Delhi Factories Rules, 1950

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Notification.- No. F. 9 (13)/48-Dev-In exercise of the powers conferred by Section 112 of the Factories Act, 1948, (LXIII of 1948), read with the Government of India, Ministry of Labour Notification No, Fac. 41 (38), dated the 11th January, 1948, the Chief Commissioner of Delhi is pleased to make the following rules, the same having been previously published with his notification No. F. 9(13) / 48-P. & D., dated the 19th March, 1949.

1. Short Title, Extent And Commencement :-

(1) These Rules may be cited as the Delhi Factories Rules, 1950.
(2) These Rules shall extend to the whole of the Delhi Province.
(3) These Rules, except Rules 29 to 33,53,62, 65 to 71 and 95 shall come into force on 15th August, 1950 and Rules 29 to 33, 53, 62,65 to 71 and 95 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 steams or water vapour into the atmosphere ere directly due to a manufacturing process :
Provided that the introduction of air directly from outside through mist end mats or screens placed in openings at times 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 Faherenheit scale.
(f) "District Magistrate" includes such other official as maybe appointed by the Chief Commissioner 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 Chief Commissioner in that behalf.
(i) "Hygrometer" means an accurate wet and dry bulb hygrometer conforming to the prescribed conditions as regards constructions and maintenance.

(j) "Inspector" means an officer appointed under Section 3 of the Act and includes "Chief Inspector".
(k) "Maintained" means maintained in an efficient state, in efficient working order and in good repair.
(1) "Manager" means the person responsible to the occupier for the working of the factory for the purposes of the Act.

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 purposes of carrying out tests, examinations, inspections and certification for such buildings, dangerous, machinery, hoists and lifts, lifting machines and lifting tackles, pressure plants, confined space, ventilation system and such other process or plant 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 annexed to this Rule:
Provided that the Chief Inspector may relax the requirements of qualifications in respect of a Competent Person if such a person is exceptionally experienced and knowledgeable, but not the requirements in respect of facilities at his command :
Provided further that where it is proposed to recognise 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 powers 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.
(2) The Chief Inspector may recognise an institution of repute, having person possessing qualifications and experience 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 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 application, 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.

(4) The Chief Inspector may, after giving an opportunity to the competent person of being heard, revoke the certificate of competency

(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 intent or the purpose of this Act or the Rules made thereunder; or has omitted to act as required under the Act and the Rules made thereunder; or

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

Explanation: For the purpose of this Rule, an institution included a organisation.

(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 outside the states.

Form of Application for grant of Certificate of Competency to a person under sub-rule (1) of 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 professionals experience

(in chronological order)

Name of the Organisation Period of Service Designation Area of Responsibility

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 accuracy of these facilities.
9. Purpose for which competency certificate is 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 the event of any change in the 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 manufacturers instructions or as per National standards; and
(c) to fulfil and abide by all the conditions stipulated in the certificate of competency and instructions issued by the Chief Inspector from time to time.
Place:
Date:
Signature of applicant
Declaration by the Institution (if employed)
I..... 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 the disposal as mentioned above;
(c) notify the Chief Inspector any change in the facilities (either addition or deletion).
Signature
Designation
Telephone No: Date .....
Official
seal
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. Orgainsations status (specify whether Government, Autonomous, Cooperative, 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 Schedule, annexed to sub-rule (1) of Rule 2A.
xxx
6. Details of facilities (relevant to item 3 above) and arrangements made for their maintenance and period i.e. 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 periodically as per manufacturers instructions as per National Standards; an
(ii) to fulfil and abide by all the conditions stipulated in the certificate of competency and instructions issued by the Chief Inspector from time to time.
Place &
Date Signature of Head of the
Institutions or of the
persons authorised to sign
on his behalf
Designation.
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 me under section 2(ca) of the Factories Act and the rules made thereunder, hereby recognize ..... (Name of the institution) of Shri .....employed in (Name of the person) .....(Name of the Organisation) to be a competent person for the purpose of carrying out tests, examinations, inspections and certificate for such buildings, dangerous machinery, lifts and hoists, lifting machines and lifting

tackles, 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-

T h i s 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 inspections shall be carried out under direct supervision 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 names, designations and qualifications of the persons authorised by it to carry out tests, examinations and inspections.

(v) .....

(vi) .....

Station Official seal Signature of the Chief Inspector

Date

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. Strike out the words not applicable.

SCHEDULE

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3. The Lt. Governor 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 scale showing:-

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

(ii) the plan, elevation and necessary cross-sections 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 passageways; and
(iii) such other particulars as the State Government or the Chief Inspector, as the case may be, any required.

3A. Approval Of Site And Plan :-
(1) No site shall be used for the location of a factory or no building in a factory should be constructed, reconstructed, extended or taken into use as a factory or part of a factory unless previous permission in writing is obtained from the Administrator or the Chief Inspector of Factories.
Applications for such permission shall be in Form No.1 and 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-sections of the various buildings, indicating all relevant details relating to natural lighting, ventilation and means of escape in case on fire. The plans shall also clearly indicate the plant and machinery, aisles and passage ways; and
(c) Such other particulars as the Chief Inspector may require.
(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 such approve to be given.

4. Application For Registration And Grant Of License :-

The Occupier of every factory shall submit to the Chief Inspector of Factories an application in triplicate in the prescribed form No.2 for the registration of the factory and grant of a license.

5. Grant Of Licence :-

(1) A licence for a factory shall be granted by the Chief Inspector of Factories or any other officer appointed under sub-section (2-A) of section 8 of the Act and specially empowered in this behalf by the

State Government, in Form No.4 prescribed for the purpose, for a period of one year or five years, as may be requested in the application for registration and grant of licence and on payment of the fees specified in sub-rule (2).
(2) The fees for grant of licence for one year shall be as specified in the Schedule hereto. In case an application for licence has been made for a period of five years, the licence fees shall be five times the fees payable for grant of a licence for one year, as specified in the said Schedule.
(3) A licence granted under this rule may, at the request of license, be renewed for one year or five years in accordance with the provisions of rule 7.
(4) Every licence as granted or renewed, shall remain in force upto 31st December of the year for or upto which it is renewed.
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6. Amendment Of Licence :-

(1) A licence granted under rule 4 may amended by the Chief Inspector of Factories or any other officer appointed under sub-section (2-A) of section 8 of the Act and specially empowered in this behalf by the State Government.
(2) No licence shall-
(i) Change the name of his factory; or
(ii) employ persons in excess of the number stated in the licence; or
(iii) use motive power in excess of the limits of horse power specified in the licence; without getting his licence amended.
(3) A licensee who desires to have his licence amended shall submit it to the Chief Inspector or any other officer appointed under sub-section (2.- A) of Section 8 of the Act and specially empowered in this behalf, with an application stating the nature of the amendment and reasons therefor.
(4) The fee for the amendment of a licence shall be twenty five 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 of Factories or any other officer appointed under sub-section (2-A) of section 8 of

the Act and specially empowered in this behalf by the State Government.

