

INTERNATIONAL LABOUR OFFICE

REPORT FORM

FOR THE

**SAFETY PROVISIONS (BUILDING)
CONVENTION, 1937 (No. 62)**

**AND APPENDIX FORM FOR THE TRIENNIAL REPORT ON THE
SAFETY PROVISIONS (BUILDING)
RECOMMENDATION, 1937 (No. 53)**

The present report form is for the use of countries which have ratified the Convention. It has been approved by the Governing Body of the International Labour Office, in accordance with article 22 of the ILO Constitution, which reads as follows: "Each of the Members agrees to make an annual report to the International Labour Office on the measures which it has taken to give effect to the provisions of Conventions to which it is a party. These reports shall be made in such form and shall contain such particulars as the Governing Body may request."

Annexed to this report form will be found the text of a Recommendation whose provisions supplement those of the present Convention. The sole object of appending the text of this Recommendation to the report form is to contribute to a better understanding of the requirements laid down in the Convention and to facilitate its application.

The Government is under no obligation to supply in its report on the application of the Convention information on the measures which may have been taken to give effect to the Recommendation as such; however, if the Government deems it useful to supply such information in its report, by way of information on practical application, this would make it possible to assess more precisely the extent to which the Convention is applied and the problems which may have arisen in its application.

REPORT

for the period to , made by the Government of , in accordance with article 22 of the Constitution of the International Labour Organisation, on the measures taken to give effect to the provisions of the

SAFETY PROVISIONS (BUILDING) CONVENTION, 1937

ratification of which was registered on

I. Please give a list of the legislation and administrative regulations, etc., which—

- (a) implement the obligations of parties to the Convention, as laid down in Part I of the Convention;
- (b) ensure the application of the General Rules set forth in Parts II to IV of the Convention.

Where this has not already been done, please forward copies of the said legislation, etc., to the International Labour Office with this report.

Please give any available information concerning the extent to which this legislation and administrative regulations have been enacted or modified to permit of, or as a result of, ratification.

II. Please indicate in detail for each of the following Articles of the Convention the provisions of the above-mentioned legislation and administrative regulations, etc., or other measures, under which each Article is applied.

If in your country ratification of the Convention gives the force of national law to its terms please indicate by virtue of what constitutional provisions the ratification has had this effect. Please also specify what action has been taken to make effective those provisions of the Convention which require a national authority to take certain specific steps for its implementation, such as measures to define the exact scope of the Convention and the extent to which advantage may be taken of permissive exceptions provided for in it, measures to draw the attention of the parties concerned to its provisions, and arrangements for adequate inspection and penalties.

If the Committee of Experts or the Conference Committee on the Application of Conventions and Recommendations has requested additional information, or has made an observation on the measures adopted to apply the Convention, please supply the information asked for or indicate the action taken by your Government to settle the points in question.

PART I. OBLIGATIONS OF PARTIES TO THE CONVENTION

Article 1

1. Each Member of the International Labour Organisation which ratifies this Convention undertakes that it will maintain in force laws or regulations—

- (a) which ensure the application of the General Rules set forth in Parts II to IV of this Convention; and
- (b) in virtue of which an appropriate authority has power to make regulations for the purpose of giving such effect as may be possible and desirable under national conditions to the provisions of, or provisions equivalent to the provisions of, the model code annexed to the Safety Provisions (Building) Recommendation, 1937, or any revised model code subsequently recommended by the International Labour Conference.

2. Each such Member further undertakes that it will communicate every third year to the International Labour Office a report indicating the extent to which effect has been given to the provisions of the model code annexed to the Safety Provisions (Building) Recommendation, 1937, or of any revised model code subsequently recommended by the International Labour Conference.

Please give detailed information respecting the authority empowered to make regulations giving effect to the provisions of the model code annexed to the Safety Provisions (Building) Recommendation, 1937 (No. 53).

N.B. It is requested that the form given in the Appendix should be used for the triennial report on the model code annexed to the Safety Provisions (Building) Recommendation required by paragraph 2 of this Article.

Article 2

1. The laws or regulations for ensuring the application of the General Rules set forth in Parts II to IV of this Convention shall apply to all work done on the site in connection with the construction, repair, alteration, maintenance and demolition of all types of buildings.

2. The said laws or regulations may provide that the competent authority may, after consultation with the organisations of employers and workers concerned where such exist, exempt from all or any of their provisions work of such a character that reasonably safe conditions normally obtain.

Please state whether, and, if so, subject to what conditions and after what consultations, etc., advantage has been taken of the provision in paragraph 2 of this Article respecting exemptions from the laws and regulations of certain types of work. In addition, if such exemptions have been granted please give detailed information on the nature, etc., of the work concerned.

Article 3

The laws or regulations for ensuring the application of the General Rules set forth in Parts II to IV of this Convention, and regulations made by the appropriate authority for the purpose of giving effect to the model code annexed to the Safety Provisions (Building) Recommendation, 1937, shall—

- (a) require employers to bring them to the notice of all persons concerned in a manner approved by the competent authority;
- (b) define the persons responsible for compliance therewith; and
- (c) prescribe adequate penalties for any violation thereof.

Please indicate the definition of "the persons responsible for compliance therewith" which has been adopted for the purpose of subparagraph (b) of this Article.

Article 4

Each Member which ratifies this Convention undertakes to maintain, or satisfy itself that there is maintained, a system of inspection adequate to ensure the effective enforcement of its laws and regulations relating to safety precautions in the building industry.

Please give detailed information respecting the organisation, powers, etc., of the inspection service responsible for the enforcement of the laws and regulations relating to safety precautions in the building industry; in addition, please state what qualifications, training, etc., are required of members of the inspection service.

Article 5

1. In the case of a Member the territory of which includes large areas where, by reason of the sparseness of the population or the stage of economic development of the area, the competent authority considers it impracticable to enforce the provisions of this Convention, the authority may exempt such areas from the application of the Convention either generally or with such exception in respect of particular localities or particular kinds of building operations as it thinks fit.

2. Each Member shall indicate in its first annual report upon the application of this Convention submitted under article 22 of the Constitution of the International Labour Organisation any areas in respect of which it proposes to have recourse to the provisions of the present Article and no Member shall, after the date of its first annual report, have recourse to the provisions of the present Article except in respect of areas so indicated.

3. Each Member having recourse to the provisions of the present Article shall indicate in subsequent annual reports any areas in respect of which it renounces the right to have recourse to the provisions of the present Article.

Please indicate in the first annual report of your Government any areas which, in virtue of the authorisation given in paragraph 1 of this Article, have been excluded in whole or in part from the application of this Convention.

Please indicate the specific reason or reasons why in the case of these areas compliance with the requirements of the Convention is considered impracticable, stating whether the exemption claimed is general in scope or whether exceptions are provided for particular localities or particular kinds of work.

Please indicate in subsequent annual reports, in accordance with paragraph 3 of this Article, any areas in respect of which the right to have recourse to the provisions of this Article has been renounced.

Article 6

Each Member which ratifies this Convention undertakes to communicate annually to the International Labour Office the latest statistical information relating to the number and classification of accidents occurring to persons occupied on work within the scope of this Convention.

In addition to the number and classification of accidents, please give as detailed information as possible respecting the number of persons occupied in the building industry and covered by the statistics.

