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SCHEDULE.

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P.N.  
30 of 1949.

**DOCKS REGULATION (SAFETY OF WHARF WORKERS)  
RULES**

*made by the Governor in Council under section 2.*

Citation.

1. These rules may be cited as the Docks Regulation (Safety of Wharf Workers) Rules.

Application.

2. These rules shall apply to all processes of loading, unloading, moving and handling goods or produce, in, on, or at any dock, wharf or quay and the processes of loading, unloading and coaling any ship in any dock or harbour:

Provided that—

(i) Nothing in Parts II to VI inclusive of these rules shall apply to the unloading of fish from a vessel employed in the catching of fish; provided that it is possible without

undue risk to pass to and from such craft to the shore or to any other craft in accordance with rules 13 and 14 hereof respectively;

(ii) Nothing in rules 13, 14 (so far as regards liability to provide means of access), 15, 17, 18, 20, 21, 41 (1) and 52 shall apply to a barge or lighter;

(iii) rules 22 (1), 23 (1) and 24 (1), and rule 26 (1), so far as regards the tests and examination required under those rules, shall not apply to machinery, chains, or other gear taken into use, or wire rope purchased, before the commencement of these rules.

### 3. In these rules—

Interpreta-  
tion.

“processes” means the processes above mentioned or any of them;

“person employed” means a person employed in the processes;

“prescribed” means prescribed by the Governor;

“hatch” means an opening in a deck used for the purpose of the processes or for trimming, or for ventilation;

“hatchway” means the whole space within the square of the hatches, from the top deck to the bottom of the hold;

“lifting machinery” means cranes, winches, hoists, derrick booms, derrick and mast bands, goose necks, eyebolts, and all other permanent attachments to the derricks, masts and decks, used in hoisting or lowering in connection with the processes.

“pulley block” means pulley, block, gin and similar gear, other than a crane block specially constructed for use with a crane to which it is permanently attached.

4. The Governor may appoint one or more inspectors for the purposes of these rules. Every person in charge of any machinery or appliances to which these rules apply shall permit any inspector to examine and test such machinery and appliances at all reasonable times.

Inspectors.

5. (1) It shall be the duty of the person having the general management and control of a dock, wharf or quay, to comply with Part I of these rules; provided that if any other person has the exclusive right to occupation of any part of the dock, wharf or quay, and has the general management and control of such part, the duty in respect of that part shall devolve upon that other person.

Duties.

(2) It shall be the duty of the owner, master, or officer-in-charge of a ship to comply with Part II of these rules.

(3) It shall be the duty of the owner of machinery or plant used in the processes, and in the case of machinery or plant carried on board a ship it shall also be the duty of the master of such ship to comply with Part III of these rules:

(4) It shall be the duty of every person who by himself, his agents, or workmen carries on the processes and of all agents, workmen, and persons employed by him in the processes, to comply with Part IV of these rules:

Provided that, where the processes are carried on by a stevedore or other person other than the owner of the ship, it shall be the duty of the owner, master or officer-in-charge of the ship to comply with rule 41, so far as it concerns—

(a) any hatch not taken over by the said stevedore or other person for the purpose of the processes, and

(b) any hatch which, after having been taken over by the said stevedore or other person for the purposes of the processes,

(i) has been reported by written notice to the owner, master or officer-in-charge of the ship by or on behalf of the said stevedore or other person, as being a hatch at which the processes have been completed or completed for the time being, and

(ii) either has been left by the said stevedore or other person fenced or covered as required by rule 41, or has been taken into use by or on behalf of the owner of the ship, and in either case has been so reported by such written notice as aforesaid.

It shall be the duty of the owner, master or officer-in-charge of the ship to give immediately a written acknowledgment of such written notice as aforesaid.

(5) It shall be the duty of all persons, whether owners, occupiers, or persons employed, to comply with Part V of these rules.

(6) Part VI of these rules shall be complied with by the persons on whom the duty is placed in that Part.

#### · PART I.

Maintenance  
of  
approaches.

6. (1) Every regular approach over a dock, wharf or quay which persons employed have to use for going to or from a working place at which the processes are carried on and every such working place on shore shall be maintained with due regard to the safety of the persons employed.

