeon)	If certificate of unfitness or suspension issued to worker	Signature with date of Certifying Surgeon
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Note — (i) Column 8. Detailed summary of reasons for transfer or discharge should be stated

(i) Column 11. should be expressed as fit/unfit/suspended.

FORM NO. 18
[PRESCRIBED UNDER RULE 95]
Notice of accident

To ..... PO., ...

Sir,

I, hereby give notice under Section 88 of the Factories Act, 1948 that an accident occurred in this factory and the following person was involved in the accident.

Sex.....

Name..... Occupation..... Age.....

1. Date and hour of accident.....
2. The hour at which the injured persons started work on day of occurrence.....
3.(a) State how the accident occurred.....
(b) If caused by machinery.....
(i) Give the name of the machine and part causing the accident.....
(ii) State whether it was being moved by mechanical power at the time.....
4. Was the accident due to injured person's negligence or to that of any other person's.....
5. Names of persons who saw the accident and can give important evidence.....
6. Nature and extent of injury giving medical diagnosis, if possible.....
7. Number of days the injured person is likely to be off work.....
8. Name and address of Medical Officer in attendance on injured person.....

Name of Factory.....

Nature of Industry .....

Branch or Department where accident occurred.....

Address..... Signature.....

Note: Any additional information which the Manager may wish to give, in order to let the Inspector have a clear idea of the circumstances surrounding the accident, should be attached to this form.

(To be filled in by the Factory Inspection Department)

Classification..... Inspector's initial.....

Responsibility..... Date.....

::::::::

FORM NO. 18-A
[PRESCRIBED UNDER RULE 95 (5)]
Notice of Dangerous Occurrence

Date.....

To

Sir,

I hereby give notice under Section 88 of the Factories Act, 1948 that a dangerous occurrence occurred in the factory as detailed below

1. Date and hour of dangerous occurrence.....
2. Full account of dangerous occurrence.....
3. Name of persons who saw the dangerous occurrence and can give important evidence.....

Name of Factory..... Nature of Industry.....

Branch or Department where the dangerous occurrence occurred.....

Address..... Signed.....

Note: Any additional information which the Manager may wish to give in order to let the Inspector have a clear idea of the circumstances surrounding the dangerous occurance, should be attached to this form.

FORM NO. 19
[PRESCRIBED UNDER RULE 96]
Notice of poisoning or disease

To be filled in by
the Chief Inspector
No. of case .....
Remarks.....

Factory Particulars

1. Name of factory..... .....
2. Address of factory .....
3. Address of office or private residence of occupier.....
4. Nature of Industry.....

Person affected

5. Name and Works Number of patient.....
6. Address of patient.....
7. Sex and Age of patient.....
8. Precise occupation of patient.....
9. Nature of Poisoning or Disease from which patient is suffering .....

Genearal Particulars

10. Has the case been reported to the Certifying Surgeon?

Signature of Factory Manager.....

Date.....

FORM NO. 20
[PRESCRIBED UNDER RULE 98]

Abstract of the Factories Act, 1948 and the Assam Factories Rules, 1950

(To be affixed in a conspicuous and convenient place at or near the main entrance to the factory)

Interpretation — "Factory" means any premises including the precincts thereof:

(i) whereon ten or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on, or

(ii) whereon twenty or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on,

but does not include a mine subject to the operation of the Indian Mines Act, 1923 *(IV of 1923),* or a railway running shed.

"Worker" means a person employed directly or through any agency, whether for wages or not, in any manufacturing process, or in cleaning any part of the machinery or premises used for a manufacturing process, or in any other kind of work incidental to or connected with, the manufacturing process, or the subject of the manufacturing process.

"Manufacturing process" means any process for making, altering, repairing, ornamenting, finishing, packing, oiling, washing, cleaning, breaking-up, demolishing, or otherwise treating or adapting any article or substance with a view to its use, sale, transport delivery or disposal, or pumping oil, water or sewage, generating, transforming or transmitting power, printing by letter press, lithography, photogravure or book-binding which is carried on by way of trade or for purposes of gain, or incidentally to another business so carried on, or constructing, reconstructing, repairing, refitting, finishing or breaking up ships or vessels.

WORKING HOURS, HOLIDAYS, INTERVALS FOR REST, ETC.

1. ***Hours of work (Adults) [Sections 51 and 54]*** — No adult worker shall be required, or allowed to work in a factory for more than 48 hours in a week and for more than 9 hours in any day.

2. ***Relaxation of hours of work (Adults) [Section 64]***— The ordinary limits on working hours of adults may be relaxed in certain special cases, *e.g.,* workers, engaged on urgent repairs; in preparatory or complementary work which must necessarily be carried on outside the limits laid down for the general working of the factory, in work which is necessarily so intermittent that the intervals during which they do not work while on duty ordinarily amount to more than the intervals for rest, in work which for technical reasons must be carried on continuously throughout the day in working or supplying articles of prime necessity which must be made or supplied every day, in a manufacturing process which cannot be carried on except during fixed seasons, or at times dependent on the irregular action of natural forces, in engine rooms or boiler houses or in attending to power plant or transmission machinery.

Except in the case of urgent repairs, the relaxation shall not exceed the following limits —

(i) the total number of hours of work on any day shall not exceed ten;

(ii) the total number of hours of overtime work shall not exceed 50 for any one quarter;

(iii) the spread over inclusive of intervals for rest shall not exceed 12 hours in any one day.

In the case of any or all adult workers in any factory, the ordinary limits on working hours of adults may be relaxed for a period or periods not exceeding in the aggregate 3 months in any year, to enable the factory to deal with an exceptional pressure of work.

3. ***Payment for overtime [Section 59]*** — Where a worker works in a factory for more than 9 hours in any day or for more than 48 hours in any week he shall in respect of overtime work be entitled to wages at the rate of twice his ordinary rate of wages.