PART II. GENERAL RULES AS TO SCAFFOLDS

Article 7

1. Suitable scaffolds shall be provided for workmen for all work that cannot be safely done from a ladder or by other means.
2. A scaffold shall not be constructed, taken down, or substantially altered, except—
 - (a) under the supervision of a competent and responsible person; and
 - (b) as far as possible by competent workers possessing adequate experience in this kind of work.
3. All scaffolds and appliances connected therewith and all ladders shall—
 - (a) be of sound material;
 - (b) be of adequate strength having regard to the loads and strains to which they will be subjected; and
 - (c) be maintained in proper condition.
4. Scaffolds shall be so constructed that no part thereof can be displaced in consequence of normal use.
5. Scaffolds shall not be overloaded and so far as practicable the load shall be evenly distributed.
6. Before installing lifting gear on scaffolds special precautions shall be taken to ensure the strength and stability of the scaffolds.
7. Scaffolds shall be periodically inspected by a competent person.
8. Before allowing a scaffold to be used by his workmen every employer shall, whether the scaffold has been erected by his workmen or not, take steps to ensure that it complies fully with the requirements of this Article.

Please give detailed information regarding the provisions governing the designation of the “ competent person ” referred to in paragraphs 2 (a) and 7 of this Article.

Article 8

1. Working platforms, gangways and stairways shall—
 - (a) be so constructed that no part thereof can sag unduly or unequally;
 - (b) be so constructed and maintained, having regard to the prevailing conditions, as to reduce as far as practicable risks of persons tripping or slipping; and
 - (c) be kept free from any unnecessary obstruction.
2. In the case of working platforms, gangways, working places and stairways at a height exceeding that to be prescribed by national laws or regulations—
 - (a) every working platform and every gangway shall be closely boarded unless other adequate measures are taken to ensure safety;
 - (b) every working platform and gangway shall have adequate width; and
 - (c) every working platform, gangway, working place and stairway shall be suitably fenced.

Please indicate the height limit prescribed under paragraph 2 of this Article.

Article 9

1. Every opening in the floor of a building or in a working platform shall, except for the time and to the extent required to allow the access of persons or the transport or shifting of material, be provided with suitable means to prevent the fall of persons or material.
2. When persons are employed on a roof where there is a danger of falling from a height exceeding that to be prescribed by national laws or regulations, suitable precautions shall be taken to prevent the fall of persons or material.
3. Suitable precautions shall be taken to prevent persons being struck by articles which might fall from scaffolds or other working places.

Please indicate the height limit prescribed under paragraph 2, and give detailed information as to the measures prescribed with reference to the “ suitable precautions ” to be taken under paragraphs 2 and 3 of this Article.

Article 10

1. Safe means of access shall be provided to all working platforms and other working places.
2. Every ladder shall be securely fixed and of such length as to provide secure handhold and foothold at every position at which it is used.
3. Every place where work is carried on and the means of approach thereto shall be adequately lighted.
4. Adequate precautions shall be taken to prevent danger from electrical equipment.
5. No materials on the site shall be so stacked or placed as to cause danger to any person.

Please state what measures have been prescribed with a view to ensuring compliance with the provisions of paragraph 4 of this Article.

PART III. GENERAL RULES AS TO HOISTING APPLIANCES

Article 11

1. Hoisting machines and tackle, including their attachments, anchorages and supports, shall—
 - (a) be of good mechanical construction, sound material and adequate strength and free from patent defect; and
 - (b) be kept in good repair and in good working order.
2. Every rope used in hoisting or lowering materials or as a means of suspension shall be of suitable quality and adequate strength and free from patent defect.

Please supply in the first annual report of your Government as detailed information as possible concerning national laws or regulations respecting the quality, strength, etc., of hoisting equipment, including hoisting ropes, together with such other information as may be available concerning the methods adopted to comply with this Article, and references to these methods.

Article 12

1. Hoisting machines and tackle shall be examined and adequately tested after erection on the site and before use and be re-examined in position at intervals to be prescribed by national laws or regulations.
2. Every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering materials or as a means of suspension shall be periodically examined.

Please supply in the first annual report of your Government as much information as may be available respecting the methods used in the examination and testing of hoisting equipment. Where the compilation of such information is considered difficult or unjustifiable for practical reasons, a summary of, or reference to, the relevant regulations, etc., would suffice. Please indicate in particular the intervals at which hoisting equipment must be re-examined in accordance with paragraph 1 of this Article.

Article 13

1. Every crane driver or hoisting appliance operator shall be properly qualified.
2. No person under an age to be prescribed by national laws or regulations shall be in control of any hoisting machine, including any scaffold winch, or give signals to the operator.

Please indicate the age-limit prescribed for persons to be employed as crane operators or signallers and the requirements for securing that drivers of cranes and other hoisting appliances are properly qualified.

Article 14

1. In the case of every hoisting machine and of every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering as a means of suspension the safe working load shall be ascertained by adequate means.
2. Every hoisting machine and all gear referred to in the preceding paragraph shall be plainly marked with the safe working load.
3. In the case of a hoisting machine having a variable safe working load each safe working load and the conditions under which it is applicable shall be clearly indicated.
4. No part of any hoisting machine or of any gear referred to in paragraph 1 of this Article shall be loaded beyond the safe working load except for the purpose of testing.

Please give any available information on the means prescribed for the determination of the safe working load, as referred to in paragraph 1 of this Article.

Article 15

1. Motors, gearing, transmissions, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards.

2. Hoisting appliances shall be provided with such means as will reduce to a minimum the risk of the accidental descent of the load.

3. Adequate precautions shall be taken to reduce to a minimum the risk of any part of a suspended load becoming accidentally displaced.

Please supply any information available concerning experience with regard to reliable means for preventing accidental descent of loads suspended from hoisting machinery (paragraph 2 of this Article).

PART IV. GENERAL RULES AS TO SAFETY EQUIPMENT AND FIRST AID

Article 16

1. All necessary personal safety equipment shall be kept available for the use of the persons employed on the site and be maintained in a condition suitable for immediate use.

2. The workers shall be required to use the equipment thus provided and the employer shall take adequate steps to ensure proper use of the equipment by those concerned.

Please give any information available with respect to special steps taken by the employers to ensure proper use of safety equipment (paragraph 2 of this Article) and the experience gained in this matter.

Article 17

When work is carried on in proximity to any place where there is a risk of drowning, all necessary equipment shall be provided and kept ready for use and all necessary steps shall be taken for the prompt rescue of any person in danger.

Article 18

Adequate provision shall be made for prompt first-aid treatment of all injuries likely to be sustained during the course of the work.

III. In addition to the information given under Articles 1, 3 and 4 of the Convention, please state to what government department or other authority the application of the above-mentioned legislation and administrative regulations is entrusted.

IV. Please state whether courts of law or other tribunals have given decisions involving questions of principle relating to the application of the Convention. If so, please supply the text of these decisions.

V. Please add a general appreciation of the manner in which the Convention is applied in your country, including, in so far as such particulars have not already been given under other questions in this form, extracts from the reports of the inspection services, and, if such statistics are available, information regarding the number of workers covered by the relevant legislation, the number and nature of the contraventions reported, the number, nature and causes of accidents reported, etc.

VI. Please indicate the representative organisations of employers and workers to which copies of the present report have been communicated in accordance with article 23, paragraph 2, of the Constitution of the International Labour Organisation.¹ If copies of the report have not been communicated to representative organisations of employers and/or workers, or if they have been communicated to bodies other than such organisations, please supply information on any particular circumstances existing in your country which explain the procedure followed.