In particular, the following parts shall, as far as is practicable having regard to the traffic and working, be securely fenced so that the height of the fence shall be in no place less than two feet six inches, and the fencing shall be maintained in good condition ready for use—

(a) all breaks, dangerous corners, and other dangerous parts or edges of a dock, wharf or quay;

(b) both sides of such footways over bridges, caissons, and dock gates as are in general use by persons employed, and each side of the entrance at each end of such footway for a sufficient distance not exceeding five yards.

7. When any persons are employed on a dock, wharf or quay during the hours of darkness in any of the processes, the said dock, wharf or quay shall be adequately lighted, either by electric clusters supplied by the vessel moored at the dock, wharf or quay or by other safe and suitable means.

Lighting at night.

8. In the case of a dock, wharf or quay which is not permanently equipped with life-saving appliances a lifebuoy, with not less than five fathoms of line attached, shall be provided during such time as any persons are employed thereon in the processes.

Provision of live-saving appliances.

9. (1) A sufficient number of first-aid boxes or cupboards of a standard to be prescribed shall be provided at reasonable distances from working places:

Provision of first-aid equipment.

Provided that in the Protectorate these first-aid boxes or cupboards may be maintained on the vessel using the dock, wharf or quay.

(2) A first-aid box or cupboard shall be marked plainly with a white cross on a red ground.

(3) Nothing except appliances or requisites for first-aid shall be kept in a first-aid box or cupboard.

10. A first-aid box or cupboard shall be kept stocked and in good order and shall be placed under the charge of a responsible person who shall always be readily available during working hours. Such person shall, except at docks, wharves or quays at which the total number of persons employed at any time does not exceed fifty, be a person trained in first-aid.

Maintenance of first-aid equipment.

Notification  
of place of  
first-aid  
equipment.

11. Notices shall be exhibited in prominent positions at every dock, wharf or quay stating—

(a) the position of each first-aid box and the place where the person in charge thereof can be found,

(b) the position of stretchers or other appliances,

(c) the position of the ambulance carriage, or, where such is not provided, the position of the nearest telephone and the name and telephone number of the hospital or other place from which such carriage may be obtained.

Exemption.

13. For the purpose of Part I of these rules, the term "vessel" shall not apply to any rowing boat or canoe.

## PART II.

Passage  
between  
ship and  
shore.

13. If a ship is lying at a dock, wharf or quay for the purpose of loading or unloading or coaling, there shall be safe means of access for the use of persons employed at such times as they have to pass from the ship to the shore or from the shore to the ship as follows—

(a) Where reasonably practicable the ship's accommodation ladder or a gangway or a similar construction not less than twenty-two inches wide, properly secured, and fenced throughout on each side to a clear height of two feet nine inches by means of upper and lower rails taut ropes or chains or by other equally safe means, except that in the case of the ships' accommodation ladder such fencing shall be necessary on one side only provided that the other side is properly protected by the ship's side.

(b) In other cases a ladder of sound material and adequate length which shall be properly secured to prevent slipping:

Provided that nothing in this rule shall be held to apply to cargo stages or cargo gangways if other proper means of access is provided in conformity with these rules:

Provided also that as regards any sailing vessel not exceeding 250 tons net registered tonnage and any steam vessel not exceeding 150 tons gross registered tonnage this rule shall not apply if and while the conditions are such that it is possible without undue risk to pass to and from the ship without the aid of any special appliances.

Passage  
between  
ship and  
ship.

14. If a ship is alongside any other ship, vessel, or boat, and persons employed have to pass from one to the other, safe means of access shall be provided for their use, unless the

conditions are such that it is possible to pass from one to the other without undue risk without the aid of any special appliance. If one of such ships, vessels, or boats is a sailing barge, flat, keel, lighter or other similar vessel of relatively low freeboard, the means of access shall be provided by the ship which has the higher freeboard.

15. (1) If the depth from the level of the deck to the bottom of the hold exceeds five feet, there shall be maintained safe means of access from the deck to the hold in which work is being carried on.

Means of safety while aboard ship.