4. ***Exemption of supervisory staff [Section 64, chapter VI of the Act]*** - **Working** hours of adult does not apply to persons holding positions of supervision or management or employed in a confidential position in a factory.

5. ***Weekly Holiday (Adults) [Section 52]*** — No adult worker shall be required or allowed to work in a factory on the first day of the week, unless he has, or will have, a holiday for a whole day on one of the three days immediately before or after the said day, and the manager of the factory has, before the said day or the substituted day, whichever is earlier, delivered a notice at the office of the Inspector of his intention to require the worker to work on the said day and of the day which is to be substituted, and displayed a notice to that effect in the factory :

Provided that no substitution shall be made which will result in any worker working for more than ten days consecutively without a holiday for a whole day.

Where a worker in a factory, as a result of exemption from the ordinary provision relating to weekly holidays is deprived of any of the weekly holidays, he shall be allowed, within the month in which the holidays were due to him or within the two months immediately following that month, compensatory holidays of equal number to the holidays so lost.

6. ***Intervals for rest (Adults) [Sections 55 and 56]***— The periods of work of adult workers in a factory each day shall be so fixed that no period shall exceed *5* hours before he has had an interval for rest of at least half an hour and that inclusive of his intervals for rest they shall not spread over more than $10^{1}/_{2}$ hours in any day or, with permission of the Chief Inspector in writing, 12 hours.

7. ***Prohibition of double employment [Section 60, 71 and 99]*** — No child or except in certain circumstances, an adult worker shall be required or allowed to work in any factory on any day on which he has already been working in any other factory.

If a child works in a factory on any day on which he has already been working in another factory, the parent or guardian of the child or the person having custody of or control over him or obtaining any direct benefit from his wages shall be punishable with fine, which may extent to Rs. 50 unless it appears to the court that the child so worked without the consent or connivance of such parent, guardian or person.

8. ***Prohibition of employment of children under Section 67***— No child who

has not completed his fourteen years shall be required or allowed to work in any factory.

9. ***Hours of work (Children) [Section 71]***— No child shall be employed or permitted to work in any factory for more than $4\frac{1}{2}$ hours in any day and between the hours of 7 P.M. and 6 A.M. The periods to work of all children employed in a factory shall be limited to two shifts which shall not overlap or spread over more than 5 hours each and each child shall be employed in only one of the relays.

The provision relating to weekly holidays shall also apply to child workers and no exemption from this provision may be granted in respect of any child.

10. ***Prohibition of employment of women [Section 66]***— No woman shall in any circumstances be employed in any factory for more than 9 hours in any day or between the hours of 7 P.M. and 6 A.M.

LEAVE WITH WAGES

11. ***Leave with wages [Sections 79, 80 and 83 and Rules]*** — Every worker who has completed a period of 12 months, continuous service in a factory shall be allowed during the subsequent period of 12 months leave with wages for a number of days calculated at the rate of —

(i) if an adult, one day for every twenty days of work performed by him during the previous period of 12 months subject to a minimum of 10 days;

(ii) if a child, one day for every 15 days of work performed by him during the previous period of 12 months subject to a minimum of 14 days:

Provided that a period of leave shall be excluside of any holiday which may occur during such period.

For the leave allowed to him, a worker shall be paid at a rate equal to the daily average of his total full time earnings, exclusive of any overtime earnings, and bonus, but inclusive of dearness allowance and the cash equivalent of any advantage accruing by the sale, by the employer, of food grains and other articles at concessional rates for the days on which he worked during the month immediately preceding his leave.

Where the employment of a person who has completed a period of 4 month's

continuous service in a factory is terminated before he has completed a period of 12 month's continuous service he shall be deemed to have become entitled to leave for the number of days calculated at the rate of, if an adult one day for every 20 days of work performed by him, and if a child one day for every 15 days of work performed by him, and the occupier of the factory shall pay to him the amount payable in respect of the leave to which he is deemed to have become entitled.

If a worker entitled to leave with wages is discharged from the factory before he has taken the entire leave to which he is entitled, or if having applied for and having not been granted such leave, he quits his employment before he has taken the leave, the occupier of the factory shall pay him the amount payable in respect of the leave not taken and such payment shall be made before the expiry of the second working day after the day on which his employment is terminated.

The Manager shall maintain a leave with wages register in the prescribed Form No. 15 and shall provide each worker with a book called the 'Leave book' in the prescribed Form No. 16. The Leave Book shall be the property of the worker and the Manager or his agent shall not demand it except to make entries of the dates of holidays or interruptions in service and shall not keep it for more than a week at a time. If a worker loses his Leave Book, the Manager shall provide him with another copy on payment of two annas and shall complete it from his record.

HEALTH

12. ***Cleanliness [Section 11]*** — Except in cases specially exempted, all inside walls and partitions, all ceilings or tops of room and all wall sides and tops of passages and stair cases in a factory shall be kept white-washed or colour-washed. The white-washing or colour-washing shall be carried out at least once in every period of fourteen months. The floors of every workroom shall be cleaned at least once in every week by washing or using disinfectant, where necessary, or some other method.

13. ***Disposal of wastes and effluents [Section 12]*** — Effective arrangements shall be made in every factory for the disposal of wastes and effluents due to the manufacturing process carried on therein.

14. ***Ventilation and temperature [Section 13]***— Effective and suitable

provision shall be made in every factory for securing and maintaining in every workroom adequate ventilation by the circulation of fresh air and such a temperature as will secure to workers therein reasonable conditions of comfort and prevent injury to health.

15. ***Overcrowding [Section 16]***— Unless exemption has been granted, there shall be in every workroom of a factory in existence on 1st April, 1949 at least 9.9 cubice meters feet and of a factory built after this date at least 14.2 cubicc meters of space for every worker employed therein and for this purpose no account shall be taken of any space which is more than 4.2 meters above the level of the floor of the room.