(2) Every application for the renewal of a licence shall be made in triplicate, in Form No.2 together with the payment of fees for a period of one year or five years as the case may be, and shall be submitted not less than 30 days before the date on which the licence expires. If the application, complete in all respects, is so made, the premises shall be held to be duly licensed until such date as the Chief Inspector of the Factories or as the case may be, the Officer appointed under sub-section (2-A) of section 8 of the Act and specially empowered in this behalf by the State Government, renews the licence.

(3) The fees for the renewal of licence for one year shall be the same as for the grant thereof. In case an application for renewal has been made for a period of five years, the renewal fees shall be five times the fees payable for renewal of licence for one year, as specified in the Schedule appended below rule 5.

Provided that if the application for renewal, duly completed in all respects, is not received within the time specified in sub-rule (2) of this rule, the licence shall be renewed only on payment of a fee twenty five percent in excess of the fees ordinarily payable for the renewal of a licence for the year or years for which the application has been received late.

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 of Factories or any other officer appointed under sub-section (2-A) of section 8 of the Act and specially empowered in this behalf by the State Government 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 twenty five rupees shall be charged on each such application.

9. Procedure On Death Or Disability Of Licencee :-

lf a licencee dies or becomes insolvent the person carrying on the business of such licence shall not be liable to any penalty under the Act for exercising the powers granted to the licencee by the licence

during such time as may reasonably be required to allow him to make an application for the amendment of the licence under Rule 6 in his own name for the unexpired portion of the original licence.

10. Loss Of Licence :-

Where a licence granted under the Rules is lost or accidentally destroyed, a duplicate may be granted on payment of a fee of rupees twenty five.

11. Payment Of Fees :-

(1) Every application under the Rules shall be accompanied by a treasury receipt showing that the appropriate fees has been paid into the authorised branch of the State Bank of India under the head of account, affixed by the office of the Chief Inspector of Factories.
(2) If an application for the grant, renewal or amendment of a licence is rejected, the fee paid shall be refunded to the applicant.

11A. Prohibiting Running Of A Factory Without A Valid Licence :-
An occupier shall not use any premises as a factory or carryon any manufacturing process in a factory unless a licence has been issued in respect of such premises and is in force for the time being :
Provided that if a valid application for grant of licence has been submitted and the required fees has been paid, the premises shall be deemed to be fully licensed until such date as the Chief Inspector of Factories or as the case may be, any other officer appointed under sub-section (2-A) of section 8 of the Factories Act, and specially empowered in this behalf by the State Government, grants or renews the licence or refuses in writing with reasons, to grant or renew licence.
Provided further that if the Chief Inspector of Factories or as the case may be, any other officer appointed under sub-section (2-A) of section 8 of the Act and specially empowered in this behalf, by the State Government fails to grant or renew the licence or fails to refuse to do so, for reasons to be communicated in writing to the applicant, within 60 days from the date of the application, licence shall be deemed to have been granted or renewed.

12. Notice Of Occupation :-

The notice of occupation shall be in Form No 2. Under sub-section (4) of Section 7

12A. Notice Of Change Of Manager :-
The notice of change of Manager shall be in Form No.3.

12B. Guidelines Instructions And Records :-
(i) Without prejudices to he general responsibility of the occupier to comply with the provisions of sect on 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.
(ii) The occupier shall maintain such records, as may be prescribed by the Chief Inspector, in respect of monitoring of working environment in the factory.

13. Power Of Inspectors :-

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 a 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 Magistrates and such other public officers as are appointed to be additional inspectors shall be limited to the inspection of factories in respect of the following matters, namely:-
Cleanliness {Section 11), Over-crowding {Section 16), Lighting {Section 17), Drinking water {Section 18), Latrines & 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 the proviso to Section 62), Employment of young persons, (Chapter

VIII), Leave with wages {Chapter VIII) andDisplay of notices {Section 108).

13A. Qualification Of An Inspector :-
No person shall be appointed as an Inspector for the Act unless he possesses the following qualifications-
{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 upto the Intermediate standard of a recognised University.
{ii) Secured a degree, or diploma equivalent to a degree of a recognised university, in any branch of Engineering, Technology of 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 2 years in a public hospital or factory medical Department or alternately a diploma in Industrial medicine.
(c) Where for a particular post special knowledge, "the deal with special problems is required the Chief Commissioner, may, in addition to the basic qualifications prescribe appropriate qualifications for such a post."
Provided that in the case of a person who has been working as Inspector under the Act at the time of commencement of these rules, the Chief Commissioner may, subject to such conditions as he may specify, exempt such persons from the provisions of this rule.
Provided further that the provisions of this rule relating to qualifications shall not apply in the case of a person who is already appointed as Inspector of Factories on regular basis, in accordance with the provisions of the Recruitment Rules framed under Article 309 of the Constitution.

14. Duties Of Certifying Surgeon :-

(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 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.
(2) The Certifying Surgeon shall issue his certificates in Form No.4. The foil and counter-foil 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 entries, made therein and of the fitness of the person examined he shall sign the foil and initial the counter-foil 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 2 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 examinations 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 purposes 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.

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 vaccum-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 rooms, rest rooms and wash-places; and
(iv) to such parts of walls, sides and tops of passages and stair cases 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.
Bricks and title works in which unglazed bricks 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 ceiling consist of galvanised iron, glazed bricks, glass, slate, asbestos, bamboo, thatch.
Parts in which dense steam is continuously evolved in the process.
Parts in which pitch, tar or like material is manufactured or is used to substantial extent, except in brush works. The parts of a glass factory known the glass house. Rooms in which graphite is manufactured or is used to 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 cement works, bleach works or dye works with the exception of finishing rooms or ware-houses.
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.
Electrical generating or transforming stations.
Engineering works.
Factories in which sugar is refined or manufactured.
Foundaries other than foundaries in which brass casting is carried on.
Gun factories.
Shipbuilding works.
Those parts of factories where unpainted or unvarnished wood manufactured

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 Register maintained in Form No.7.

17. Disposal Of Trade Wastes And Effluents :-

The arrangements made in every factory for the treatment of wastes and effluents due to the manufacturing processes carried on

therein shall be in accordance with those approved by the relevant Water and Air Pollution Boards, appointed under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 and other local authority concerned.

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 bulb readings indicated consecutively in the Schedule when the 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-
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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 position as are approved by the Inspector.
The number of hygrometers shall be regulated according to the following scale:-
(a) Weaving departments.- One hygrometer for departments with 500 looms, and one additional Hygrometer for every 500 or part of 50 looms in excess of 500.
(b) Other departments.- One Hygrometer for each room of less than 300.00 cubic feet capacity and one extra hygrometer for each 200.00 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 of 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 logible 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 temperature shall be recorded thrice daily during each working day by competent person 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 of similar construction and equal in dimensions, scale and divisions of scale. They shall be mounted on a farm 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 upto 120 degrees shall be clearly marked by horizontal lines on the stems. 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 markings 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 times during the period of employment in efficient working order, so as to give accurate indications and in particular :-
(a) the wick and the muslin covering of the wet bulb shall be renewed once a week;
(b) the reservoir shall be fitted with water which 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 afresh certificate obtained which certificate shall be kept attached to the Humidity Register.