(2) Save as hereinafter provided, such access shall be afforded by ladder, and by ladder cleats or cups on the coamings, and shall not be deemed to be safe—

(a) unless the ladders between the lower decks are in the same line as the ladder from the top deck, if the same is practicable having regard to the position of the lower hatch or hatches;

(b) unless the ladders provide a foothold of a depth including any space behind the ladder of not less than  $4\frac{1}{2}$  inches for a width of 10 inches and a firm handhold;

(c) unless the cleats or cups provided on coamings (i) provide a foothold of a depth including any space behind the cleats or cups of not less than  $4\frac{1}{2}$  inches for a width of 10 inches and a firm handhold; (ii) are so constructed as to prevent a man's foot slipping off the side; (iii) are placed vertically one above the other and in the same line as the ladders to which they give access;

(d) unless the cargo is stowed sufficiently far from the ladder to leave at each rung of the ladder foothold of a depth including any space behind the ladder of not less than  $4\frac{1}{2}$  inches for a width of 10 inches and a firm handhold;

(e) unless there is room to pass between a winch or other obstruction and the coamings at the place where the ladder leaves the deck;

(f) if the ladder is recessed under the deck more than is reasonably necessary to keep the ladder clear of the hatchway; Provided that such access may be afforded—

(i) where the provision of a ladder on a bulkhead or in a trunk hatchway can be shown to be reasonably impracticable, by cleats or cups complying with the requirements of paragraph (c);

(ii) by ladders or steps, separate from any hatchway or sloping from deck to deck, if such ladders or steps comply with the requirements of paragraphs (b), (d) and (e).

(3) Shaft tunnels shall be equipped with adequate handhold and foothold on each side.

## Lighting.

**16.** When the processes are being carried on—

(a) the places in the hold and on the decks where work is being carried on,

(b) the means of access provided in pursuance of rules 13 and 14, and

(c) all parts of the ship to which persons employed may be required to proceed in the course of their employment,

shall be efficiently lighted, due regard being had to the safety of the ship and cargo, of all persons employed and of the navigation of other vessels and to the duly approved bye-laws or regulations of any authority having power by statute to make bye-laws or regulations subject to approval by some other authority.

## Hatch covering lifting gear.

**17.** All fore and aft beams and thwartship beams used for hatch covering shall have suitable gear for lifting them on and off without it being necessary for any person to go upon them to adjust such gear.

## Marking of hatch coverings.

**18.** All hatch coverings shall be kept plainly marked to indicate the deck and hatch to which they belong and their position therein; provided that this rule shall not apply in cases where all the hatch coverings of a ship are interchangeable or, in respect of marking of position, where all hatch coverings of a hatch are interchangeable.

This rule shall apply to fore and aft beams and to thwartship beams as it applies to hatch coverings.

## Maintenance of hatch coverings.

**19.** All fore and aft beams, and thwartship beams used for hatch covering and all hatch coverings shall be maintained in good condition.

## Hand grips of hatch coverings.

**20.** Adequate hand grips shall be provided on all hatch coverings, having regard to their size and weight, unless the construction of the hatch or the hatch coverings is of a character rendering the provision of hand grips unnecessary.

21. Where the working space around a hatch is less than two feet wide, such provision shall be made as will enable persons employed to remove and replace in safety all fore and aft beams and thwartship beams used for hatch covering and all hatch coverings.

Working space around hatch.

### PART III.

22. (1) All lifting machinery shall have been tested and examined by a competent person in the manner set out in the Schedule to these rules before being taken into use.

Testing and examination of lifting gear, etc.

(2) (a) All derricks and permanent attachments, including bridle chains, to the derrick, mast and deck, used in hoisting or lowering shall be inspected once in every twelve months and be thoroughly examined once at least in every four years.

(b) All other lifting machinery shall be thoroughly examined once at least every twelve months.

(c) For the purposes of this rule thorough examination means a visual examination, supplemented if necessary by other means such as a hammer test carried out as carefully as the conditions permit, in order to arrive at a reliable conclusion as to the safety of the parts examined; and if necessary for the purpose, parts of the machines and gear must be dismantled.

23. (1) No chain, ring, hook, shackle, swivel or pulley block shall be taken into use in hoisting or lowering unless it has been tested and examined by a competent person in the manner set out in the Schedule to these rules.

Testing of chains, lifting tackle, etc.