Please indicate whether you have received from the organisations of employers or workers concerned any observations, either of a general kind or in connection with the present or the previous report, regarding the practical application of the provisions of the Convention or the application of the legislation or other measures implementing the Convention. If so, please communicate a summary of the observations received, together with any comments that you consider useful.

¹ Article 23, paragraph 2, of the Constitution reads as follows: " Each Member shall communicate to the representative organisations recognised for the purpose of article 3 copies of the information and reports communicated to the Director-General in pursuance of articles 19 and 22."

APPENDIX

FORM FOR THE
TRIENNIAL REPORT
ON THE

SAFETY PROVISIONS (BUILDING) RECOMMENDATION, 1937 (No. 53)

- I. Please give a list of the legislation, administrative regulations, etc., which ensure the application of the model code annexed to this Recommendation. Where this has not already been done, please forward copies of the said legislation, administrative regulations, etc., to the International Labour Office with this report.
 - II. Please indicate as far as may be practicable for the several provisions of each part of the model code the provisions of the above-mentioned legislation, administrative regulations, etc., or other measures under which the provisions of the model code are implemented.
 - III. Please indicate the authority or authorities to which the application of the above-mentioned legislation and administrative regulations, etc., is entrusted.
 - IV. Please add a general appreciation of the manner in which the model code is applied in your country including, in so far as such particulars have not already been given under the annual report on the Safety Provisions (Building) Convention, 1937 (No. 62), or under other questions in this form, extracts from inspectors' reports and, where such statistics are available, information regarding the number of workers covered by the relevant legislation, the number and nature of the contraventions reported, the number, nature and causes of accidents reported, etc., or any other information which your Government may consider to be of interest.
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ANNEX

SAFETY PROVISIONS IN THE BUILDING INDUSTRY RECOMMENDATION, 1937 (No. 53)

The General Conference of the International Labour Organisation,

Having been convened at Geneva by the Governing Body of the International Labour Office, and having met in its Twenty-third Session on 3 June 1937, and

Having decided upon the adoption of certain proposals with regard to safety provisions for workers in the building industry with reference to scaffolding and hoisting machinery, which is the first item on the agenda of the Session, and

Having determined that these proposals shall take the form of an international Convention accompanied by a Recommendation embodying a model code of safety regulations,

adopts this twenty-third day of June of the year one thousand nine hundred and thirty-seven the following Recommendation, which may be cited as the Safety Provisions (Building) Recommendation, 1937:

Whereas it is desirable, with a view to intensifying the efforts being made by the Members of the Organisation to reduce the risk of accident in the building industry, to submit for their consideration model safety provisions and to arrange for an exchange upon an international scale of the experience acquired in the application of these provisions;

Whereas the Safety Provisions (Building) Convention, 1937, embodies a series of general principles which require to be supplemented by detailed safety regulations;

Whereas it is therefore desirable that Members of the Organisation which ratify that Convention should have at their disposal a model code of safety regulations which have been proved by experience to be calculated to reduce the risk of accidents; and

Whereas it is also desirable that such a model code should be available for the guidance of any Members which may be unable to ratify immediately the Safety Provisions (Building) Convention, 1937;

The Conference recommends that:

1. Each Member of the International Labour Organisation should give the fullest effect possible and desirable under national conditions to the provisions of, or provisions equivalent to the provisions of, the annexed Model Code.

2. Any Members of the International Labour Organisation which have not ratified the Safety Provisions (Building) Convention, 1937, should communicate every third year to the International Labour Office on a voluntary basis a report indicating the extent to which effect has been given to the Model Code.

ANNEX

MODEL CODE

PART I: SCAFFOLDS

Regulation 1. Necessity for Scaffolding

Suitable and sufficient scaffolds shall be provided for workmen for all work that cannot safely be done from a ladder or by other means.

Regulation 2. Erection of Scaffolds

A scaffold shall not be constructed, taken down or substantially altered except under the direction of a competent and responsible person and as far as possible by competent workers possessing adequate experience in this kind of work.

Regulation 3. Quality of Materials

1. All scaffolds and appliances connected therewith and all ladders shall be of sound material and be of adequate strength having regard to the loads and strains to which they will be subjected.

2. The wooden parts used for scaffolds, gangways, runs and ladders shall be of good quality, shall have long fibres, shall be in good condition, and shall not be painted or treated in a manner likely to hide defects.

3. Timber used for scaffolds shall have the bark completely stripped off.

4. Where necessary, boards and planks used for scaffolds shall be protected against splitting.

5. Metal parts of scaffolds shall have no cracks and shall be free from any corrosion or other defect likely to affect their strength.

6. Cast-iron nails shall not be used.

Regulation 4. Inspection and Storage of Materials

1. Scaffold parts, including scaffolding machines and ropes and cables, shall be examined by an experienced person on each occasion before erection and shall not be used on any occasion unless in every respect they possess the qualities required for their purpose.

2. Any rope that has been in contact with acids or other corrosive substances or is defective shall not be used.

3. All materials used in the construction of scaffolds shall be stored under good conditions and apart from any material unsuitable for scaffolds.

Regulation 5. Supply and Use of Material and Maintenance of Scaffolds

1. Sufficient material shall be provided for and shall be used in the construction of scaffolds.

2. (1) Every scaffold shall be maintained in good and proper condition and every part shall be kept fixed or secured so that no part can be displaced in consequence of normal use.

(2) No scaffold shall be partly dismantled and left so that it is capable of being used unless it continues to comply with the Regulations.

Regulation 6. Pole and Gabbard Scaffolds

1. Pole standards and the legs of gabbard scaffolds shall be—

- (a) vertical or slightly inclined towards the building; and
- (b) fixed sufficiently close together to secure the stability of the scaffolds having regard to all the circumstances.

2. The stability of pole standards shall be secured—

- (a) by letting the pole the necessary distance into the ground according to the nature of the soil; or
- (b) by placing the pole on a suitable plank or other adequate sole plate in such a manner as to prevent slipping; or
- (c) in any other sufficient way.

3. When two scaffolds meet at the corner of a building a pole standard shall be placed at the corner on the outside of the scaffolds.

4. (1) Ledgers shall be practically level and securely fastened to the uprights by bolts, dogs, ropes or other efficient means.

(2) The ends of two consecutive ledgers at the same level shall be securely joined together at an upright except when special devices are used which ensure equivalent strength.

5. (1) Putlogs shall be straight and securely fastened to the ledgers.

(2) If ledgers are not used the putlogs shall be fastened to the uprights and supported by securely fastened cleats.

(3) Putlogs which have one end supported by a wall shall have at that end a plane supporting surface at least 10 cm. deep.

(4) The dimensions of the putlogs shall be appropriate to the load to be borne by them.

(5) The distance between two consecutive putlogs on which a platform rests shall be fixed with due regard to the anticipated load and the nature of the platform flooring.

(6) As a general rule the said distance shall not exceed 1 m. with planks less than 40 mm. thick, 1.50 m. with planks less than 50 mm. thick, and 2 m. with planks at least 50 mm. thick.

(7) The requirements of paragraph 5 (6) of this Regulation shall not apply in the case of platforms used for carrying light building materials only, but in the case of such platforms the distance between the putlogs shall not exceed 2 m.