26. Hygometer 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 of thermometer steam or in the direct draughts from a 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 reservoir.

28. How To Introduce Steam For Humidifications :-

In any room in which steam pipes are 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 August, 1950 the diameter shall not exceed one inch;
(b) Such pipes shall be short as it reasonably practicable;
(c) All hangers supporting such pipes shall be separated from the be pipes by an efficient insulator not less than half an inch thickness
(d) No uncovered jet from such pipe shall project more than 4-1/2 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.

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 requirements.
(2) Rules 29 to 33 shall come into force, in respect of any class or description of factories, on such dates as the Chief Commissioner may, by notification in the Official gazette, appoint in this behalf.

30. Lighting Of Interior Parts :-

(1) The general illumination over these interior parts of a factory where persons are regularly employed shall be not less than 6 feet candles measured in 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 not be 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°.
(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 a single operative or small group of operatives working near other, shall be provided with a suitable shade of opaque material to prevent glare or with other effective means by which the light source is completely creened from the eyes of every person employed at the normal working place, or shall be so placed that 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 workroom or process that any requirement of Rules 29 to 31 is inappropriate or is not reasonably practicable, he may order in writing exempt that factory or part thereof, or description of workroom or process from such requirement to such extent and subject to such conditions 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 parts of factories respectively specified in Part II of the said Schedule.
SCHEDULE
PART I
Part of factories in which light sensitive photographic materials are made or used in an exposed condition.
PART II
Cement Works.
Works for the crushing and grinding of limestone.
Gas works.
Coke oven works.
Electrical stations.
Flour mills.
Melting 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 annealing of metals.
Glass blowing and other working in molten glass.

Tar distilling
Petroleum refining and blending.

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 workings hours.

35. Source Of Supply :-

The water provided for drinking shall be supplied :-
(a) from a public water supply system, or
(b) from any other source approved in writing by the Health Office.

36. Means Of Supply :-

If drinking water is not supplied directly from taps either connected with public water supply system or any other water supply system of the factory approved by the Health-Officer, it shall be kept in suitable vessels receptacles or tanks fitted with taps and having dust proof covers placed on raised stands or platforms in shade and haring suitable arrangement of drainage to carry away the split water. Such vessels or receptacles and tanks shall be kept clean and the water renewed at least once every day. All practicable measures shall be taken to ensure that the water is free from contamination.

37. Cleanliness Of Well To Reservoir :-

(1) Drinking water shall no be supplied from any open well or reservoir 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 supplied from such well or reservoir the water in it shall be sterilised once a week or more frequently if the Inspector by written order so requires, and the date, on which sterilising is carried out shall be recorded.
Provided that his requirement shall not apply to any such well or reservoir if the 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 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 16th of April to the 30th 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 the 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 anyone them 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 upto the first 500 and one for every 500 persons thereafter;
(e) every water centre shall be maintained in a clean and orderly condition;
(f) every water centre shall be incharge of a suitable person who shall distribute the water. Such person shall be provided with clean clothes 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.

40. Latrine Accommodation :-

Latrine accommodation shall be provided in every factory on the following scale :-
(a) where females are employed there shall be least one latrine for every 25 females;
(b) where males are emp loyed, there shall be at leas t one latrine for every 25 males;
Provided that where the number of males employed exceeds 100, it shall be sufficient if there is one latrine for every 25 males upto the first l00 and one for every 50 thereafter.
In calculating the number of latrines required under this Rule, any odd number of workers less than 25 to 50, as the case may be, shall be reckoned a 25 or 50.

41. Latrines To Confirm 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 of 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 ever 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 upto the first 500 employed, and one for every l00 thereafter.
In calculating the urinal accommodation required under the Rule may odd number of workers less than 50 or 800, 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 municipality, all latrines and urinals of a factory situated in such locality shall, if the factory is situated within l00 feet o an existing sewer, be connected that with sewerage system.

47. White-Washing, Colour-Washing Of Latrines And Urinals :-

The walls, ceiling and partitions of every latrine and urinal shall be white-washed or colour-washed and the white-washing or colour-washing shall be repeated at least once in every period of four months. The dates on which the white-washing or colour-washing is carried out shall be entered in the prescribed Register (Form No.7).
Provided that this Rule shall not apply to latrines and urinals the walls, ceilings or portions of which are laid glazed tiles or otherwise finished to provide 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 mosonry 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 dedorized and rendered innocuous and then disposed of 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.

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 galvanized 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, clean sand, and covered with a layer of Bleaching powder;
(c) any other type approved by the Chief Inspector.

52. Cleaning Of Spittoons :-

The spittoon 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 scrapping out the top layer of sand as often as necessary or at least once every day.

53. Further Safety Precautions :-

(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 Chief Commissioner may, by notification in the official gazette, appoint in this behalf.

53A. Register Prescribed Under Section 22 (1) :- The Register for recording the names of specially trained adult male workers shall be in Form No.28.

54. Rules Framed Under Section 28 :-

Employment of young persons on dangerous machines.- The following machines shall be deemed to be such dangerous character that young persons shall not work at them unless the provisions of Section 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.

55. Hoists & Lifts :-

(l) A register shall be maintained to record particulars of examination of hoists or lifts and shall give particulars as shown in Form. No. 7B.
(II) Exemption of certain hoists and lifts. In pursuance of the provisions of sub-section (4) of section 28 in respect of any class or description of hoist or lift specified in the second column of the said schedule, and set opposite to than class or description hoists or lift shall not apply.

SCHEDULE 42

Class or description of hoist or lift	Requirement which shall not apply
I	II
Hoists or lifts mainly used for raising materials for charging blast furnaces or lime kilns.	Sub-Section I (b) in so far as it requires agate at the bottom landing; sub-section I (d);
Hoists not connected with mechanical power and which are not used for carrying persons.	sub-section I (e), Sub-section I (b) in so far as it requires the hoist way of 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 I (e).

55A. Rules Framed Under Sub-Section (2) Of Section 29 :-
(1) No lifting machine and no chain, rope or lifting tackle, except 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 having 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 raising or lowering of the jib, shall have attached thereto either on automatic indicator of 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 radil of the load.

(b) A table showing the safe working loads of every kind and size of chain, rope or lifting tackle in use, and, in the case of a multiple sling, the safe working load 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 promises, and no chain, rope or lifting tackle not shown in the table shall be used. The foregoing provisions of this clause shall not apply in respect of any lifting tackle if the safe working load there working load at different angles of the legs is plainly marked upon its.

(3) Particulars of register to be maintained under clause (a) (iii) of sub-sec ion (1) of section 29 of the Act shall be :

(i) Name of occupier of factory.

(ii) Address of the factory.

(iii) Distinguishing number of 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-rules (1) and (7) together with the name and address of the person when 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 treatment of the chain other lifting tackle made under sub-rule (5) and by it was carried out.