(2) All chains, other than bridle chains attached to derricks or masts, and all rings, hooks, shackles, and swivels used in hoisting or lowering shall, unless they have been subjected to such other treatment as may be prescribed, be effectually annealed under the supervision of a competent person and at the following intervals—

(a) half inch and smaller chains, rings, hooks, shackles and swivels in general use, once at least in every six months,

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

Provided that in the case of such gear used solely on cranes and other hoisting appliances worked by hand, twelve months shall be substituted for six months in paragraph (a) and two years for twelve months in paragraph (b):

Provided also that where the Chief Mechanical Engineer, Railway Department, is of opinion that, owing to the size, design, material or infrequency of use of any such gear or class of such gear, the requirement of this rule as to annealing is not necessary for the protection of persons employed, he may by certificate in writing (which he may in his discretion revoke) exempt such gear or class of gear from such requirement subject to such conditions as may be specified in such certificate.

(3) All chains, other than bridle chains attached to derricks or masts, and all rings, hooks, shackles, swivels and pulley blocks shall be inspected by a competent person immediately before each occasion on which they are used in hoisting or lowering; unless they have been inspected within the preceding three months.

(4) All chains, rings, hooks, shackles, or swivels used in hoisting or lowering which have been lengthened, altered or repaired by welding shall before being again taken into use be adequately tested and re-examined.

Provisions  
relating to  
ropes,  
splices, etc.

24. (1) No rope shall be taken into use in hoisting or lowering unless—

(a) it is of suitable quality and free from patent defect, and

(b) in the case of wire rope, it has been examined and tested by a competent person in the manner set out in the Schedule to these rules.

(2) Every wire rope in general use for hoisting or lowering shall be inspected by a competent person once at least in every three months, provided that after any wire has broken in such rope it shall be inspected once at least in every month.

(3) No wire rope shall be used in hoisting or lowering if in any length of eight diameters the total number of visible broken wires exceed ten per cent. of the total number of wires, or the rope shows signs of excessive wear, corrosion or other defect which, in the opinion of the person who inspects it, renders it unfit for use.

(4) A thimble or loop splice made in any wire rope shall have at least three tucks with a whole strand of the rope and two tucks with one half of the wires cut out of each strand. The strands in all cases shall be tucked against the lay of the rope:

Provided that this rule shall not operate to prevent the use of another form of splice which can be shown to be as efficient as that laid down in this rule.

25. For the purposes of rules 22, 23 and 24, a person shall not be deemed to be a competent person if and in so far as the Chief Mechanical Engineer, Railway Department, has given notice in writing that such person is in his opinion not technically qualified to carry out the tests, examinations or annealing required by these rules:

Qualification of a competent person

Provided that any person whom the Chief Mechanical Engineer, Railway Department, may thus declare not to be competent shall have the right to appeal against such declaration to the Governor, whose decision shall be final.

26. (1) Certificates in the prescribed forms and containing the prescribed particulars with regard to the tests, examinations, inspections annealing or other treatment required under rules 22, 23 (1) and (2) and 24 (1) shall be obtained, and entered in or attached to the prescribed register before the machinery, chain, rope or other gear to which the certificate refers is subsequently taken into use in connection with the processes.

Certificates and register.

(2) The prescribed register with the certificates required to be attached to it shall be kept on the premises unless some other place has been approved in writing by the Harbour Master.

27. No pulley block shall be used in hoisting or lowering unless the safe working load is clearly stamped upon it.

Weight capacity of pulley block to be marked on it.

28. Means shall be provided to enable any person using a chain or wire rope sling to ascertain the safe working load for such chain or sling under such conditions as it may be used.

Weight capacity of chains and slings.

(a) As regards chain slings, such means shall consist of marking the safe working load in plain figures or letters upon the sling or upon a tablet or ring of durable material attached securely thereto.

(b) As regards wire rope slings, such means shall consist of either the means specified in paragraph (a) above or a notice or notices, so exhibited as to be easily read by any person concerned, stating the safe working loads for the various sizes of wire rope slings used.

29. Chains shall not be shortened by tying knots in them and suitable packing shall be provided to prevent the links coming into contact with sharp edges of loads of hard material.

Preservation of chains.

Fencing  
machinery,  
etc.