16. ***Lighting [Section 17]***— In every part of a factory where workers are working or passing, there shall be provided and maintained sufficient and suitable lighting, natural or artificial or both.

17. ***Drinking water [Section 18]*** — In every factory effective arrangements shall be made to provide and maintain at suitable points, conveniently situated for all workers employed therein a sufficient supply of wholesome drinking water.

In every factory wherein more than 250 workers are ordinarily employed the drinking water shall, during the hot weather, be cooled by ice or other effective methods. The cooled drinking water shall be supplied in every canteen, lunch-room and rest-room also at conveniently accessible points throughout the factory.

18. ***Latrines and urinals [Section 19 and rules]*** — In every factory sufficient latrine and urinal accommodation of the prescribed type (separate enclosed accommodation for male and female workers) shall be provided conveniently situated and accessible to workers at all times while they are at the factory. Every latrine shall be under cover and so partitioned off as to secure privacy and shall have a proper door and fastenings. Sweepers shall be employed whose primary duty would be to keep clean latrines, urinals and washing places.

19. ***Spittoons [Section 20]***— In every factory there shall be provided a sufficient number of spittoons of the type prescribed in convenient places and they shall be maintained in a clean and hygienic condition. No person shall spit within the premises of a factory except in the spittoons provided for the purpose. Whoever spits in contravention of this provision shall be punishable with fine not exceeding five rupees.

SAFETY

20. ***Fencing of machinery [Section 21]*** — In every factory dangerous parts of machines *e.g.*, every moving parts of a prime mover and every flywheel connected to a prime mover, *etc.*, shall be securely fenced by the safeguards of substantial construction which shall be kept in position while the parts of machinery they are fencing are in motion or in use.

21. ***Work on or near machinery in motion [Section 22]*** — No woman or child shall be allowed in any factory to clean, lubricate or adjust in any part of the machinery while that part is in motion, or to work between moving parts or between fixed and moving parts of any machinery which is in motion.

22. ***Employment of young persons on dangerous machineries [Section 23]***- No young person shall work at any machine declared to be dangerous unless he has been fully instructed as to the dangers arising in connection with machine and the precautions to be observed and has received sufficient training in work at the machine or is under adequate supervision by a person who has a thorough knowledge and experience of the machine.

23. ***Casing of new machinery [Section 26]*** — In all machinery driven by power installed in any factory after 1st April, 1949 every set screw, bolt or key on any revolving shaft, spindle, wheel or pinion shall be so sunk, encased or otherwise effectively guarded as to prevent danger; all spur, worm and other toothed or friction gearing which does not require frequent adjustment while in motion shall be completely encased, unless it is so situated as to be as safe as it would be if it were completely encased.

Whoever sells or lets on hire or as agent of a seller or hirer, causes or procures to be sold or let on hire, for use in a factory any machinery driven by power which does not comply with these provisions, shall be punishable with imprisonment for a term which may extend to three months or with fine which may extend to five hundred rupees or with both.

24. ***Prohibition of employment of women and children near cotton openers [Section 27]*** — No woman or child shall be employed in any part of a factory for pressing cotton in which a cotton opener is at work.

25. ***Excessive weight [Section 34]*** — No woman or young person shall unaided by another person, lift, carry or move by hand or on head, any material article

tool or appliance exceeding the following limits —

Adult male	55 kg
Adult female	30 kg
Adolescent male	30 kg
Adolescent female	20 kg
Male child	16 kg
Female child	14 kg

26. ***Protection of eyes [Section 35]*** — Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the vicinity of processes which involve risk of injury to the eyes from articles or fragments thrown off in the course of the process or which involve risk of injury to the eyes by reason of exposure to excessive light.

27. ***Precautions in case of fire [Section 38]*** — Every factory shall be provided with adequate means of escape in case of fire for the persons employed therein. The doors affording exit from any room shall, unless they are of the sliding type, be constructed to open outwards. Every window, door or other exit affording a means of escape in case of fire, other than means of exit in ordinary use, shall be distinctively marked. Effecitive and clearly audible means of giving warning in case of fire to every person employed in the factory shall be provided. Effective measure shall be taken to ensure that wherein more than twenty workers are ordinarily employed in any place above the ground floor, or wherein explosive or highly imflammable materials are used or stored, all the workers are familier with the means of escape in case of fire and have been adequately trained in the routine to be followed in such case.

WELFARE

28. ***Washing facilities [Section 42]*** — In every factory adequate and suitable facilities for washing shall be provided and maintained for the use of worker therein. Such facilities shall include soap and nail brushes or other suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.

If female workers are employed separate facilities shall be provided and so

enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass.

29. ***Facilities for storing and drying clothing [Section 43 and rules]*** -In the case of certain dangerous operations, *e.g.,* lead processes, liming and tanning raw hides and skins, *etc.,* suitable places for keeping clothing not worn during working hours and for drying of wet clothing shall be provided and maintained.

30. ***Facilities for sitting [Section 44]*** — In every factory suitable arrangements for sitting shall be provided and maintained for all workers obliged to work in a standing position in order that they may take advantage of any opportunities for rest which may occur in the course of their work.

31. ***First aid ambulance room [Section 45]*** — There shall, in every factory, be provided and maintained so as to be readily accessible during all working hours, first-aid boxes or cupboards equipped with the prescribed contents. All such boxes and cupboards shall be kept in the charge of a responsible persons who is trained in first-aid treatment and shall always be available during the working hours of the factory.

In every factory wherein more than 500 workers are employed there shall be provided and maintained an ambulance room of the prescribed size and containing the prescribed equipment. The ambulance room shall be in charge of a qualified medical practitioner assisted by at least one qualified nurse and such other staff as may be prescribed.