(viii) Particulars of any defects effecting the safe working load found at any such thorough examination or after annealing and 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 or 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 the Chief Inspector be effectively annealed under the supervision of a competent person at the following intervals:-

(i) All chains, sling rings hooks, shackles aI1d swivels used in connection with molten metals or molten slage 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 frequent use shall, subject to the Chief Inspectors approval, be annealed only when necessary. Particular of such annealing shall be entered in a register prescribed under Rule 3.

(6) Nothing in sub-rule 5 shall apply to the following clauses of chains and lifting tackles :

(i) Chains made of malleable cast iron.

(ii) Plate link chains.

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

(iv) Pitched chains working on sprocket or pecketed wheel.

(v) Rings, hooks, shackles and swivels permanently attached to pitched chains, pully blocks or weighing machines.

(vi) Hooks, and swivels having screw threaded parts or ball bearing or other case hardened parts.

(vii) Socket shackles secured to wire ropes by white metal capping.

(viii) Boardean connections. Such chains and lifting tackle shall be thoroughly examined by a competent person once at least in every twelve months, and particulars entered in the register kept in accordance with 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 the 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 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 otherwise or to give signals to driver.

<u>56.</u> Pressure Plant :-

(1) Every plant of machinery other than the working cylinders of prime movers used in a factory, and operated at a pressure greater than atmospheric pressure, shall be :-

(a) of good construction, sound material, adequate strength, and free from any patent defect;

(b) properly maintained in a safe condition;

(c) fitted with :-

(i) a suitable valve or other effective device to ensure that the maximum permissible working pressure of the vessel shall not be exceeded;

(ii) a suitable pressure gauge easily visible and designed to show, at all times, the correct interval pressure in lbs, per square inch, and marked with a prominent red mark at the safe working pressure of the vessels;

(iii) a suitable stop valve or valves by which the vessel may be isolated from other vessels or source of supply of pressure;

(iv) a suitable drain cock or valve at the lowest part of the vessel for the discharge of connected liquid. (d) thoroughly examined by a competent person :-

(i) externally, once in every period of six months, to ensure general condition of the vessel and the working its fittings;

(ii) internally, once in every period of twelve months to ensure condition walls, seams, and ties, both inside and outside the vessel, soundness of the parts of the vessel, and the effects of correction. If by reason of construction of the vessel, a thorough internal examination is not possible, this examination may be replaced by a hydraulic test which shall be carried out once. every two years.

Provided that the vessels in continuous processes which cannot be frequently opened, the period of internal examination may be extended to four years; and

(iii) hydraulically tested at interval or not more than four year provided that in respect of pressure vessels with thin wall such as sizing cylinders made of copper or any other non ferrous metal periodic hydraulic test may be dispensed with on the condition that the requirements laid down in clause (2) are fulfilled.

Provided that it shall be sufficient for the purposes of clauses (e) if the safety valve, pressure gauge and stop valve are mounted on a pipe line immediately adjacent to the vessel & where there is a range of two or more similar vessels in a plant served by the same pressure lead, only one set of such mountings need be fitted provided they cannot be isolated.

(2) (a) In respect of pressure vessels of thin wall such as sizing

cylinder made of copper or any other non-ferrous metal the safe working pressure shall be reduced at the rate of 5 per cent of the original working pressure for every year of its use after the first five years and no such cylinder shall be continued to be used for more than twenty years after it was first taken into use.

(b) If no information as the date of construction thickness of walls and safe working pressure is available, the age of the sizing cylinder shall be determined by the competent person in consultation with the Chief Inspector from any other particulars available with the manager.

(c) Every new and second hand cylinder of thin walls to which repairs, which may affect its safety, have been carried out, shall be tested before use to at least one and a half times its working pressure.

(3) Every vessel other than part of a prime mover operated at a pressure greater than atmospheric pressure, and not so constructed as to withstand with safety the maximum permissible working pressure at the sources of supply, or the maximum pressure which can be obtained in the pipe connecting the vessel with any other source of supply shall be fitted with a suitable reducing valve or other suitable automatic device to prevent the safe working pressure of the vessel being exceeded.

(4) In cases owing to the nature of the process or the action of the contents of the vessel, a pressure gauge or safety valve or both cannot work reliable a tested and reliable working thermometer, with a sufficient large scale, on which shall be clearly marked the maximum permissible temperature in the vessel or pyrometers or rupture discs in addition to the pressure gauge and safety valve may be fitted as may be directed by the Chief Inspector.

(5) If during thorough examination, doubt arises as to the ability of vessels to work safety until the next examination provided for in these rules then the competent person shall enter in the register prescribed a reasoned statement, to authorise the vessel for further work subject to a lowering of pressure or to more frequent inspection or subject to both of these requirements.

(6) No vessel which has undergone alterations or repairs shall be taken into use unless it is thoroughly examined by a competent person.

(7) A report of the result of every examination made shall be completed in the prescribed Form No.8 and signed by the person making the examination, and shall be kept available for perusal by an Inspector at any time while the vessel is in service.

(8) No vessel which has previously been used shall be taken into use in any factory for the first time in the factory until it has been examined and reported in accordance with these rules and no new vessel shall be taken into use unless there has been obtained from the maker of the vessel, or from a competent person, a certificate specifying the maximum permissible working pressure thereof, and stating the nature of the tests to which the vessel and its fittings (if any) have been subjected, and the certificate is kept available for perusal by an Inspector and the vessel is so marked as to enable it to be identified, the vessel to which the certificate relates.
(9) Where the report of any examination under this Rule specifies conditions for securing the safe working of vessel, shall not be used except in accordance with these conditions.
(10) The competent person making the 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 were the maximum permissible working pressure is reduced, or the examination shows that the part cannot continue to be used with safety unless certain repairs and carried out immediately or within a specified time.
(11) The requirements of this rule shall be in addition to and not in derogation the requirements of any other Act, rules or regulations.
(12) Nothing in this rule shall apply to :-
(a) any vessels which comes within the scope of the Indian Boiler Act.
(b) metal bottles of cylinders used for the storage or transport of compressed gases or liquified or dissolved gases under pressure.
(13) The Chief Inspector may exempt, subject to such conditions as may be considered necessary, all or any of the pressure vessels from all or any of the provisions of this rule if he has reason to believe that the construction or use of those vessels is such that the provisions of relating to inspection are not necessary or it is not practicable to comply with them.