**30.** All motors, cog-wheels, chain and friction gearing, shafting, live electric conductors and steam pipes shall (unless it can be shown that by their position and construction they are equally safe to every person employed as they would be if securely fenced) be securely fenced so far as is practicable without impeding the safe working of the ship.

Winches,  
cranes, etc.

**31.** Cranes and winches shall be provided with such means as will reduce to a minimum the risk of the accidental descent of a load while being raised or lowered; in particular, the lever controlling the link motion reversing gear of a crane or winch shall be provided with a suitable spring or other locking arrangement.

Fencing of  
driver's  
platform on  
crane or tip  
and access  
thereto, etc.

**32.** The driver's platform on every crane or tip driven by mechanical power shall be securely fenced and shall be provided with safe means of access. In particular, where access is by a ladder—

(a) the sides of the ladder shall extend to a reasonable distance beyond the platform or some other suitable handhold shall be provided;

(b) the landing place on the platform shall be maintained free from obstruction;

(c) in cases where the ladder is vertical and exceeds thirty feet in height, a resting place shall be provided approximately midway between the platform and the foot of the ladder.

Working  
load to be  
marked on  
crane or  
derrick.

**33.** Every crane and derrick shall have the safe working load plainly marked upon it, and every shore crane, if so constructed that the safe working load may be varied by the raising or lowering of the jib or otherwise, shall have attached to it an automatic indicator of safe working loads, provided that, in cases where the jib may be raised or lowered, provision on the crane of a table showing the safe working loads at the corresponding inclinations or radii of the jib shall be considered sufficient compliance.

Exhaust  
steam from  
crane or  
winch.

**34.** Adequate measures shall be taken to prevent exhaust steam from, and so far as is practicable live steam to, any crane or winch obscuring any part of the decks, gangways, stages, wharf, or quay where any person is employed in the processes.

**35.** Appropriate measures shall be taken to prevent the foot of a derrick being accidentally lifted out of its socket or support.

Measures to prevent unseating of derrick.

#### PART IV.

**36.** Precautions shall be taken to facilitate the escape of the workers when employed in a hold or on 'tween decks in dealing with coal or other bulk cargo.

Means of escape of workers in hold, etc.

**37. (1)** No lifting machinery, chains or other lifting appliance shall be loaded beyond the safe working load, except that a crane may be loaded beyond the safe working load in exceptional cases to such extent and subject to such conditions as may be approved by the engineer in charge or other competent person, if on each occasion—

Lifting machinery not to be worked beyond safe load.

(a) the written permission of the owner or his responsible agent has been obtained,

(b) a record of the overload is kept:

Provided also, that, where the load upon a single sheave pulley block is attached to the pulley block instead of to the chain or rope passing round the sheave, the load on the pulley block shall be deemed for the purpose of this rule to be half the actual load.

(2) No load shall be left suspended from a crane, winch, or other machine unless there is a competent person actually in charge of the machine while the load is so left.

**38.** No person under 16 years of age and no person who is not sufficiently competent and reliable shall be employed as driver of a crane or winch, whether driven by mechanical power or otherwise, or to give signals to a driver or to attend to cargo falls on winch-ends or winch-bodies.

Crane or winch drivers, signallers.

**39.** Where goods are placed on a wharf or quay—

(a) A clear passage leading to the means of access to the ship required by rule 12 shall be maintained on the wharf or quay; and

(b) If any space is left along the edge of the wharf or quay, it shall be at least three feet wide and clear of all obstructions other than fixed structures, plant and appliances in use.

Clear passage on wharf.

Provisions relating to deck-stages and cargo-stages, gang-way planks, etc.

40. (1) No deck-stage or cargo-stage shall be used in the processes unless it is substantially and firmly constructed and adequately supported, and, where necessary, securely fastened.

(2) No truck shall be used for carrying cargo between ship and shore on a stage so steep as to be unsafe.

(3) Any stage which is slippery shall be made safe by the use of sand or otherwise.