32. ***Canteens [Section 46 and Rules]*** — In specified factories wherein more than 250 workers are ordinarily employed, a canteen or canteens shall be provided and maintained by the occupier for use of the workers. Food, drink and other items served in the canteen shall be sold on a non-profit basis and the prices charged shall be subject to the approval of a Canteen Managing Committee which shall be appointed by the Manager and shall consist of an equal number of persons nominated by the occupier and elected by the workers. The number of elected workers shall be in the proportion of 1 for every 1,000 workers employed in the factory; provided that in no case shall there be more than 5 or less than 2 workers on the Committee. The Committee shall be consulted from time to time on to the quality and quantity of foodstuffs to be served in the canteen, the arrangements of the menus, *etc.*

33. ***Shelters, rest rooms and lunch room [Section 47]***—In every factory wherein more than 150 workers are ordinarily employed, adequate and suitable shelters and rest rooms and suitable lunch room, with provision for drinking water, where workers can eat meals brought by them, shall be provided and maintained for the use of the workers.

34. ***Creches [Section 48 and Rule]*** — In every factory wherein more than 50 women workers are ordinarily employed there shall be provided and maintained a suitable room or rooms for the children under the age of six years of such women. The creche shall be adequately furnished and equipped and in particular there shall be one suitable cot or a cradle with the necessary bedding for each child, at least one chair or equivalent seating accommodation for the use of the mother while she is feeding or attending to her child and a sufficient supply of suitable toys for older children.

There shall be in or adjoining the creche a suitable wash-room for the washing of the children and their clothing. An adequate supply of clean clothes, soap and clean towels shall be made available for each child while it is in the creche. At least half a pint of clean pure milk shall be available for each child on every day it is accommodated in the creche and the mother of such a child be allowed in the course of her daily work suitable intervals to feed the child. For children above two years of age, there shall be provided, in addition, an adequate supply of wholesome refreshment. A suitably fenced and shady open air playground shall be provided for the older children.

35. ***Welfare Officers [Section 49]*** — In every factory where 500 or more workers are ordinarily employed, the occupier shall employ in the factory such number of Welfare Officers as may be prescribed.

SPECIAL PROVISIONS

36. ***Dangerous operation [Section 87 and Rules]*** — Employment of women, adolescent and children is prohibited or restricted in certain operations declared to be dangerous, *e.g.,* manufacture of aerated water, electroplating, manufacture and repair of electric accumulators, glass manufacture, grinding or glazing of metals; manufacture and treatment of lead and certain compounds of lead, generating petrol gas from petrol, sand blasting and liming and tanning of raw hides and skins.

37. ***Notice of accident [Section 88 and Rules]***— Where in any factory an accident occurs which causes death or which causes bodily injury by reason of which the person injured is prevented from working for a period of 48 hours or more immediately following the accident or which though not attended by personal injury or disablement, is of one of following types —

(i) bursting of a vessel used for containing steam pressure greater than atmospheric pressure other than plant which comes within the scope of the Indian Boilers Act;

(ii) collapse or failure of crane, derrick, winch, hoist or other appliances used in raising or lowering persons or goods, or any part thereof or the overturning of crane;

(iii) explosion or fire causing damage to any room or place in which persons are employed, or fire in rooms of cotton pressing factories where a cotton opener is in use;

(iv) explosion of a receiver or container used for the storage at a pressure greater than atmospheric pressure of any gas or gases (including air) or any liquid or solid resulting from the compression of gas;

(v) collapse or subsidence of any floor, gallery, roof, bridge, tunnel, chimney, wall or building forming part of a factory or within the compound or curtilage of factory.

the Manager of the factory shall forthwith send notice thereof to the Chief Inspector. If the accident is fatal or of such a serious nature that it is likely to prove fatal, notice shall also be sent to the District Magistrate or the Sub-divisional Officer and the Officer-in-charge of the nearest Police Station.

38. ***Notice of certain diseases [Section 89 and Rules]*** — Where any worker in a factory contracts any of the following diseases the Manager of the factory shall send notice thereof forthwith both to the Chief Inspector and Certifying Surgeon:

Lead, phosphorus, mercury, manganese, arsenic, carbon disulphide, or benzine poisoning or poisoning by nitrous fumes or by halogens or halogen derivatives of the hydro carbons of the alipathic series, or of chrome ulceration anthrax, silicosis, toxic anaemia, toxic jaundice, primary epitheliomatous cancer of the skin or pathological

manifestations due to radium or other radio-active substances or X-rays.

39. ***No charge for facilities and conveniences [Section 114]*** — No fee or charge shall be realised from any worker in respect of any arrangements or facilities to be provided or any equipments or appliances to be supplied by occupier under the provisions of the Act.

40. ***Powers of Inspectors [Sections 9 and 82]*** — Inspectors have power to inspect factories any time may require the production of registers, certificates, *etc.,* prescribed under the Act and the Rules.

Any Inspector may institute proceedings on behalf of any workers to recover any sum required to be paid by an employer under the provisions relating to leave with wages, which the employer has not paid.

41. ***Obligations of worker [Sections 97 and 111]*** — No worker in a factory—

(i) shall wilfully interfere with or misuse an appliance, convenience or other thing provided in a factory for the purpose of securing the health, safety welfare of workers therein;

(ii) shall wilfully without any reasonable cause do anything likely to endanger himself or others; and

(iii) shall wilfully neglect to make use of any appliance or other thing provided in the factory for the purpose of securing the health or safety of the workers therein.

If any worker employed in a factory contravenes any of these provisions of the Act or any rules or orders made thereunder imposing any duty or liability on workers he shall be punishable with fine which may extend to Rs. 100 or imprisonment for a tern which may extend to three months, or with both.

