

**JAMAICA
THE FACTORIES ACT**

REGULATIONS
(under section 12)

THE BUILDING OPERATIONS AND WORKS OF ENGINEERING
CONSTRUCTION (SAFETY, HEALTH AND WELFARE) REGULATIONS, 1968

(Made by the Minister on the 27th day of May, 1968)

[1st October. 1968.]

L.N. 214/68
Amd
L.N.314/ 69

PART I
Preliminary

Short title

1. These Regulations may be cited as the Building Operations and Works of Engineering Construction (Safety, Health and Welfare) Regulations, 1968.

Interpretation.

2. (1) In these Regulations, unless the context otherwise requires

“approved” means approved for the time being by certificate of the Chief Factory Inspector;

“building operation” means the construction, structural alteration, repair or maintenance of a building (including re-pointing, redecoration and external cleaning of the structure), the demolition of a building and the preparation for, and laying the foundation of an intended building, but does not include any operation which is a work of engineering construction within the meaning of this regulation;

“competent person” means a person having such practical and theoretical knowledge and actual experience of the plant or equipment which he has to examine or inspect, as the case may be, as will enable him to detect defects or weaknesses which it is the purpose of the examination to discover and to assess their importance in relation to the strength and function of the particular plant or equipment, as the case may be:

Provided that for the purpose of the examination of any crane or hoist, the term “competent person” does not include the owner or user of the crane or hoist or any person employed by the owner or user except as an independent contractor;

“contractor” means a contractor or an employer of workmen who is undertaking any of the operations or works to which these Regulations apply;

“hoist” means a lifting machine, whether worked by mechanical power or not, with a carriage, platform or cage, the movement of which is restricted by a guide or guides;

“ladder” does not include a folding step-ladder;

“lifting appliance” means a crab, winch, pulley block or gin wheel used for raising or lowering, and a hoist, crane, sheer legs, excavator, drag-line, piling frame, aerial cableway, aerial rope-way or overhead runway;

“lifting gear” means a chain sling, rope sling, or similar gear, and a ring, link, hook, plate clamp, shackle, swivel or eyebolt;

“mobile crane” means a crane capable of traveling under its own power, but does not include a crane which travels on a line of rails;

“plant or equipment” includes any plant, equipment, gear, machinery, apparatus or appliance, or any part thereof;

“raising or lowering or as a means of suspension” where that expression occurs in regulations 56, 57, 58, 62 and 63, means raising or lowering or as a means of suspension either of a load on a lifting appliance or lifting gear or of a scaffold but does not include the use of a rope or chain solely as a means of lashing or securing together two or more rigid members of a scaffold to form a frame or as a means of making a lapped joint or the use of a rope or chain solely for the movement of a load in a horizontal direction:

“safe working load” means either the relevant safe working load required to be specified in the latest certificate of test obtained for the purposes of regulations 51, 56, 57 or 68 or, where no such certificate is required, the relevant safe working load required to be marked or re-exhibited on the lifting appliance, lifting gear, chain, rope or other article of plant or equipment by regulations 52 and 56:

“scaffold” means any temporarily provided structure on or from which persons perform work in connection with operations or works to which these Regulations apply, any temporarily provided structure which enables persons to obtain access to or which enables materials to be taken to any place at which such work is performed. and includes any working platform, gangway, run, ladder or step-ladder (other than an independent ladder or step-ladder which does not form part

of such a structure) together with any guard-rail, toe-board or other safeguards and all fixings, but does not include a lifting appliance or a structure used merely to support such an appliance or to support other plant or equipment;

“site” means any place where building operations or works of engineering construction or both such operations and such works are being carried on;

“sloping roof” has the meaning assigned to it by regulation 30;

“suspended scaffold” means a scaffold suspended by means of ropes or chains and capable of being raised or lowered by such means, but does not include a boatswain’s chair or similar appliance;

“trestle scaffold” includes a scaffold in which the supports for the platform are any of the following which are self-supporting, that is to say, split-heads, folding step-ladders, tripod or movable contrivances similar to any of the foregoing;