(4) Where the process is carried out by means of the persons employed walking between the shore and the vessel over gang-way planks, adequate provision shall be made for the safety of the persons so employed. The gangway planks shall be of sufficient strength to support the maximum number of laden persons which could be placed upon them and shall be sufficiently broad to provide safe transit to and from the vessel. Gangway planks which are not properly and securely fenced and which are required both for boarding and leaving a vessel shall be not less than six feet wide. Where separate gangway planks are provided for boarding and for leaving a vessel these planks, if not properly and securely fenced shall be not less than four feet wide.

Hatch coamings, fencing, etc.

41. (1) If any hatch of a hold accessible to any person employed and exceeding five feet in depth, measured from the level of the deck in which the hatch is situated to the bottom of the hold, is not in use for the passage of goods, coal or other material, or for trimming, and the coamings are less than two feet six inches in height, such hatch shall either be fenced to a height of three feet or be securely covered:

Provided that this requirement shall not apply—

(i) to vessels not exceeding 200 tons net registered tonnage which have only one hatchway,

(ii) to any vessel during meal times or other short interruptions of work during the period of employment.

(2) Hatch coverings shall not be used in the construction of deck or cargo stages, or for any other purpose which may expose them to damage.

(3) Hatch coverings shall be replaced on the hatches in the positions indicated by the markings made thereon in pursuance of rule 18.

42. No cargo shall be loaded or unloaded by a fall or sling at any intermediate deck unless either the hatch at that deck is securely covered or a secure landing platform of a width not less than that of one section of hatch coverings has been placed across it:

Use of falls or slings for loading, etc. at intermediate decks.

Provided that this rule shall not apply to any process of unloading the whole of which will be completed within a period of half an hour.

43. When the working space in a hold is confined to the square of the hatch, hooks shall not be made fast in the bands or fastenings of bales of cotton, wool, cork, gunny bags or other similar goods, nor shall can hooks be used for raising or lowering a barrel when, owing to the construction or condition of the barrel or of the hooks, their use is likely to be unsafe.

Use of hooks.

Nothing in this rule shall apply to breaking out or making up slings.

44. When work is proceeding on any skeleton deck, adequate staging shall be provided unless the space beneath the deck is filled with cargo to within a distance of two feet of such deck.

Work on skeleton decks.

45. Where stacking, unstacking, stowing or unstowing of cargo or handling in connection therewith cannot be safely carried out unaided, reasonable measures to guard against accident shall be taken by shoring or otherwise.

Shoring as guard against accident.

46. The beams of any hatch in use for the processes shall, if not removed, be adequately secured to prevent their displacement.

Securing of hatch beams.

47. When cargo is being loaded or unloaded by a fall at a hatchway, a signaller shall be employed, and where more than one fall is being worked at a hatchway, a separate signaller shall be employed to attend to each fall:

Signallers.

Provided that this rule shall not apply in cases where a barge, lighter or other similar vessel is being loaded or unloaded if the driver of the crane or winch working the fall has a clear and unrestricted view of those parts of the hold where work is being carried on.

48. When any person employed has to proceed to or from a ship by water for the purpose of carrying on the processes proper measures shall be taken to provide for his safe transport. Vessels used for this purpose shall be in charge of a competent

Safe conveyance of workers by water.

person, shall not be overcrowded, and shall be properly equipped for safe navigation and maintained in good condition.

#### PART V.

Removal of fencing, gangways, gear, etc.

**49.** No person shall, unless duly authorised or in case of necessity, remove or interfere with any fencing, gangway, gear, ladder, hatch covering, life-saving means or appliances, lights, marks, stages or other things whatsoever required by these rules to be provided. If removed, such things shall be restored at the end of the period during which their removal was necessary by the persons last engaged in the work that necessitated such removal.

Special provision for removal of fencing.

**50.** The fencing required by rule 6 shall not be removed except to the extent and for the period reasonably necessary for carrying on the work of the dock, wharf or ship, or for repairing any fencing. If removed it shall be restored forthwith at the end of that period by the persons engaged in the work that necessitated its removal.

Persons to use means of access provided.

**51.** Every person employed shall use the means of access provided in accordance with rules 13, 14 and 15 and no person shall authorise or order another to use means of access other than those provided in accordance therewith.

No person to go on the fore and aft beams, etc., to adjust lifting gear.

**52.** No person shall go upon the fore and aft beams or thwartship beams for the purpose of adjusting the gear for lifting them on and off nor shall any person authorise or order another to do so.