42. ***Certificates of fitness [Sections 68, 70 and 98]*** — No child who has completed his fourteenth year or an adolescent shall be required or allowed to work in any factory unless a certificate of fitness granted with reference to him is in the custody of the Manager of the factory and such child or adolescent carries, while he is at work, a token giving a reference to such certificate. Any fee payable for such a certificate shall be paid by the occupier and shall not be recoverable from the young person, his parent or guardian.

An adolescent who has been granted a certificate of fitness to work in a factory as an adult and who while at work in a factory carries a token giving reference to the certificate shall be deemed to be an adult for all the purposes of the provisions of the Act relating to the working hour of adults and the employment of young persons. An adolescent who has not been granted a certificate of fitness to work in a factory as an adult shall, notwithstanding his age, be deemed to be a child for all the purposes of the Act.

Whoever knowingly use or attempts to use, as a certificate of fitness granted to himself, a certificate granted to another adolescent to work in a factory as an adult, or who having procured such a certificate knowingly allows it to be used, or an attempt to use it to be made, by another person, shall be punishable with imprisonment for a term which may extend to two month or with fine which may extend to Rs. 1000 or with both.

43. ***Registers, notices and returns [Sections 61,63, 72, 74, 79,80 and 110]*** -A register of adult workers in the prescribed Form No. 12 and a register of child workers in the prescribed Form No. 14 shall be maintained by the Manager of every factory.

A notice of periods of work for adults and children in the prescribed Forms No. 11 and 13 shall be correctly maintained and displayed in every factory. No adult worker or child shall be required or allowed to work in any factory otherwise than in accordance with their respective notices of period of work displayed in the factory.

The owners, occupiers or Managers of factories shall submit the prescribed periodical returns to the Inspector regularly.

FORM NO. 21

[PRESCRIBED UNDER SUB-RULE (1) OF RULE 99]

Annual Return

For the year ending 31st December,.....

1. Registration Number of Factory.....
2. Name of Factory.....
3. Name of the Occupier.....
4. Name of the Manager.....
5. District... ... ... Sub-Division.....
6. Full postal address of factory .....
7. Nature of Industry.....

Number of workers and particulars of employment

8. Number of days worked in the year. .....
9. Number of mandays worked during the year .....
   (a) Men .....
   (b) Women.....
   (c) Children.....
10. Average number of workers employed daily *(See* Explanatory note)
    (a) Adults (i) Men.....
        (ii) Women.....
    (b) Adolescents
        (i) Male.....
        (ii) Female.....
    (c) Children
        (i) Boys.....
        (ii) Girls.....
11. Total number of man-hours worked including over-time.
    (a) Men ... ...
    (b) Women... ... ...
    (c) Children... ... ...
12. Average number of hours worked per week (See explanatory note)
    (a) Men .....

Substituted vide. notification No.GLR(RC) 43/86/241 dt. : 05-05-1993

    (b) Women.....
    (c) Children.....
13. (a) Does the factory carry out any process or operation declared as dangerous under Section 87 ? *(*See Rule 94)
    (b) If so, give the following information.

Name of the dangerous process or operations carried on	Average number of persons employed daily in each of the processes or operations given in column 1
1	2
(i)	
(ii)	
(iii) *etc.*	

14. Total number of workers employed during the year.
    (a) Men ... ...
    (b) Women... ... ...
    (c) Children... ... ...
15. Number of workers who were entitled to annual leave with wages during the year.
    (a) Men ... ...
    (b) Women ... ...
    (c) Children... ... ...
16. Number of workers who were granted leave during the year.
    (a) Men ... ...
    (b) Women... ... ...
    (c) Children... ... ...
17. (a) Number of workers who were discharged or dismissed from the service or quit employment or were superannuated or who died while in service during the year.... ... ...
    (b) Number of such workers in respect of whom wages in lieu of leave were paid. ... ...

Safety Officer

18. (a) Number of safety Officers required to be appointed as per Notification under Section 40-B.... ....

(b) Number of Safety Officer appointed..... ... .

Ambulance Room

19. Is there an Ambulance Room provided in the factory as required under Section 45 ? ... .

Canteen

20. (a) Is there a Canteen provided in the factory as required under Section 46.

(b) Is the Canteen provided managed/run.

(i) Departmentally, or ... ...

(ii) Through a contractor?... ... ...

Shelters or Rest Room and Lunch Rooms.

21. (a) Are there adequate and suitable Shelters or Rest Rooms provided in factory required under Section 47.... ... ...

Creches

22. Is there a creche provided in the factory as required under Section 48 ?

Welfare Officers

23. (a) Number ofWelfare Officers to be appointed as required under Section49.

(b) Number of Welfare Officers appointed... ... ...

Accidents

24. (a) Total number of accidents

(See Explanatory note)

(i) Fatal. ... ...

(ii) Non-Fatal. ... ...

(b) Accidents in which workers returned to work during the year to which

*The term "Ordinary employed" in Section 48 of the Factories Act, 1948 would mean "total number of persons employed in all shifts. This should be over 50% of the number of working days in the establishment".

this relates :

(i) Accidents (workers injured) occuring during the year in which injured workers returned to work during the same year.

(aa) Number of accidents ... ...

(bb) Mondays lost due to accidents.... ... ...

(ii) Accidents (Workers injured) occuring in the previous year in which injured workers returned to work during the year to which this return relates.

(aa) Number of accidents,... ... ...

(bb) Mandays lost due to accidents.... ... ...

(c) Accidents (workers injured) occurring during the year in which injured workers did not return to work during the year to which this return relates.

(i) Number of accidents.... ... ...

(ii) Mandays lost due to accidents..... ... .

Suggestion Scheme

25. (a) Is a Suggestion Scheme in operation in the factory ... ...

(b) If so, the number of suggestion ... ...

(i) Received during the year... ... .

(ii) Accepted during the year... ... .