6. No plank used for a platform shall be less than 30 mm. thick.

Regulation 7. Ladder Scaffolds

1. Ladder scaffolds shall be used only for light work requiring little material (renovation, painting and the like).

2. The ladders serving as the uprights of ladder scaffolds—

- (a) shall be of adequate strength; and
- (b) shall either—
 - (i) be let into the ground to the necessary depth according to the nature of the soil; or
 - (ii) be placed on sole plates or boards so that the two uprights of each ladder rest evenly on the base, and be suitably fastened at the feet to prevent them from slipping.

3. If a ladder is used to extend another, the two shall overlap at least 1.50 m. and shall be securely fastened together.

Regulation 8. Stability of Pole, Gabbard and Ladder Scaffolds

1. Every scaffold shall be sufficiently and properly braced.

2. Every scaffold shall, unless it is an independent scaffold, be rigidly connected with the building at suitable vertical and horizontal distances.

3. If the scaffold is an independent scaffold, at least one-third of the putlogs shall remain in position until the scaffold is finally dismantled and remain securely fastened to the ledgers or the uprights as the case may be.

4. All structures and appliances used as supports for working platforms shall be of sound construction, have a firm footing, and be suitably struted and braced to make them stable.

5. Loose bricks, drain pipes, chimney pots or other unsuitable material shall not be used for the construction or support of scaffolds.

Regulation 9. Cantilever or Jib Scaffolds

1. Cantilever or jib scaffolds shall—

- (a) be securely fixed and anchored from the inside;
- (b) have outriggers of adequate length and cross-section to ensure their solidity and stability; and
- (c) be properly braced and supported.

2. Only solid parts of the building shall be used as supports for scaffold parts.

3. If working platforms rest on bearers let into the wall the bearers shall be efficiently braced, shall go right through the wall and shall be securely fastened on the far side.

Regulation 10. Bracket Scaffolds

No figure or bracket scaffold supported or held by dogs or spikes driven into the wall shall be used unless the brackets are of suitable strength, are made of suitable metal, and are securely anchored in the wall.

Regulation 11. Heavy Suspended Scaffolds with Movable Platforms

1. Heavy suspended scaffolds shall comply with the provisions of this Regulation.

2. Outriggers shall be—

- (a) of adequate strength and cross-section to ensure the solidity and stability of the scaffold;
- (b) installed at right angles to the building face; and
- (c) carefully spaced to suit the putlogs or deck irons.

3. The overhang of the outriggers from the building shall be such that the platform is fixed to hang not more than 10 cm. from the building face.

4. (1) The outriggers shall be securely anchored to the building by bolts or other equivalent means.

(2) Anchor bolts shall be properly tightened and shall securely tie down the outrigger to the framework of the building.

5. No counterweight shall be used as a means of securing the outriggers of such scaffolds.

6. Stop bolts shall be placed at the end of each outrigger.

7. The shackles serving to fasten the cables to the outriggers shall be placed vertically above the drum centres of the winches on the movable platforms. The eye of the cable shall be placed in the centre of the bent shackle bolt.

8. Suitable putlogs or deck irons shall be used to support the platforms and shall be suitably fastened so as to prevent displacement. Deck irons shall be adequately jointed by fish plates.

9. The cables or wire ropes used for suspension shall—

- (a) have at all times a factor of safety of at least ten, based on the maximum load that the ropes may have to support, and
- (b) be of such length that at the lowest position of the platform there are at least two turns of rope on each drum.

10. The scaffolding machines shall be so constructed and installed that their moving parts are readily accessible for inspection.

Regulation 12. Light Suspended Scaffolds with Movable Platforms

1. Light suspended scaffolds shall comply with the provisions of this Regulation.

2. The outriggers shall be of adequate length and cross-section and shall be properly installed and supported.

3. (1) The inside ends of the outriggers shall be firmly secured.

(2) When the outriggers are anchored by bags of ballast or other loose counterweights the bags or counterweights shall be securely lashed to the outriggers.

(3) The suspension ropes shall have a factor of safety of at least ten.

4. The maximum length of the platform shall be 8 m.

5. The platform shall hang on at least three ropes which shall be not more than 3 m. apart. No intermediate rope shall at any time be tauter than either of the end ropes.

6. The pulley blocks shall be fastened to the platforms by stout iron bands which shall be properly secured, shall be continued round the sides and bottom of the platform, and shall have eyes in the iron to receive the ropes.

7. Suspended scaffolds on which the workers sit to work shall be provided with devices to keep the platform at a distance of at least 30 cm. from the wall and to prevent the workers from knocking their knees against the wall if the scaffold swings.

Regulation 13. Other Suspended Scaffolds

1. A skip, large basket, boatswain's chair or similar equipment shall only be used as a suspended scaffold in exceptional circumstances for work of short duration, and under the supervision of a responsible person.

2. When such equipment is used as a suspended scaffold—

- (a) it shall be supported by ropes having a safety factor of at least ten based on the total load including the dead weight; and
- (b) the necessary precautions shall be taken to prevent the workers from falling out.

3. When a skip or large basket is used as a suspended scaffold—

- (a) it shall be at least 75 cm. deep; and
- (b) it shall be carried by two strong iron bands which shall be properly fastened, shall be continued round the sides and bottom, and shall have eyes in the iron to receive the ropes.

Regulation 14. Transport and Storage of Materials on Scaffolds: Distribution of the Load

1. In transferring heavy loads on or to a scaffold no sudden shock shall be transmitted to the scaffold.

2. The load on the scaffold shall be evenly distributed as far as is practicable and in any case shall be so distributed as to avoid any dangerous disturbance of the equilibrium.

3. During the use of a scaffold care shall constantly be taken that it is not overloaded and that materials are not unnecessarily kept upon it.

Regulation 15. Installation of Lifting Gear on Scaffolds

1. When lifting gear is to be used on a scaffold—

- (a) the parts of the scaffold shall be carefully inspected, and, if need be, adequately strengthened;
- (b) any movement of the putlogs shall be prevented; and
- (c) if possible the uprights shall be rigidly connected to a solid part of the building at the place where the lifting gear is erected.

2. When the platform of the lifting gear does not move in guides or when the load is liable to come into contact with the scaffold during hoisting or lowering, a vertical hoarding shall be erected to the full height of the scaffold to prevent loads from being caught in it.

Regulation 16. Periodic Inspection of Scaffolds

Scaffolds shall be inspected by a competent person—

- (a) at least once a week; and
- (b) after every spell of bad weather and every material interruption in the work.

Regulation 17. Examination of Scaffolds before Use, Especially Scaffolds Constructed by Other Contractors

Every scaffold, whether or not it has been erected by the employer whose workmen are about to use it—

- (a) shall before use be examined by a competent person to ensure more particularly—
 - (i) that it is in a stable condition;
 - (ii) that the materials used in its construction are sound;

- (iii) that it is adequate for the purpose for which it is to be used; and
- (iv) that the required safeguards are in position; and
- (b) shall during use be maintained in good condition.

Regulation 18. Working Platforms

1. Every working platform which is more than 2 m. above the ground or floor shall be closely boarded or planked.

2. (1) The width of the platform shall be adequate having regard to the nature of the work, and shall be such that at every part there is not less than 60 cm. clear passage free from fixed obstacles and deposited material.