#### PART VI.

Employers not to allow use of machinery which does not comply with Part III.

**53.** No employer of persons in the process shall allow machinery or gear to be used by such persons which does not comply with Part III of these rules.

Failure to comply with rules 13, 14, and 16.

**54.** If the persons whose duty it is to comply the rules 13, 14 and 16 fail so to do, then it shall also be the duty of the employers of the person employed for whose use the means of access and the lights are required, to comply with the said rules within the shortest time reasonably practicable after such failure.

Production of the register.

**55.** The prescribed register shall, on the application of the Chief Mechanical Engineer, Railway Department, be produced

by the person in charge thereof; if it relates to the lifting machinery and other gear of a ship and is kept on the ship, it shall be produced, together with the certificate of the ship's register, by the person for the time being in charge of the ship.

### SCHEDULE.

#### MANNER OF TEST AND EXAMINATION BEFORE TAKING LIFTING MACHINERY AND GEAR INTO USE.

*Rules 22 (1), 23 (1) and 24 (1) (a).*

(1) Every winch with the whole of the gear accessory thereto (including derrick, goose necks, eye-plates, eye-bolts or other attachments) shall be tested with a proof load which shall exceed the safe working load as follows—

<i>Safe working load.</i>	<i>Proof load.</i>
Up to 20 tons.	25 per cent. in excess.
20—50 tons.	5 tons in excess.
Over 50 tons.	10 per cent. in excess.

The proof load shall be applied either—

- (i) by hoisting movable weights; or
- (ii) by means of a spring or hydraulic balance or similar appliance, with the derrick at an angle to the horizontal which shall be stated in the certificate of the test.

In the former case, after the movable weights have been hoisted, the derrick shall be swung as far as possible in both directions.

In the latter case, the proof load shall be applied with the derrick swung as far as practicable first in one direction and then in the other.

(2) Every crane and other hoisting machine with its accessory gear shall be tested with a proof load which shall exceed the safe working load as follows—

<i>Safe working load.</i>	<i>Proof load.</i>
Up to 20 tons.	25 per cent. in excess.
20—50 tons.	5 tons in excess.
Over 50 tons.	10 per cent. in excess.

The said proof load shall be hoisted and swung as far as possible in both directions. In the case of a jib-crane if the jib has a variable radius it shall be tested with a proof load as defined above at the maximum and minimum radii of the jib. In the case of hydraulic cranes or hoists, where, owing to the limitation of pressure, it is impossible to hoist a load 25 per cent. in excess of the safe working load, it shall be sufficient to hoist the greatest possible load.

(3) Every article of loose gear (whether it is accessory to a machine or not) shall be tested with a proof load at least equal to that shown against the article in the following table—

<i>Article of Gear.</i>	<i>Proof load.</i>
Chain ... ..	} Twice the safe working load.
Ring ... ..	
Hook ... ..	
Shackle ... ..	
Swivel ... ..	
<i>Pulley Blocks:</i>	
Single Sheave Block ... ..	Four times the safe working load.
Multiple Sheave Block with safe working load up to and including 20 tons ... ..	} Twice the safe working load.
Multiple Sheave Block with safe working load over 20 tons up to and including 40 tons ... ..	
Multiple Sheave Block with safe working load over 40 tons ... ..	20 tons in excess of the safe working load.
Multiple Sheave Block with safe working load over 40 tons ... ..	} One and a half times the safe working load.
Multiple Sheave Block with safe working load over 40 tons ... ..	

Provided that where the Chief Mechanical Engineer, Railway Department, is of opinion that, owing to the size, design, construction, material or use of any such loose gear or class of such gear, any of the above requirements are not necessary for the protection of persons employed, he may by certificate in writing (which he may in his discretion revoke) exempt such gear or class of gear from such requirement, subject to such conditions as may be stated in the certificate.

(4) After being tested as aforesaid, all machines with the whole of the gear accessory thereto and all loose gear shall be examined, the sheaves and the pins of the pulley blocks being removed for the purpose, to see that no part is injured or permanently deformed by the test.

(5) In the case of wire ropes, a sample shall be tested to destruction and the safe working load shall not exceed one-fifth of the breaking load of the sample tested.