(c) Amount awarded in case prizes during the year ....

(i) Total amount awarded ... ...

(ii) Value of the maximum cash prize awarded ... ...

(iii) Value of the minimum cash prize awarded ... ...

Certified that the information furnished above is, to the best of my knowledge and belief, correct.

Signature of the Manager.

Date:

FORM NO. 21-A

[PRESCRIBED UNDER SECTION 22(1) OF THE FACTORIES ACT, 1948]

Register to record the name of specially trained adult male workers

(1) Name of worker

(2) Serial number as in the register of workers under Section 62 of the Act.....

(3) Father's name.....

(4) Age and date of birth .....

(5) Nature of work .....

(6) Qualification, if any or period of service on similar work.....

(7) Remarks .....

I certify that the above-mentioned worker is a properly trained male adult worker who is competent to mount on ship belts of 6 inches or less in width of either laced or flush type belt joints to lubricate or do other adjusting operations on the machinery installed in my factory while they are in motion.

Date ..... Signature of Occupier

FORM NO. 22 (REVISED)

[PRESCRIBED UNDER RULE 99 (3)]

HALF YEARLY RETURN

For the period ending 30th June, 20....

.

Name of Factory :

Name of occupier :

Name of Manager:

1. District..... Sub-Division .....
2. Postal address .....
3. Nature of Industry .....
4. Number of days worked during the half year ending 30th June, 20.....
5. Number of mandays worked during the half year ending 30th June, 20....

Adults.....

Men .....

Women.....

Adolescents .....

Male .....

Female.....

Children.....

Boys.....

Girls.....

6. Average number of workers employed daily

Adults.....

Men .....

Women.....

Adolescents .....

Male .....

Female.....

Children.....

Boys.....

Girls.....

Signature of Occupier Signature of Manager

Date: Date:

The average daily number should be calculated by dividing the aggregate number of attendances on working days by the number of working days during the half year. In reckoning attendances, attendance by temporary as well as permanent employees should be counted and all employees (including apprentices) should be counted and all employees should be included whether they are employed directly or under contractors. Attendance on separate shifts *(e. g.* night and day shifts) should be counted separately. Days on which the factory was closed, for whatever cause, and days on which the manufacturing processes were not carried on should not be treated as working days. However, if more than 50% of workers employed (on the previous days) attend to repair maintenance or other such work on closed days, such days should be treated as working days.

'Partial attendance for less than half a shift of working day should be neglected and attendance of half a shift or more should be treated as full ' attendance.

Certified that the information furnished above is to the best of my knowledge and belief, correct.

Signature of Manager,

Date:.....

FORM NO. 24 :

[PRESCRIBED UNDER RULE 94 (Schedule V)]

Report of Examination and test of dust **extraction system**

1. Description of system :
2. Hood :
   (a) Serial No. of Hood.....
   (b) Contaminant captured.....
   (c) Capture velocities .....
   (at points to be specified) **Design value Actual value**
   (d) Volume exhausted at hood .....
   (e) Hood Static pressure .....
3. Total pressure drop at:
   (a) Joints.....
   (b) Other points of system .....
   (to be specified.)
4. Transport velocity in Duet
   (at points along duets to be specified)
5. Air cleaning Device :
   (a) Type used.....
   (b) Velocity at inlet.....
   (c) Static pressure at inlet.....
   (d) Velocity at outlet.....
   (e) Static pressure at outlet..... .
6. Fan:
   (a) Type used.....
   (b) Volume handled .....
   (c) Static pressure.....
   (d) Pressure drop at outlet of fan .....

7. Fan Motor:

   (a) Type.....

   (b) Speed and horse power .....

8. Particulars of defects, if any, disclosed during test in any of the above components.

I, certify that on this ———— day of ———— the above dust extraction system was thoroughly cleaned and (so far as its construction permits) make accessible for thorough examination. I further certify that on the said date, I thoroughly examined the above dust extraction system including its components and fittings and that the above is a true report of my examination.

Signature.....

Qualification.....

Address.....

Date.....

If employed by a Company or Association, the name and address of the company or association :

FORM NO. 25

[PRESCRIBED UNDER RULE 102]

Muster Roll

Name of Factory..... Place..... District.....

Sl. No.	Name of the worker	Father's name	Nature of work	For the period ending										Remarks
				1	2	3	4	5	6	7	8	9	10	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

FORM NO. 26

[PRESCRIBED UNDER RULE 103]

Register of Accidents and Dangerous Occurrences

Name of injured person (if any)	Date of accident or dangerous occurrence	Date of report (in Form No. 18) to Inspector	Nature of accident or dangerous occurrence	Date of return of injured person to work	Number of days the injured person was absents from work
1	2	3	4	5	6

FORM NO. 27

[PRESCRIBED UNDER SCHEDULE VI TO RULE 94]

Special certificate of fitness

(In respect of persons employed in operations involving use of lead compounds)

Serial No.....

Date.....

I hereby certify that I have personally examined ..... son of..... residing at..... who is desirous of being employed as ..... in the ..... and that his age, as nearly as can be ascertained from my examination is..... years, and that he is, in my opinion fit for employment at work involving the use of lead compounds.

His descriptive marks are :

Left thumb-impression of person examined

Certifying Surgeon

I certify that I examined the person mentioned above on	I extend this certificate until	Signature of Certifying Surgeon	Note of symptoms of lead poisoning (if any)
1	2	3	4

FORM NO. 30

[PRESCRIBED UNDER SUB-RULE (4) OF RULE 61 (B)]

RECORD OF EYE EXAMINATION

Sl. No.	Department/ Works	Name of Worker	Sex	Age (on last birthday)	Occupation		Examination of eye sight		Signature of opthalmologist	Remarks
					Nature	Date of Employment	Date	Result		
1	2	3	4	5	6	7	8	9	10	11

FORM NO. 31
[PRESCRIBED UNDER RULE 92]

.