(2) In no case shall the width of the platforms be less than—

- (a) 60 cm. if the platform is used as a footing only and not for the deposit of any material;
- (b) 80 cm. if the platform is used for the deposit of material;
- (c) 110 cm. if the platform is used for the support of any higher platform;
- (d) 130 cm. if the platform is one upon which stone is dressed or roughly shaped;
- (e) 150 cm. if the platform is used for the support of any higher platform and is one upon which stone is dressed or roughly shaped.

3. The maximum width of a platform supported on putlogs shall as a rule not exceed 160 cm.

4. Every working platform shall, if part of a pole or gabbard scaffold, be at least 1 m. below the top of the standards.

5. Boards or planks which form part of a working platform or which are used as toe-boards shall—

- (a) be of a thickness which is such as to afford adequate security having regard to the distance between the putlogs but is in no case less than 30 mm.; and
- (b) be of a width not less than 15 cm.

6. No board or plank which forms part of a working platform shall project beyond its end support to a distance exceeding four times the thickness of the board or plank.

7. Boards or planks shall not overlap one another unless precautions such as the provision of bevelled pieces are taken to reduce the risk of tripping to a minimum and to facilitate the movement of barrows.

8. Every board or plank which forms part of a working platform shall rest on at least three supports, unless the distance between the putlogs and the thickness of the board or plank are such as to exclude all risk of tipping or undue sagging.

9. Platforms shall be so constructed that the boards or planks cannot be displaced in consequence of normal use.

10. Whenever possible a platform shall extend at least 60 cm. beyond the end of the wall of the building.

11. Every part of a working platform or working place from which a person is liable to fall a distance exceeding 2 m. shall be provided—

- (a) with a suitable guard-rail or guard-rails having a cross-section of at least 30 cm.^a fixed at least

1 m. above the platform or above any raised standing place on the platform and so that the vertical opening below any guard-rail does not exceed 85 cm.;

- (b) with toe-boards which are of sufficient height to prevent the fall of materials and tools from the platform and in no case less than 15 cm. high and are as close as possible to the platform.

12. Guard-rails, toe-boards and other safeguards used on a scaffold platform shall be maintained in position, except that they may be removed for the time and to the extent required to allow the access of persons or the transport or shifting of materials.

13. The guard-rail and toe-boards used on a scaffold platform shall be placed on the inside of the uprights.

14. The platforms of suspended scaffolds shall be provided with guard-rails and toe-boards on all sides, subject to the reservations that—

- (a) on the side facing the wall the guard-rail need not be at a height of more than 70 cm. if the work does not allow of a greater height;
- (b) the guard-rail and toe-boards shall not be compulsory on the side facing the wall if the workers sit on the platform to work, but in such case the platform shall be provided with cables, ropes or chains affording the workers a firm handhold and capable of holding any worker who may slip.

15. The space between the wall and the platform shall be as small as practically possible except where workmen sit on the platform during their work, in which case it shall not exceed 45 cm.

Regulation 19. Gangways, Runs and Stairs

1. Every gangway or run any part of which is more than 2 m. above the ground or floor shall be—

- (a) closely boarded or planked; and
- (b) at least 50 cm. wide.

2. The maximum slope of any gangway or run shall be 60 cm. per metre.

3. Where the gangway or run is used for the passage of materials there shall be maintained a clear passageway which—

- (a) is adequate in width for transport of materials without the removal of the guard-rails and toe-boards; and
- (b) is in any case of a width not less than 60 cm.

4. All planks forming a gangway or run shall be so fixed and supported as to prevent undue or unequal sagging.

5. When the slope renders additional foothold necessary, and in every case where the slope is more than 25 cm. per metre, there shall be proper stepping laths which shall—

- (a) be placed at suitable intervals; and
- (b) be the full width of the gangway, except that they may be interrupted over a breadth of 10 cm. to facilitate the movement of barrows.

6. Stairs shall be provided with guard-rails throughout their length.

7. Gangways, runs and stairs from which a person is liable to fall a distance exceeding 2 m. shall be provided—

- (a) with a suitable guard-rail or guard-rails having a cross-section of at least 30 cm.² fixed at least 1 m. above the gangway, run or stair and so that the vertical opening below any guard-rail does not exceed 85 cm.; and
- (b) with toe-boards which are of sufficient height to prevent the fall of material and tools from the gangway, run or stair and in no case less than 15 cm. high, and are as close as possible to the gangway, run or stair.

*Regulation 20. General Provisions
concerning Platforms, Gangways, Runs
and Stairs*

1. Every platform, gangway, run or stairway shall be kept free from any unnecessary obstruction, rubbish, etc.
2. Suitable precautions shall be taken to prevent any platform, gangway, run or stairway from becoming slippery.
3. No part of a working platform, gangway or run shall be supported by loose bricks, drain pipes, chimney pots or other loose or unsuitable material.
4. No working platform, gangway or run shall be supported by an eaves gutter, a balcony or its coping, a lightning-conductor or other unsuitable parts of a building.
5. No working platform, gangway or run shall be used for working upon until its construction is completed according to these Regulations and the prescribed safeguards properly fixed.

Regulation 21. Trestle Scaffolds

1. There shall not be used any trestle scaffold which—
 - (a) is of more than two tiers; or
 - (b) exceeds a height of 3 m. from the ground or floor; or
 - (c) is erected on a suspended scaffold.

2. The width of a trestle scaffold erected on a platform shall be such as to leave sufficient unobstructed space on the platform for the transport of materials or the passage of persons.

3. Trestles shall be firmly fixed so as to prevent displacement.

Regulation 22. Ladders

1. Every ladder used as a means of communication shall rise at least 1 m. above the highest point to be reached by any person using the ladder, or one of the uprights shall be continued to that height to serve as a hand-rail at the top.
2. Ladders shall not stand on loose bricks or other loose packing but shall have a level and firm footing.
3. Every ladder—
 - (a) shall be securely fixed so that it cannot move from its top or bottom points of rest; or
 - (b) if it cannot be secured at the top, shall be securely fastened at the base; or
 - (c) if fastening at the base is also impossible, shall have a man stationed at the foot to prevent slipping.
4. The undue sagging of ladders shall be prevented.

5. Ladders shall be equally and properly supported on each upright.

6. Where ladders connect different floors—

- (a) the ladders shall be staggered; and
- (b) a protective landing with the smallest possible opening shall be provided at each floor.

7. A ladder having a missing or defective rung shall not be used.

8. No ladder having any rung which depends for its support on nails, spikes or other similar fixing shall be used.

9. Wooden ladders shall be constructed with—

- (a) uprights of adequate strength made of wood free from visible defects and having the grain of the wood running lengthwise; and
- (b) rungs made of wood free from visible defects and mortised into the uprights, to the exclusion of any rungs fixed only by nails.

10. Roofers' and painters' ladders shall not be used by workmen in other trades.

Regulation 23. Fencing of Openings

1. Every opening left in a floor of a building or in a working platform for an elevator shaft or stairway, or for the hoisting of material, or for access by workmen or for any other purpose shall be provided—

- (a) with a suitable guard-rail or guard-rails having a cross-section of at least 30 cm.² fixed at least 1 m. above the floor or platform, and so that the vertical opening below any guard-rail does not exceed 85 cm.;
- (b) with toe-boards which are of sufficient height to prevent the fall of materials and tools from the floor or platform and in no case less than 15 cm. high and are as close as possible to the floor or platform.