Pressure Plant
(1) Every plant of machinery other than the working cylinders of prime movers used in a factory, and operated at a pressure greater than atmospheric pressure, shall be :-
(a) of good construction, sound material, adequate strength, and free from any patent defect;
(b) properly maintained in a safe condition;
(c) fitted with :-

(i) a suitable valve or other effective device to ensure that the maximum permissible working pressure of the vessel shall not be exceeded;
(ii) a suitable pressure gauge easily visible and designed to show, at all times, the correct interval pressure in lbs, per square inch, and marked with a prominent red mark at the safe working pressure of the vessels;
(iii) a suitable stop valve or valves by which the vessel may be isolated from other vessels or source of supply of pressure;
(iv) a suitable drain cock or valve at the lowest part of the vessel for the discharge of connected liquid. (d) thoroughly examined by a competent person :-
(i) externally, once in every period of six months, to ensure general condition of the vessel and the working its fittings;
(ii) internally, once in every period of twelve months to ensure condition walls, seams, and ties, both inside and outside the vessel, soundness of the parts of the vessel, and the effects of correction. If by reason of construction of the vessel, a thorough internal examination is not possible, this examination may be replaced by a hydraulic test which shall be carried out once. every two years.
Provided that the vessels in continuous processes which cannot be frequently opened, the period of internal examination may be extended to four years; and
(iii) hydraulically tested at interval or not more than four year provided that in respect of pressure vessels with thin wall such as sizing cylinders made of copper or any other non ferrous metal periodic hydraulic test may be dispensed with on the condition that the requirements laid down in clause (2) are fulfilled.
Provided that it shall be sufficient for the purposes of clauses (e) if the safety valve, pressure gauge and stop valve are mounted on a pipe line immediately adjacent to the vessel & where there is a range of two or more similar vessels in a plant served by the same pressure lead, only one set of such mountings need be fitted provided they cannot be isolated.
(2) (a) In respect of pressure vessels of thin wall such as sizing cylinder made of copper or any other non-ferrous metal the safe working pressure shall be reduced at the rate of 5 per cent of the original working pressure for every year of its use after the first five years and no such cylinder shall be continued to be used for more than twenty years after it was first taken into use.
(b) If no information as the date of construction thickness of walls and safe working pressure is available, the age of the sizing

cylinder shall be determined by the competent person in consultation with the Chief Inspector from any other particulars available with the manager.

(c) Every new and second hand cylinder of thin walls to which repairs, which may affect its safety, have been carried out, shall be tested before use to at least one and a half times its working pressure.

(3) Every vessel other than part of a prime mover operated at a pressure greater than atmospheric pressure, and not so constructed as to withstand with safety the maximum permissible working pressure at the sources of supply, or the maximum pressure which can be obtained in the pipe connecting the vessel with any other source of supply shall be fitted with a suitable reducing valve or other suitable automatic device to prevent the safe working pressure of the vessel being exceeded.

(4) In cases owing to the nature of the process or the action of the contents of the vessel, a pressure gauge or safety valve or both cannot work reliable a tested and reliable working thermometer, with a sufficient large scale, on which shall be clearly marked the maximum permissible temperature in the vessel or pyrometers or rupture discs in addition to the pressure gauge and safety valve may be fitted as may be directed by the Chief Inspector.

(5) If during thorough examination, doubt arises as to the ability of vessels to work safety until the next examination provided for in these rules then the competent person shall enter in the register prescribed a reasoned statement, to authorise the vessel for further work subject to a lowering of pressure or to more frequent inspection or subject to both of these requirements.

(6) No vessel which has undergone alterations or repairs shall be taken into use unless it is thoroughly examined by a competent person.

(7) A report of the result of every examination made shall be completed in the prescribed Form No.8 and signed by the person making the examination, and shall be kept available for perusal by an Inspector at any time while the vessel is in service.

(8) No vessel which has previously been used shall be taken into use in any factory for the first time in the factory until it has been examined and reported in accordance with these rules and no new vessel shall be taken into use unless there has been obtained from the maker of the vessel, or from a competent person, a certificate specifying the maximum permissible working pressure thereof, and stating the nature of the tests to which the vessel and its fittings (if

any) have been subjected, and the certificate is kept available for perusal by an Inspector and the vessel is so marked as to enable it to be identified, the vessel to which the certificate relates.
(9) Where the report of any examination under this Rule specifies conditions for securing the safe working of vessel, shall not be used except in accordance with these conditions.
(10) The competent person making the 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 were the maximum permissible working pressure is reduced, or the examination shows that the part cannot continue to be used with safety unless certain repairs and carried out immediately or within a specified time.
(11) The requirements of this rule shall be in addition to and not in derogation the requirements of any other Act, rules or regulations.
(12) Nothing in this rule shall apply to :-
(a) any vessels which comes within the scope of the Indian Boiler Act.
(b) metal bottles of cylinders used for the storage or transport of compressed gases or liquified or dissolved gases under pressure.
(13) The Chief Inspector may exempt, subject to such conditions as may be considered necessary, all or any of the pressure vessels from all or any of the provisions of this rule if he has reason to believe that the construction or use of those vessels is such that the provisions of relating to inspection are not necessary or it is not practicable to comply with them.

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 (In Kilograms)
(a) Adult male 55
(b) Adult female 30
(c) Adolescent male 30
(d) Adolescentfemale 20
(e) Male child 16
(f) Female child 14

(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 ~f the persons engaged.

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 process ;-

(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 ultraviolet radiation.

SCHEDULE I 49

Dry grinding of metals or articles of metal applied by hand to 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 a precision turning where the use of goggles or a screen would seriously interfere with the work or turning by means of hand tools.

Welding or cutting of metals by means of an electric oxyacetylene 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 49

1 . Welding or cutting of metals by means of an electrical, oxyacetylene or similar process.

2. All work on furnaces where there is risk of exposure to excessive

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

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 there 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 the case of a rectangular or oval shape, be not less than 16 inches long and 12 fiches wide;
(b) in the case of a circular shape, be not less than 16 inches in diameter.

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 the following conditions:
(i) The gas-holder shall contain only the following gases, separately or mixed at a pressure greater than atomospheric press re, namely, town gas, coke-oven gas, producer gas, blast furnace 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 experienced operatives under the constant supervision of a competent person.
(b) The operations of cutting or welding steel 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, town gas, coke 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 operation;
(iv) The site of the 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 of service, this shall be pierced or drilled and the escaping gas ignited;
(c) The operation of repairing an oil tank on any ship by the electric welding process, subject to the following conditions :-
(i) The only oil contained in the tank shall have a flash point of not less than 150 F (close test) and a certificate to this effect shall be obtained from a competent analyst.
(ii) The analysts 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 a 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 of 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.

61. Section 61 :-

61A. Fire Protection :- .
(1) Processes equipment, plant, 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 on a minimum number of employees are exposed to such hazards at any one time.
(b) All industrial processes involving serious fire hazard shall be located in building or work places separated from one another by

wall 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, pnematic conveyors and similar equipment 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 work places having serious fire or flash fire hazards, passages between machines, installations or piles of material should be at least 90 cms. wide. For storage piles, the clearance between the ceil rig and the top of the pile should not be less than 2 m.
(2) Access for fire fighting-
(a) Building 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 lightening.- Protection from lightening shall be provided for-
(a) building in which explosive or highly flammable substances are manufactured, used, handled or stored;
(b) storage tanks containing oils, paints or other flammable liquids;
(c) rains elevators;
(d) buildings, tall chimneys or stacks where flammable gases, fumes dust or lint are likely to be present;
(e) sub-station building and out-door transformers and switch yards.
(4) Precautions against ignition.- Where 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 maintain as to prevent the danger of their being 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) Transmission belts with iron fasteners shall not be used;
(e) Smoking, lightening or carrying of matches, lighters or