I hereby require that in the event of my death before resuming work the balance of my pay due for the period of leave with wages not availed of shall be paid to..... who is my.....
and resides at.....
.....

Signature or left hand thumb impression of the worker.

ANNEXURE-I
Prescribed under Rule 2(A)
SCHEDULE

Sl. No.	Section or Rules under which competency is recognised	Qualification required	Experience for the purpose	Facilities at his command
(1)	(2)	(3)	(4)	(5)
1.	Rules made under Section 6 and Section 112 Certificate of stability for buildings	Degree in Civil or Structural Engineering; or equivalent	(i) A minimum of 10 years experience in the design of construction or testing or repairs of structures; (ii) Knowledge of non-destructive testing, various codes of practices that are current and the effect of the vibrations and natural forces on the stability of the building; and (iii) Ability to arrive at a reliable conclusion with regard to the safety of the structure or the building.	

SI. No.	Section or Rules under which competency is recognised	Qualification required	Experience for the purpose	Facilities at his command
(1)	(2)	(3)	(4)	(5)
2.	Rules made under Section 21(2) "Dangerous Machines".	Degree in Electrical or Mechanical or Textile Engineering or equivalent	(i) A minimum of 7 years experience in - (a) Design or Operation or maintenance; examination and inspection of relevant machinery, their guards, safety devices and appliances. (ii) He shall — (a) be conversant with safety services and their proper functioning; (b) be able to identify defects and any other case leading to failures; and (c) have ability to arrive at a reliable conclusion with regard to the proper functioning of safety device and appliance and machine guard,	gauges-for measurment; instruments for measurement of speed and any other equipment or device to determine the safety in the use of the dangerous machines;

SI. No.	Section or Rules under which competency is recognised	Qualification required	Experience for the purpose	Facilities at his command
(1)	(2)	(3)	(4)	(5)
3.	Section 28 Lifts and Hoists	A degree in Electrical and/or Mechanical Engineering or its equivalent	(i) A minimum experience of 7 years in — (a) design or erection or maintenance; or (b) inspection and test procedures; of lifts and hoists; (ii) He shall be — (a) conversant with relevant codes of practices and test procedures that are current; (b) conversant with other statutory requirements covering the safety of the Hoists and Lifts; (c) able to identify defects and arrive at a reliable conclusion with regard to the safety of Hoists and Lifts. .	Facilities for load testing, tensile testing gauges, equipment gadgets for measurement and any other equipment required for determining the safe working conditions of Hoists and Lifts.

SI. No.	Section or Rules under which competency is recognised	Qualification required	Experience for the purpose	Facilities at his command
(1)	(2)	(3)	(4)	(5)
4.	Section 29 Lifting Machinary and Lifting Tackles	Degree in Mechanical or Electrical or Metallurgical Engineering or its equivalent	(i) A minimum experience of 7 years in — (a) design or erection or maintenance, or (b) testing, examination and inspection, of lifting machinery, chains, ropes and lifting tackles. (ii) He shall be — (a) conversent with the relevant codes of practies and test procedures that are current; (b) conversant with fracture mechanics and metallurgy of the material of construction; (c) conversant with heat treatment/stress relieving techniques as applicable to stress bearing components and parts of lifting machinery and lifting tackles;	Facilities for load testing, tensile testing, heat treatment, equipment/gadget for measurement, gauge and such other equipment for deermining safe working conditions of the lifting machinery tackles.

SI. No.	Section or Rules under which competency is recognised	Qualification required	Experience for the purpose	Facilities at his command
(1)	(2)	(3)	(4)	(5)
5.	Section 31 'Pressure plant'	Degree in Chemical or Electrical or Metallurgical orMechanical Engineering or its equivalent	(d) capable of identifying defects and arriving at a reliable conclusion with regard to the safety of lifting machinery chains, ropes and lifting tackles. (i) A minimum experience of 10 years in — (a) design or erection or maintenance, or (b) testing examination and inspection of pressure plants. (ii) He shall be — (a) conversant with the relevant codes of practices and test procedures relating to pressure vessels; (b) conversant with statutory requirements concerning the safety of unfired pressure vessels and equipment operating under pressure;	Facilities for carrying out hydraulic test, non-destructive test, guages equipment/ gadget for measurement and any other equipment or guages to determine the safety in the use of pressure vessels.

SI. No.	Section or Rules under which competency is recognised	Qualification required	Experience for the purpose	Facilities at his command
(1)	(2)	(3)	(4)	(5)
			(c) conversant with non-destructive testing techniques as are applicable to pressure vessels; (d) able to identify defects and arrive at a reliable conclusion with regard to the safety of pressure plants.	
6.	(i) Section 36 precautions against dangerous fumes. (ii) Rules made under Sections 41 & 112 concerning ship building and ship repairs	Master's degree in Chemistry, or a degree in Chemical Engineering	(i) A minimum of 7 years in collection and analysis of environmental samples and calibration of monitoring equipment; (ii) He shall — (a) be conversant with the hazardous properties of chemicals and their permisible limit values;	Meters, instruments and devices duly calibrated and certified for carrying out the tests and certification of safety in working in confined spaces.

SI. No.	Section or Rules under which competency is recognised	Qualification required	Experience for the purpose	Facilities at his command
(1)	(2)	(3)	(4)	(5)
			(b) be conversant with the current techniques of sampling and analysis of the environmental contaminants, and (c) be able to arrive at a reliable conclusion as regards to the safety in respect of entering and carrying out hot work.	
7.	Ventilation systems as required under various Schedules framed under Section 87, such as Schedules on (i) Grinding or glazing of metals and processes incidental thereto, (ii) Cleaning or smoothing, roughening, etc. of articles, by a jet sand, metal short, or grit, or other abrasive propelled	Degree in Mechanical or Electrical Engineering or equivalent,	(i) A minimum of 7 years in the desining, fabrication, installation, testing of ventilation system and systems used for extraction and collection of dusts, fumes and vapours and other ancillary equipment. (ii) He shall be conversant with relevant codes of practice and tests procedures that are current in respect of ventilation	Facilities for testing the ventilation system, instruments and guages for testing the effectiveness of the extraction systems for dusts vapours and fume, and any other equipmente or gadget for determining the efficency and adequacy to the system.