2. Every opening in a wall which is less than 1 m. from the floor or platform shall be provided—

- (a) with a suitable guard-rail or guard-rails, having a cross-section of at least 30 cm.² and fixed at least 1 m. above the floor or platform; and so that the vertical opening below any guard-rail does not exceed 85 cm.;
- (b) when necessary, with toe-boards which are of sufficient height to prevent the fall of material and tools and in no case less than 15 cm. high and are as close as possible to the floor or platform or to the lower side of the opening.

3. The fencing of openings shall, except in so far as its removal is permitted by the following paragraph, remain in position until it becomes necessary to remove it in order to complete the permanent enclosure.

4. The fencing of openings shall not be removed except for the time and to the extent required to allow the access of persons or the transport or shifting of materials and shall be replaced immediately after.

5. When work is done on or over open joisting, the joisting shall be securely boarded over or other effective measures shall be taken to prevent falls of persons.

Regulation 24. Roof Work

1. No person shall be employed on any roof on which, by reason of the pitch, the nature of the surface, or the state of the weather, there is a risk of falling, unless suitable precautions are taken to prevent the fall of persons or materials.

2. On glass roofs, or roofs covered with fragile materials, special precautions shall be taken to prevent the workers from inadvertently stepping on them and to facilitate the safe carrying out of repairs.

3. (1) Only experienced workmen who are physically and psychologically suitable shall be employed on extensive work on the outside of any roof which has a pitch of over 34° (2 : 3) or is slippery.

(2) When persons are so employed—

(a) whenever possible the following facilities shall be provided:

- (i) suitable guard-rails;
- (ii) a suitable working platform, securely supported and of a width of not less than 40 cm.; and
- (iii) suitable, sufficient and properly secured ladders, duck ladders or crawling boards;

(b) whenever it is impossible to provide the facilities specified in subparagraph (a)—

- (i) safety belts with ropes enabling the wearers to lash themselves to a solid structure shall be supplied to the workers and used by them; and
- (ii) if the safety rope cannot be fixed to a solid structure a second person shall be provided to hold the rope in a secure manner.

Regulation 25. Miscellaneous Provisions

1. Any part of the premises where any person at work or passing is liable to be struck by materials, tools, or other articles falling more than 3.5 m. shall be covered in such a manner as to protect such persons, unless other effective steps are taken to prevent falls of objects from such height.

2. Scaffold materials, tools, or other objects shall not be thrown down, but be properly lowered.

3. Safe means of access shall be provided to all working platforms and other working places.

4. Every working place and other place to which access is required for any person and every means of approach thereto shall be efficiently lighted.

5. When necessary, special lighting shall be provided at all parts of scaffolds and structures where materials are hoisted.

6. During all construction, repair, alteration, maintenance or demolition of buildings, all necessary precautions shall be taken to prevent the workers from coming into contact with electric wires or equipment, including low-tension wires and equipment.

7. Protruding nails shall be knocked in or removed from all materials used in the construction of scaffolding or false-work.

8. No materials on the site shall be so stacked or placed as to cause danger to any person.

PART II: HOISTING APPLIANCES

Regulation 26. General Provisions

1. Every part of the structure, working gear and anchoring and fixing appliances of every crane, crab and winch and of all other hoisting machines and tackle shall—

- (a) be of good mechanical construction, sound material and adequate strength and substance and free from defect;
- (b) be kept in good repair and in good working order; and
- (c) as far as the construction permits be examined in position at least once in every week by the driver or other competent person.

2. Adequate steps shall be taken to ascertain the safe working load of every hoisting appliance.

3. The maximum safe working load shall be plainly marked—

- (a) upon every crab, winch and pulley block used in the hoisting or lowering of any load;
- (b) upon every derrick pole or mast used in the hoisting or lowering of any load weighing 1,000 kg. or more; and
- (c) upon every crane.

4. In the case of a crane fitted with a derricking jib, the safe working load at various radii of the jib shall be plainly marked upon it.

5. A crane, crab, winch or any other hoisting appliance, or any part of such appliance, shall not, except as permitted by the following paragraph, be loaded beyond the safe working load.

6. For the purpose of making tests of a crane or other hoisting appliance or gear the safe working load may be exceeded by such amount as the competent person appointed to carry out the tests may authorise.

7. During hoisting operations effective precautions shall be taken to prevent any person from standing or passing under the load.

8. No load shall be left suspended from a hoisting appliance unless there is a competent person actually in charge while the load is so suspended.

9. Every crane driver or hoisting appliance operator shall be properly qualified.

10. No person under 18 years of age shall be in control of any hoisting machine, including any scaffold winch, or give signals to the operator.

11. Under normal working conditions one person only shall be appointed as being responsible for the giving of all signals to the crane driver.

12. When any hoisting or lowering is performed by means of a crane and the crane driver or person operating the crane is unable to see the load in all its positions, one or more look-out or signalmen shall be stationed so as to see the load throughout its travel and give the necessary signals to the crane driver or person operating the crane.

13. (1) For each operation to be performed there shall be a distinctive signal of such a character that the person to whom it is given shall be able to hear or see it easily.

(2) Where a sound, colour or light signal is used, it shall be made by an efficient device.

(3) Every signal wire shall be adequately protected from accidental interference.

14. Motors, gearing, transmissions, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards which shall not be removed while the machine or apparatus is in use. If the safeguards have to be removed they shall be replaced as soon as possible by the persons removing them and in any case before the machines and apparatus are again taken into normal service.

15. The driver of every crane or similar hoisting appliance shall be provided with a safe and covered stand, cab or cabin.

16. (1) Where reasonably practicable the driver's cab on every crane or other hoisting machine shall, before the crane or other hoisting machine is put into general use, be completely erected or adequate provision made for the protection of the driver from the weather.

(2) During cold weather the cabin of every power-driven crane or other hoisting appliance in use shall be adequately heated by suitable means.

Regulation 27. Winches, Crabs and Pulleys

1. Every part of the framework of every crab or winch, including the bearers, shall be of metal.

2. When wire ropes are used, the diameter of the pulleys or drums shall not be less than 400 times the diameter of the wires in the rope excluding the core of the rope.

3. When winch drums are grooved—

- (a) the radius of the grooves shall be approximately the same as, but not less than, the radius of the rope; and
- (b) the pitch of the grooves shall not be less than the diameter of the rope.

4. Winch drums shall be provided with flanges that prevent the rope from slipping off the drum.

5. Every crane, crab and winch shall be provided with an efficient brake or brakes and with any other safety device required to prevent the fall of the load when suspended.

6. On every crab or winch the control lever shall be provided with a suitable locking device.

7. On steam-driven lifting engines the lever controlling the link motion reversing gear shall be provided with a suitable spring-lock arrangement.

Regulation 28. Suspension and Attachment

1. All cables or ropes used on hoisting appliances for raising or lowering materials shall be long enough to leave at least two turns on the drum at every operating position of the appliance.

2. No rope shall be used over a grooved drum or pulley if its diameter exceeds the pitch of the drum grooves or the width of the pulley groove.

3. Wire ropes shall be such as to have a factor of safety of at least six under the maximum load. In calculating the dimensions of wire ropes the ropes shall be assumed to be under tensile stress only.

4. No chain or wire rope which has a knot tied in it shall be used for raising or lowering any load.

5. Every hoisting or derricking rope or chain shall be securely fastened to the barrel of the crane, crab or winch with which it is used.

6. Each temporary attachment or connection of a rope, chain or other appliance used in the erection or dismantling of a crane shall be adequate and secure.