smoking; materials shall be prohibited;
(f) All other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as spenflames, frictional sparks, overheated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat.
(5) Spontaneous ignition.- Where materials are likely to induce spontaneous ignition, care shall be taken to avoid formation of air pocket and 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 materials susceptible to ignition and stored in the open shall be at a distance not less than 10 meters 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 by stored near highly flammable substances, 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 20°C or less shall be kept or stored in any work room.
(b) Flammable liquids shall be stored in closed containers and limited quantities in well ventilated room 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 limits.
(8) Accumulation of flammable dust, gas fume or vapour in air or 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 materials shall be placed in suitable metal containers with covers wherever possible.
(9) Fire Exits-
(a) In this rule-
(i) "horizontal exist" 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 an adjoining part of the same building with adequate separation; and
(ii) "travel distance" means the distances an occupant has to travel to reach an exit.
(b) An exit may be a doorway corridor, passageway to an external stairway or to a varandah or to an internal stairway segregated from the rest 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 exit for the purpose of this sub-rule.
(d) In every room of a factory exits sufficient to permit safe escape other 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 lightening 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 understood 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 shuttors shall be provided at appropriate places along the escape routes to prevent spread of fire and smoke, particularly at the entrance of lifts or stairs where funnel or flue effect may be created inducing an upward spread of fire.
(i) All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.
(j) Exists 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 these factories where high hazard materials are

stored or used, the travel distance to the exist shall not exceed 22.5 meters and there shall be at least two ways escape from every room, how ever shall, except toilet rooms, so located that the paints of access there to are out of or suitably shielded from areas of high hazard.

(l) Wherever more than one exit is required for any room space or 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 areas 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 lead shall be reckoned on the basis of actual number of occupants within any floor area or 10 square meters 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 to arrange and located as to provide a suitable means of escape of any per-son employed therein, and in 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 other as practicable.

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

(s) Every exit doorway shall open into an enclosed stairway, 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, doorway shall be not less than 200 cm 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 a 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 1.5m x 1.5m 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 carridors 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 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 risor shall be 19 cm. and the number of risers shall be limited to 12 per flight.
(ff) Hand rails shall be provided with minimum height of 100 cm. and shall be fairmly supported.
(gg) The use of spiral staircase shall be limited to low occupant load and to a building of height of 9 meters, unless they are connected to platform such as balconies and terraces to allow escape 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 door
(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 square 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 exits shall lead directly to the exterior.
(kk) Where there is difference in level between connected areas for horizontal exit, ramps, not more than 1 in 8 slopes shall be provided For this purpose steps shall not be used.
(ll) Doors in horizontal exits shall be openable at all times.
(mm) Ramps with a slope of not more than 1 in 10 to substituted for the requirements of staircase. For all slopes exceeding 1 in 10

and wherever the use in 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 determined 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, restroom, ambulances, rooms and the like;

2. "Ordinary Hazard ".- Occupancies like saw mills carpentry shop, shall timber yards, book binding shops engineering workshop and the like;

3. "Extra Hazard".- Occupancies like large timber yards, godowns storting fibrous materials, flour mills, cotton mills, jute mills, large wood working factories and the like;

(ii) "Class B Fire".- Fire in flammable liquids like oil, petroleum products, solvents, grease, paints 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 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 confirm to the relevant Indian Standards.

(e) As far as possible the first-aid fire fighting equipment shall all

b e 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 these 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 send buckets shall be filled with clean, dry and fine sand.

(h) 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 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 away that their bottom is 750 mm above the floor level. Fire buckets shall be placed on hooks attached 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 recharged immediately after discharge. Sufficient refill material shall be kept readily available for this purpose at all times.

(l) All first-aid fire fighting equipment shall be subjected to routine maintenance inspection and testing to be carried out properly trained persons. Periodically of the routine maintenance inspection and text shall confirm to the relevant Indian Standards.

(11) Other fire fighting arrangements-

(a) In every factory I adequate provision of water supply for fire fighting shall be made and where the amount of water required in liters per minute, as calculated from the formula A+B+C+D divided by 20 is 550 or more power driven trailor 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 building of the factory;

B = The total area in square meters of all floors and galleries

including open spaces in which combustible materials are handed 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 Dare 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%, but no account shall be taken of this reduction in calculating water supply required under clause (a).

(b) Each trailor pump shall be provided with equipment as per schedule II appended to this rule. Such equipment shall confirm to the relevant Indian Standards.

(c) Trailor pump shall be housed in a separate shed or sheds which shall be sited closed 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 of trailor pumps within reasonable time vehicles with towing attachment shall be provided at the scale of one for every four trailor 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 d under clause (a) for at least l00 minutes. At least 50% of this water supply or 450,000 liters whichever is less shall be in the form of static tanks of adequate capacities (not less than 450,000 liters each) distributed round the factory with due regards to the potential fire risks in the factory. Where piped supply is provided, the size of the main shall not be less than 15 centimeters diameter and it shall be capable of supplying a minimum of 4500 liters per minute at a pressure of not less than 7 kilogrammes per square centimeter.

(f) All trailor pumps including the equipment provided with them and the vehicles for towing them shall be maintained in good

condition and subjected to periodical inspection and testing as 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 rule 10 & 11 shall be in charge of a trained responsible person.

(b) Sufficient number of persons shall be trained in the proper handling 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 at 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 rule (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 or workers, he may by order 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 such order prescribe.

SCHEDULE IFirst Aid Fire Fighting Equipment (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, vegetables, fibres, paper & the like) Chemical Extinguishers of sodash, gas/ expelled water and antifreeze types, and water buckets.

B. Fires in flammable liquids, paints, grease, solvents and the like Chemical Extinguishers of foam carbon-dioxide and dry powder types and sand buckets.

C. Fires in gaseous substances under pressure Chemical

Extinguishers of carbon dioxide 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 carbon dioxide and dry powder types and sand buckets.
(2) One 9 liters water buckets shall be provided for every 100 sq. mm. of the floor area or part thereof and one 9 liters water type extinguishers shall be provided to six buckets or part thereof with a minimum of one extinguisher an and two buckets part 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 buckets For two buckets For each 9 litres, (or 2 gallons, extinguishers
Dry and carbon-dioxide extinguisher 1 bucket 3kg. (or 7lbs.) 3 bucket 9kg. (or 20lbs.)
is not less than 2 extinguishers 9kg. (or 20lbs.)
Dry powder 2kg. (or 5lbs.) 5kg. (or 11lbs.)
is one or more extinguishers 5kg. (or 11lbs.)
Foam extinguishers 9 liters (or 2 gallons) 9 liters (or 2 gallons) 9 liters (or 2 gallons)
(4) The following provision shall be complied with where class fires are anticipated:
(a) For rooms containing electrical transformers switch gears 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 other electrical equipments are installed in rooms other than these containing such equipment only one 5 kg. Dry powder or carbon-dioxide extinguisher shall be installed within 15 m. of such equipment in addition to the requirements of mentioned at (2) and (3) 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 platforms. 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 (2) and (3) above.

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

(6) Selection of sites for the installation of first-aid fire fighting equipment

(a) While selecting sites for first-aid fire fighting equipment, due consideration shall be given to the nature of the risk to be covered. The equipment shall be placed in conspicuous position and shall be readly 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 in incipient fires and their values may be 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 location either on hangers or on stands in such away that their bottom is 750 mm above the floor level.