Sl. No.	Section or Rules under which competency is recognised	Qualification required	Experience for the purpose	Facilities at his command
(1)	(2)	(3)	(4)	(5)
	by a blast of compressed air of steam, (iii) Handling and processing of asbestos, (iv) Manufacture of Rayon by viscose process, (v) Foundry operations		and extraction system for fumes, and shall be able to arrive at a reliable conclusion with regard to effectivenes of the system.	He shall have the assistance of a suitable qualified technical person who can come to a reasonable conclusion as to the adequacy to the system.

ANNEXURE II

Form of Application for grant of Certificate of Competency to a person under Sub-Rule (I) Rule 2A.

1. Name
2. Date of Birth
3; Name of the Organisation (if not self-employed).
4. Designation.
5. Educational Qualification (copies of testimonials to be attached).
6. Details of professional experience (in chronological order) :

Name of the Period	Designation	Area of Responsibilities	Organisation	Service.

7. Membership, if any, of professional bodies.
8. (i) Details of facilities (examination, testing, etc.) at his disposal.
   (ii) Arrangements for calibrating and maintaining the accurency of these facilities,
9. Purpose for which competency certificate so sought (section or sections of the Act should be stated).
10. Whether the applicant has been declared as a competent person under any statute (If so, the details).
11. Any other relevant information.
12. Declaration by the applicant.

I.....hereby declare that the information furnished above is true. I undertake.

(a) that in event of any change in facilities at my disposal (either addition or deletion) or my leaving the aforesaid organisation, I will promptly inform the Chief Inspector;

(b) to maintain the facilities in good working order, calibrated periodically as per manufacturer instructions or as per National Standards; and

(c) to fulfil and abide by all the conditions stipulated in the certificate of competency and instruction issued by the Chief Inspector form time to time.

Place & Date

Signature of the applicant

Declaration by the Institution (if employed)

1.....certify that Shri.....

..... Whose details are furnished above, is in our employment and nominate him on behalf of the organisation for the purposes of being declared as a competent person under the Act. I also undertake that I will —

(a) notify the Chief Inspector in case the competent person leaves our employment;

(b) provide and maintain in good order all facilities at his disposal as mentioned above;

(c) notify the Chief Inspector any change in the facilities (either addition or deletion).

Date.....

Signature.....

Designation.....

Telephone No. .....

Official Seal.

ANNEXURE III

Prescribed under Rule 2(A)

Form of Application for grant of Certificate of Competency to an Institution under Sub-Rule (2) of Rule 2A.

1. Name and full address of the Organisation
2. Organisation's status
   (Specify whether Government, Autonomous, Co-operative, Corporate or Private)
3. Purpose for which Competency Certificate is sought (Specify Section (s) of the Act).
4. Whether the Organisation has been declared as a competent person under this or any other statute.

If so, give details.

5. Particulars of persons employed and possessing qualification and experience as set out in Scheduled annexed to sub-rule (1) of Rule 2A.

Sl. No.	Name and Desiganation	Qualification & Experiemce	Section (s) and the Rule under which competency is sought for
1.			
2.			

6. Details of facilities (relevant to item 3 above) and arrangements made for their maintenance and periodic calibration.

7. Any other relevant information.

8. Declaration.

I.....hereby, on behalf of.....

.....certify the details furnished above are correct to the best of my knowledge. I undertake to —

(i) maintain the facilities in good working order, calibrated periodicaly as per manufacturer instruction or as per National Standards; and

(ii) to fulfil and abide by the conditions stipulated in the certificate of competency and instructions issued by Chief Inspector from time to time.

Place & Date

Signature of Head of the Institution or of the Persons authorised to sign on his behalf.
Designation.

ANNEXURE IV

Form of Certificate of Competency issued to a person or an institution in pursuance to Rule 2A made under Section 2 (ca) read with section

I,.....in exercise of the powers conferred on the under Section 2 (ca) of the Factories Act and the rules made theereunder, hereby recognise.....

(Name of the institution)
or Shri.....employedin.....
(Name of the person) (Name of the organisation) to be a competent person for the purpose of carrying out tests, examinations, inspections and certification for such buildings, dangerous machinery lifts and hoists, lifting machine and lifting takles, pressure plants confined space ventilation system and process or plant and equipment as the case may be used in a factory located in.....
under Section .....and the Rules made thereunder +

Strike out the words not applicable.

This certificate is valid from ..... to .....

This certificate is issued subject to the conditions stipulated hereunder —

(i) Tests, examinations and inspections shall be carried out in accordance with the provisions of the Act and the Rules made thereunder.

(ii) Tests, examinations and inspection shall be carried out under direct supervison of the competent person or by a person so authorised by an institution recognised to be a competent person.

(iii) The certificate of competency issued in favour of a person shall stand cancelled if the person leaves the organisation mentioned in his application.

(iv) The institution recognised as a competent person shall keep the Chief Inspector informed of the name, designation and qualification of the persons authorised by it to carry out tests, examinations and inspections.

(v) .....

(vi) .....

Station Office Seal Signature of the Chief Inspector

Date

Countersigned by Secy, to
the Govt. of Assam, Labour and Employment Deptt.

Note — A separate certificate should be issued under each relevant section. A person or an institution may be recognised competent for the purpose of more than one section of the Act"]