7. Every rope used in hoisting or lowering or as a means of suspension shall be of suitable quality and adequate strength and in good condition.

8. Every chain, ring, hook, shackle, swivel and pulley block used for hoisting or lowering or as a means of suspension shall have been tested and be marked in plain figures and letters with the safe working load and an identification mark.

9. No gear used for attachment or as a means of suspension shall be loaded beyond its safe working load, except for the purpose of making tests.

10. Every chain, ring, hook, shackle and swivel used in hoisting or lowering or as a means of suspension which has been lengthened, altered or repaired by welding shall be adequately tested and examined before being again taken into use.

11. Every hook used for hoisting or lowering shall either—

- (a) be provided with an efficient catch to prevent the displacement of the sling or load from the hook; or
- (b) be of such shape as to reduce as far as possible the risk of such displacement.

12. The parts of hooks liable to come into contact with ropes or chains during the raising or lowering of loads shall be rounded.

13. Where double or multiple slings are used for hoisting or lowering purposes the upper ends of the slings shall be connected by means of a shackle or ring and not be put separately into a lifting hook; this requirement shall not apply when the total load lifted is less than one-half of the safe working load of the hook.

14. When bulky objects are being raised or lowered the maximum safe load of slings shall be determined with reference, not only to their strength, but also to the angle of the legs.

15. Sharp edges of a load shall not be in contact with slings, ropes or chains.

16. All chains, ropes, slings and other gear used for hoisting or lowering or as a means of suspension shall be periodically examined by a competent person and this person's findings shall be entered on a certificate or in a special register.

Regulation 29. Cranes

1. The stage for every crane shall be built of sound material and be of good mechanical construction having regard to its height and position and to the lifting and reaching capacity of the crane.

2. The platform of every crane shall—

- (a) be close-planked or plated;
- (b) be securely fenced according to these Regulations;
- (c) be provided with safe means of access; and
- (d) be of sufficient area—
 - (i) in all cases, for the driver or operator and signalman; and

- (ii) in the case of a guy derrick crane, also for the operator of the slewing mechanism.

3. (1) Every fixed crane shall either be securely anchored or be adequately weighted by suitable ballast firmly secured to ensure stability.

(2) When a crane is weighted by ballast a diagram showing the position and size of the counterweights shall be posted up in the driver's cab.

(3) Every travelling crane shall be provided with a device for anchoring it to the rails of the crane track.

4. On every stage, gantry or other place on which a crane moves there shall in so far as practicable be maintained at every position of the crane an unobstructed passageway of a width of at least 60 cm. between the moving parts of the crane and the fixed parts or edge of such stage, gantry or place.

5. If at any time it is impracticable to maintain a passage-way of a width of at least 60 cm. at any place or point, all reasonable steps shall be taken to prevent the access of any person to such place or point at such time.

6. All rails on which a travelling crane moves shall be of adequate section and have an even running surface.

7. The following requirements shall apply to every track of a travelling crane, whether resting on the ground or raised above the ground—

- (a) the whole track shall be properly laid;
- (b) all the supports shall be of sufficient strength and be maintained in good condition; and
- (c) the ends of the track shall be provided with shoes or buffers.

8. All rails on which a travelling crane moves shall, unless other adequate steps are taken to ensure the proper junction of, and to prevent any material alteration in the gauge of, the rails—

- (a) be jointed by fish-plates or double chairs; and
- (b) be securely fastened to sleepers.

9. The track and turntable of every travelling crane shall be installed with the greatest care and in conformity with sound technical principles.

Regulation 30. Examination of Cranes Certificates

1. No crane shall be used unless it has been tested and examined by a competent person acting for the inspection authority and there has been obtained from the person who made the test and examination a certificate thereof specifying the safe working load at various radii of the jib, including the maximum radius at which the jib can be worked.

2. The examinations and tests required by this Regulation shall be repeated—

- (a) at such regular intervals as are prescribed by the competent authority; and
- (b) after all substantial alterations or repairs to the crane.

3. The safe working load at any radius specified in the most recent certificate—

- (a) shall not be more than 80 per cent of the maximum load which the crane has stood at that radius during the application of the test; and
- (b) shall not be greater than the working load indicated by the maker.

Regulation 31. Derrick Cranes

1. The maximum radius at which the jib may be worked shall be clearly indicated on every derrick crane.

2. When the jib is at the maximum radius there shall not be less than two dead turns of rope on the derricking drum.

3. The jib of a Scotch derrick crane shall not be erected between the back stays of the crane.

4. Every crane having a derricking jib shall be provided with an effective interlocking arrangement between the derricking clutch and the pawl sustaining the derricking drum, except where—

- (a) the hoisting drum and the derricking drum are independently driven; or
- (b) the mechanism driving the derricking drum is self-locking.

5. Where the guys of a guy derrick crane cannot be fixed at approximately equal spacing, such other measures shall be taken as will ensure the safety of the crane.

6. The whole of the appliances for the anchorage of a crane shall be examined on each occasion before the crane is erected.

7. The erection of cranes shall be supervised by a competent person.

8. Each crane shall after each erection on a building site and before use be tested *in situ* for anchorage by a competent person.

9. Cranes shall be tested for anchorage by the imposition on each anchorage of the maximum uplift or pull exerted either—

- (a) by a load of 25 per cent above the maximum load to be lifted by the crane as erected; or
- (b) by a less load arranged to exert an equivalent pull on the anchorage.

10. If the pull applied by the test to any anchorage is less than 25 per cent in excess of the pull which would be exerted by the maximum safe working load, a loading diagram appropriate to the crane anchorage shall be affixed in a position where it can readily be seen by the crane driver.

Regulation 32. Automatic Safe Load Indicators

1. No jib crane whether having a fixed jib or a derricking jib shall be used unless it is fitted with an automatic indicator which—

- (a) indicates clearly to the driver or person operating the crane when the load being moved approaches the safe working load of the crane at any inclination of the jib; and
- (b) gives an efficient sound signal when the load being moved is in excess of the safe working load of the crane at any inclination of the jib.

2. The preceding paragraph does not apply to—

- (a) any guy derrick crane;
- (b) any hand crane which is being used solely for erecting or dismantling another crane; or
- (c) any crane having a maximum safe working load of 1,000 kg. or less,

but in all such cases a table showing the safe working loads at various radii of the jib shall be kept attached to the crane.

*Regulation 33. Various Rules concerning
Crane Operation*

1. (1) A crane shall not be used otherwise than for direct lifting or lowering of a load unless its stability is not thereby endangered.

(2) No load which lies in the angle between the back stays of a Scotch derrick crane shall be moved by that crane.

2. Where more than one crane or winch is required to lift or lower one load—

(a) the machinery, plant and appliances used shall be so arranged and fixed that no such crane or winch shall at any time be loaded beyond its safe working load or be rendered unstable in the hoisting or lowering of the load; and

(b) a person shall be specially appointed to co-ordinate the operation of the appliances working together.

3. When a load is thought to approach the maximum safe working load a trial shall be made by raising the load a short distance to ensure that the hoisting appliance can carry it safely.

Regulation 34. Hoists

1. Hoists (i.e. lifting appliances provided with a cage or platform that runs in guides) used for raising and lowering materials shall satisfy the requirements of this Regulation.

2. (1) Hoist shafts shall be provided with solid walls or other equally effective fencing—

(a) at the ground level on all sides; and

(b) at all other levels on all sides to which access is provided.