(7) The operating instructions of the extinguishers shall not be defaced or obliterated. In case the operating instructions are obliterated or have become illegible due to passage of time fresh transfers of the same shall be obtained from the manufacturers of the equipment 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

1 Suction adapter

1 0 Unlined or rubber lined 70 mm delivery hose of 25 meters length complete with quick-release couplings.

1 Dividing breaching piece

2 Branch-piece with 15 mm nozzles

1 Diffuser nozzle

1 Standpipe with black cap

1 Hydrant key

4 collapsible canvas buckets

1 Fire hook (preventor) with cutting edge

1 25 mm manila rope of 30 meters length
1 Extension ledder of 9 meters length (where necessary)
1 Heavy axe
1 Spade
1 Pick axe
1 Crowbar
1 Saw
1 Hurricane lamp
1 Electric torch
1 Pair rubber gloves
For large trailer pump of capacity of 1800 Jitres/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 adapter
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 black cap
2 Hydrant key
6 Collapsible canvas buckets
1 Coiling hook (preyentor) 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 Huricane 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 apparatus in addition to the equipment for light trailer pump or large trailer pump as the case may be.
61-B. (1) Qualification.- (a) A person shall not be eligible for appointment as Safety Officer unless he : (i) Possesses a recognised degree in any branch of engineering or technology and has had practical experience of working in factory in a supervisory capacity for a period of not less than 2 years; or a recognized degree in physics or chemistry and has had practical experience of

working in a factory in a supervisory capacity for a period of not less than 5 years; or a recognised diploma in any branch of engineering or technology and has had practical experience of working in a factory in a supervisory capacity for a period of not less than 5 years.

(ii) Possesses a degree or diploma in industrial safety recognised by the I State Government in addition to possessing other qualification laid down in the said sub rule.

(iii) had adequate knowledge of the language spoken by majority of the workers in the region in which the factory where he is to be appointed is situated.

(b) Notwithstanding the provision contained in clause (a), any person who:-

Possesses a recognised degree or diploma in engineering or technology and has had experience of not less than S years in a department of the Central or Union Territory, State Government which deals with the administration or the Factories Act! 1948; or

Possesses a recognised degree or diploma in engineering or technology and had experience of not less than S years, Full time, on training education consultancy, or research in the field of accident prevention in industry or in any institution, shall also be eligible for appointment as a Safety Officer:

Provided that the Chief Inspector may, subject to such conditions as he may specify, grant exemption from the requirements of this sub-rule if in his opinion a suitable person possessing the necessary qualification and experience is hot available for appointment:

Provided further that in the case of a person who has been working as a Safety Office for a period not less than S years on the date of commencement of this rule, the Chief Inspector may, subject to such conditions as he may specify, relax all or any of the above said qualifications.

(2) Conditions of Service.- (a) Where the number of Safety Officers to be appointed in a factory as required by a notification in the Official Gazette exceeds one, one of them shall be designated as the Chief Safety Officer and shall have a Status higher than that of the others. The Chief Safety Officer shall be in overall charge of the safety functions as envisaged in sub-rule (3), the other safety Officers working under his control.

(b) The Chief Safety Officer or the Safety Officer in the case of factories where only one Safety Officer is required to be appointed, shall be given the status of a senior executive and he shall work directly under the control of the Chief Executive of the factory. All

other Safety Officers shall be given appropriate status to enable them to discharge their function effectively.
(c) The scale of pay and the allowances to be granted to the Safety Officer including the Chief Safety Officer and the other conditions of their service shall be the same as those of the officers of corresponding status in the factory.;
(d) In the case of dismissal or discharge, a Safety Officer shall have a right to appeal to the State Government whose decision thereon shall be final.
(3) Duties of Safety Officer.- (a) The duties of a Safety Officer shall be to advise and assist the factory management in the fulfilment of its obligations, statutory or otherwise concerning prevention of personal injuries and maintaining a safe working environment. These duties shall include the following namely :-
(i) to advise the concerned departments in planning and organizing measures necessary for the effective control of personal injuries.
(ii) to advise on safety aspects in all job studies, and to carry out detailed job safety for the selected jobs;
(iii) to check and evaluate the effectiveness of the action taken or proposed to be taken to prevent personal injuries;
(iv) to provide advice on matters related to carrying out ensuring high quality and availability of personal protective equipment;
(v) to provide advice on matters related to carrying out plant safety inspection;
(vi) to carry out plant safety inspection in order to observe the physical condition of work and the work practices and procedures followed by workers and to render advice on measures to be adopted for removing the unsafe actions by worker;
(vii) to investigate selected accident;
(viii) to render advice on matters related to reporting and investigation of industrial accidents and diseases;
(ix) to investigate the cases on industrial disease contracted and dangerous occurrence reported under Rule 96;
(x) to advise on the maintenance of such records as are necessary relating to accidents, dangerous occurrences and industrial diseases;
(xi) to promote setting up of safety committees and act as advisor and catalyst to such committees;
(xii) to organise in association with the concerned departments, campaigns, competitions, contests and other activities which will develop and maintain the interest of workers in establishing and maintaining Safe Conditions of work and procedures; and

(xiii) to design and conduct either independently or in collaboration with the training departments suitable training and educational programmes for the prevention of Personal injuries.

(4) Facilities to be provided to Safety Officers. An occupier of the factory shall provide each Safety Officer with such facilities equipment and information as are necessary to enable him to discharge his duties effectively.

(5) Prohibition of performance of other Duties. No Safety Officer shall be required or permitted to do any work which is inconsistent with or detrimental to the performance of the duties prescribed in sub-rule (3).

61-C. Safety committee.- (1) In every factory-

(a) wherein 250 or more workers are ordinarily employed;

(b) which carries on any process or operation declared to be dangerous under section 87 of the Act; or

(c) which carries on hazardous process as defined under section 2 (cb) of the Act, there shall be a safety committee.

(2) The representative of the management of 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 workers representatives of 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 on demand.

(6) Safety committee shall have the right to adequately and suitable informed of-

(a) Potential safety and health hazard 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 date on a confidential basis and solely to provide guidance and advice on measure 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 cooperating with the management in achieving the alarms 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 encounter

(c) creating safety awareness amongst all workers;

(d) undertaking educational, training and promotional activities;

(e) discussing reports on safety, environmental and occupational health surveys, safety audits, risk assessment, emergency and disaster management plans and implementation of the recommendations 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 implementation of the recommendation 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-committee as may be required to assist it.

SCHEDULE 1

COTTON TEXTILES

1. Cotton Openers, Scutchers, Combined Openers and Scutcher and Lap Machines, Hard Waste breakers, etc.-

(1) All Cotton Openers, Scutchers, Combined Openers andScutchers, Scutchers and Lap Machines, Hard Waste Breakers and similar machines shall be driven by separate motors or from counter shafts provided with fast and loose pulleys and efficient belt shifting devices.

(2) In all Openers, Combined Openers and Scutchers,Scutchers, Scutchers.- lap machines, Hard Waste Breakers and similar machines, the beater covers and doors which give access to any dangerous part of the machine shall be fitted with effective interlocking arrangements which shall prevent-

(a) the covers and doors being opened while the machine is in motion;

(b) the machine being re-started until the covers and doors are close ;

Provided that in res pect of doors of openings, other than dirt doors or desk doors such openings shall be so fenced as to prevent access to any dangerous part of the machine if effective interlocking arrangement is not provided.

(3) In all Openers, Combined Openers and Scutchers,Scutchers, Scutcher-lap

machines, Hard waste Breakers and similar machines, the openings giving access to the dust chamber shall be provided with permanently fixed fencing, which shall, while admitting light, yet prevent contact between any portion of a workers body and the beater grid bars.

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

2. Combined Openers and Scutchers, Scutcher-lap, Silver Lap, Lap Machines, Dorby Doublers and Ribbon Machines.- (1) The lap forming rollers shall be fitted with a guard or cover which shall prevent access to the intake of the lap roller and fluted roller as long as the weighted rack is down; or (2) 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 guard or cover is closed.

3. Carding Machines.- All Cylinder doors shall be secured by an automatic locking device 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.

4. Speed Framers.- Headstocks shall be fitted with automatic locking arrangements which shall prevent the doors giving access to jack box wheels opened while the machinery is in motion and shall render it impossible to restart the machine until the doors have been closed.

5. Self-acting Mules.- The drive shall be from counter-shafts which shall be provided with fast and loose pulleys and efficient belt shifting devices.

6. Calendering Machines etc..- In respect of calendering machines, mangles and similar machines, allsuch machines shall be provided with an efficient "nip" guard along the whole length on the intake side of each pair of bow Is and similar parts which shall be so fitted and maintained, whilst the rollers of bowls are in motion, as to prevent access to the point of contact of the rollers or bowls.

SCHEDULE 2

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 3

Wood-Working

Machinery

1. Definition.- For the purposes of this Schedule :-

(a) Wood-Working machine means a circular saw, band saw, planning machines, chain mortising machine or vertical spindle moulding machine operating of Wood or Cork.

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

(c) BaI1d saw means a band saw, the cutting portion of which runs in a vertical direction but does not include a log saw or band resawing machine.

(d) Planning machine means a machine for overhand plannings 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 wood-working 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, and as far as practicable shall be kept free from chips or other loose material.

5. Training and Supervision.- (1) 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 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 precautions 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 from an area of a circle having a radius not exceeding the radius of the largest saw used on the bench.

(ii) The knife shall 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 extent 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 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 point 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 plates shall not be more than six inches apart, and shall extend from the axis of the saw outwords 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 inch, or if beaded be of a thickness of at least 1/20 inch.

7. Push Sticks.- 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 expended 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. Planning Machines.- (1) A planning machine (other than a planning machine which is mechanically fed) shall not be used for overhand planning unless it is fitted with a cylindrical cutter block.
(2) Every planning machine used for overhand planning shall be provided with a "brige" 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 fee 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.- 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 wood being moulded at a vertical spindle moulding machine shall, if practicable, be held in a zig 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 cu tiers as far as practicable.
12. Adjustment and maintenance of guards.- The guards and other appliance required under this Schedule shall be-
(a) maintained in an efficient state,
(b) constanty kept in position while the machinery is in motion, and
(c) so adjusted as to enable the work to be done without unnecessary risk.
18. Exemptions.- Paragraphs 6, 8, 9 and 10 shall not apply to any wood working machine in res pect 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 4

RUBBER MILLS

1. Installation of machines.- Mills for breaking down, craking, grating, mixing, refining and warming rubber or rubber compounds shall be so installed at 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 guards 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 pushed 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 all rubber mills 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 5

Centrifugal Machines

1. Definition.- "Centrifugal machine" include centrifugal extractors and driers.

2. 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.

3. 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 or basket when the lid is closed.

(2) Every centrifugal machines 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.

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

5. Operating speed.- No centrifugal machine shall be operated at a speed in excess of the manufacturers rating which shall be legibly stamped at easily visible places both on the inside of the basket and on the outside of the machine casting.

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

SCHEDULE 6

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. Definition.- 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 mechanism of a power and includes that part of closed tool which acts as a guard;

(c) "Power press" means a machine used in metal other industries for moulding, pressing, blanking raising drawing and similar purposes.

(d) "Safety device" means the fencing and any 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 (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 provided in sub-paragraph (4) no person shall set, re-set, adjust or tryout the tools on a power press or install or adjust any safety device thereon, being installation or adjustment preparatory to production of die proving, or carry out an inspection and test of any safety device thereon required by paragraph 8 unless he-
(a) has attained 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 these duties ill 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 inform 29.
(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 the 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 examine and tested by a competent 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 provision 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 take 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 any examination and test under paragraph 6 and in the opinion of the competenent 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 untill 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 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 rectified in writing by the competent person to the occupier of the factory and, in the case of a defect falling within clause (1) 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, 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 power press or safety device (as the case may be) having 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 a defect falling within clause (b) of sub-paragraph (1) after the expiration of the said defect has been remedied.
(4) As soon as it practicable after any defect of which notification has bee 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 person appointed or authorised for the purpose under paragraph 5 has inspected and tested every safety device thereon while it 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 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 aforesaid, in efficient working order.
(2) Every power press and every safety device thereon 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 out 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 is the subject of a notification in writing under paragraph 7 by virtue of which the use of the safety device my 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. Identification of power presses and safety devices.- For the purpose of identification every power press and ever 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.
12. Exemptions.-
(1) If in respect of any factory, the Chief Inspector is satisfied that owing to the circumstance, 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 the workers, employed on any power press the Chief Inspector may by a certificate in writing (which may in his discretion revoke at any me) 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 7
Shears, Slitters and Guillotin Machines
1. Definition.- For the purpose of this schedule-
(a) "Guillotin" means a machine ordinarily equipped with straight bevel-edged blade operating vertically against a stationery raising edge and used for cutting, metallic or non-metallic substances;
(b) "Shears" or "Shearing machine" means a machine ordinarily equipped with straight, bevel-edged blade operating vertically against reasisting edges, or with rotary overlapping cutting wheels, and used for shearing metals or non-metallic substances;
(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-metallic 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 operators body to reach the descending blade from above, below or through the barrier 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 automatic 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 driven guillotine cutters, except continuous feed trimmers be equipped with-
(a) starting devices which require the simultaneous action of both hands to 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 devices 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 shall 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 continuous trimmer, shall be 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 machine.-

(1) Circular disc-type knives on machines for cutting metal and leather, paper, rubber, textiles or other non-metallic 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 themselves 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 not exceed 6 mm (1/4 in.) at an time.

(2) Portions of blades underneath the tables or benches of slitting machine 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 fingers of the operator 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 machine in front of the knives an 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 blade except the working side between the sliding guide and the table on vertical machines, or between the wheels guards on horizontal machine, shall be completely enclosed with hinged guards of sheet metal not less than = 1 m (0.04 in.) in thickness or of other material of equal strength.