(2) The walls of hoist shafts, except at approaches, shall extend at least 2 m. above the floor, platform or other place to which access is provided.

3. Approaches to hoists shall be provided with solid gates or other equally effective fencing which—

(a) are at least 1 m. high; and

(b) close automatically when the hoist platform leaves the landing.

4. Approaches to hoists shall be adequately lighted.

5. The guides of hoist platforms shall offer sufficient resistance to bending and, in the case of jamming by a safety catch, to buckling.

6. The platform shall be so constructed that safe transport is ensured.

7. On platforms for truck transport the trucks shall be efficiently blocked in a safe position on the platform.

8. Counterweights consisting of an assemblage of several parts shall be made of specially constructed parts rigidly connected together.

9. The counterweight shall run in guides.

10. If two or more wire ropes are used the load shall be equally distributed between them.

11. Each suspension rope shall be in one piece.

12. The rope ends shall be fastened to the platform attachment by splicing and tight binding with steel wire, by sealing or by clamping with the aid of

rope clamps; wherever possible, thimbles shall be used.

13. Drum anchorages of suspension ropes shall be adequate and secure.

14. Ropes shall be long enough to leave at least two turns on the drum when the cage or platform is at its lowest position, and be of such diameter as to have a safety factor of at least eight under the maximum load.

15. When wire ropes are used, the diameter of the pulleys or drums shall not be less than 400 times the diameter of the wires in the rope.

16. When winch drums are grooved—

(a) the radius of the grooves shall be approximately the same as, but not less than, the radius of the rope; and

(b) the pitch of the grooves shall not be less than the diameter of the rope.

17. Winch drums shall be provided with flanges that prevent the rope from slipping off the drum.

18. It shall not be possible to reverse the motion of the hoist without first bringing it to rest.

19. It shall not be possible to set the hoist in motion from the platform.

20. Pawls and ratchet wheels with which the pawl must be disengaged before the platform is lowered shall not be used.

21. Where the person operating the hoist cannot see clearly every position of the platform, arrangements shall be made for effective signals to be given to the hoist operator by a responsible person who can see the platform at each position.

22. (1) When the platform is at rest the brake shall be applied automatically.

(2) During loading and unloading the platform shall be blocked by catches or other devices in addition to the brake.

23. Hoists shall be provided with devices that stop the winding engine as soon as the platform reaches its highest stopping-place.

24. Above the highest stopping-place a clearance shall be provided high enough to allow sufficient unobstructed travel of the cage or platform in case of overwinding.

25. (1) No hoist shall be used unless it has been tested and examined by a competent person and a certificate of such test and examination has been issued by that person in the prescribed form.

(2) Such test and examination shall be repeated—

(a) at such regular intervals as are prescribed by the competent authority; and

(b) after every substantial alteration or repair and every re-erection.

26. (1) The above provisions apply only to hoists used for raising or lowering materials.

(2) No hoist shall be used for the conveyance of persons unless—

(a) such use has been authorised by the competent authority; or

(b) the hoist complies with the conditions laid down for the installation and operation of lifts used for the conveyance of persons in industrial undertakings.

27. The following notices shall be posted up conspicuously and in very legible characters:

(a) on all hoists:

(i) *on the platform*: the carrying capacity in kilograms or other appropriate standard term of weight; and

(ii) *on the winding engine*: the lifting capacity in kilograms or other appropriate standard term of weight;

(b) on hoists authorised or certified for the conveyance of persons:

on the platform or cage: the maximum number of persons to be carried at one time;

(c) on hoists for goods only:

on every approach to the hoist: "Goods Hoist! Use by persons prohibited."

Regulation 35. Miscellaneous Provisions

1. Precautions shall be taken to safeguard the workmen examining or lubricating a crane or hoist.

2. No person shall be lifted or carried by a crane except on the driver's platform or ride in a barrow hoist or in a hod hoist.

3. Every part of a load in course of being hoisted or lowered shall be adequately suspended and supported so as to prevent danger.

4. (1) Every receptacle used for hoisting bricks, tiles, slates or other material shall be so closed as to prevent the fall of any of the material.

(2) If loose materials or loaded wheelbarrows are placed directly on a platform for raising or lowering, the platform shall be closed in.

(3) Materials shall not be raised, lowered or slewed in such a way as to cause sudden jerks.

5. In hoisting a barrow, the wheel shall not be used as a means of support unless efficient steps are taken to prevent the axle from slipping out of the bearings.

6. When a special ginpole is used, it shall be secured by ropes in such a way that it cannot knock against the scaffolds.

7. Jibs for hoisting materials shall not be attached to standards or extension poles.

8. When no jib but only a rope pulley is used the latter may be attached to a cross-beam if the cross-beam—

(a) has sufficient strength and is fixed to at least two standards or extensions in the way prescribed for ledgers; and

(b) does not at the same time serve as a ledger for the scaffold.

9. If a hoisting appliance or any part thereof moves along a scaffold, adequate measures shall be taken to prevent persons on the scaffold from being struck by the appliance or any part of it.

10. The hoisting of loads at points where there is a regular flow of traffic shall be carried out in an enclosed space, or if this should be impossible (e.g. in the case of bulky objects), measures shall be taken to hold up or divert the traffic for the time being.

11. Adequate steps shall be taken to prevent a load in course of being hoisted or lowered from coming into contact with any objects in such a manner that part of the load or object may become displaced.

PART III: SAFETY EQUIPMENT AND FIRST AID

Regulation 36. Safety Equipment

1. Where necessary the employer shall provide the workmen with a sufficient number of respirators, goggles and safety belts of approved types.

2. Safety belts shall have life lines of sufficient length and strength.

Regulation 37. Rescue Equipment

When work is carried on in proximity to any place where there is a risk of drowning, all necessary equipment shall be provided and kept ready for use, and all necessary steps taken for the prompt rescue of any person in danger.

Regulation 38. First-Aid Equipment

1. On every place where building work is carried on, adequate provision, such as first-aid boxes or cupboards readily accessible and clearly marked, shall be made for the prompt treatment of all injuries likely to be sustained in the course of the work.

2. Such first-aid boxes or cupboards shall be placed under the charge of a responsible person who shall preferably be trained in first aid.

PART IV: MISCELLANEOUS

Regulation 39. Communication of Regulations to Workers

Copies of these Regulations or such extracts thereof as may be prescribed by the competent authority shall be handed to the workers or conspicuously posted up and maintained at suitable places.

Regulation 40. Duty of Employers to Comply with Parts I to III

It shall be the duty of the employer to comply with Parts I to III of these Regulations.

Regulation 41. Co-operation of Workers and Other Persons with the Employer

1. Every person employed and every person in or upon the work shall co-operate with the employer in carrying out these Regulations.

2. Every person employed shall forthwith remedy or report to the employer or foreman any defect that he may discover in the plant or appliances, or any action by any person liable to cause an accident.

3. No person shall interfere with, displace, take away, damage or destroy any of the plant or safeguards required by the foregoing Regulations without the authority of the employer or his responsible foreman.

4. Every person employed shall make proper use of all safeguards, safety devices or other appliances furnished for his protection and shall obey all safety instructions pertaining to his work.

5. Every worker shall take the necessary precautions for his own safety and for the safety of any other person on the site and abstain from any action which might endanger him or other persons.

6. No employed person shall go to or from his workplace otherwise than by the safe means of access and egress provided.