“work of engineering construction” means the construction of any railway line or siding otherwise than upon an existing railway. the construction, structural alteration, repair, maintenance (including re-pointing and re-painting) or demolition of any dock, harbour, inland navigation works, tunnel, bridge, viaduct, water-works, reservoir, pipe-line, aqueduct, sewer, sewage works or gasholders. and, except where carried on in a factory within the meaning of the Act, any steel or reinforced concrete structure other than a building, any road, airfield, sea defence works or river works and any other civil or structural engineering works of a similar nature to any of the foregoing works.

2. (2) For the purpose of these Regulations the number of persons employed at any given time shall be determined by reference to the number at work at that time.

Application.

3. (1) Subject to the provisions of this regulation these Regulations shall apply to -

(a) building operations undertaken by way of trade or business, or for the purpose of any industrial or commercial undertaking, and to any line or siding which is used in connection therewith and for the purposes thereof;

(b) works of engineering construction undertaken by way of trade or business, or for the purpose of any industrial or commercial undertaking, and to any line or siding which is used in connection therewith and for the purposes thereof.

3. (2) The Chief Factory Inspector may (subject to such conditions. if any, as may be specified therein) by certificate in writing (which he may at his

discretion revoke at any time) exempt from all or any of the requirements of these Regulations -

- (a) any particular plant or equipment or any class or description of plant or equipment; or
 - (b) any particular work or any class or description of work if he is satisfied that the requirements in respect of which the exemption is granted are not necessary for the protection of persons employed or are not reasonably practicable.
3. (3) In the case of a hoist manufactured before the 1st day of October, 1968, if it is not reasonably practicable to comply fully with any requirement of regulations 64(2), 64(3), 66 and 70, it shall be sufficient if the hoist has been brought as near as is reasonably practicable into conformity with that requirement and a certificate that this has been done has been obtained from a competent person.

Application of certain provisions of the Factories Regulations, 1961.

4. (1) The provisions of the Factories Regulations, 1961, specified in paragraph (2) shall apply to the operations and works referred to in paragraph (1) of regulation 3 as if -
- (a) any place where such operations or works are carried on were a factory; and
 - (b) the person undertaking any such operations or works were the occupier of a factory.
4. (2) The provisions of the Factories Regulations, 1961, referred to in paragraph (1) are -
- (a) such provisions of Part II of those Regulations as relate to the generation, transformation, distribution and use of electrical energy and to steam boilers and air receivers;
 - (b) regulation 79 of those Regulations.

with such adaptations and modifications as may be necessary:

Provided that no such regulations shall operate so as to interfere with the design of any works of engineering construction or with the adoption in the execution of those works of any method prescribed in the specification or in any signed plans issued, or written directions given, by the consulting engineer or the

engineer in charge, being a method which is not inconsistent with the safety of the works or of the persons employed.

Obligations under Regulations.

5. (1) It shall be the duty of every contractor and every employer of workmen, who is undertaking any of the operations or works to which these Regulations apply –

(a) to comply with such of the requirements of the following regulations as affect him or any workman employed by him, that is to say, regulations 6 to 18, 21, 25 to 27. 31. 33, regulation 64(1) in so far as it relates to the protection of the hoistway, regulations 69, 74 to 76, 78,81, 82, 84, 85, 92(1), 93, 94(1) and (2), 95, 97, 98, 99, 101, 102(1) and 103 to 109, and, in so far as they relate to the falling or slipping of persons, regulations 19. 20, 22 to 24 and 28 to 30:

Provided that the requirements of the said regulations shall be deemed not to affect any workman if and so long as his presence in any place is not in the course of performing any work on behalf of his employer or is not expressly or impliedly authorized or permitted by his employer; and

(b) to comply with such of the requirements of the following regulations as relate to any work, act or operation performed or about to be performed by any such contractor or employer of workmen, that is to say regulations 32, 71(1), (2),(3), (4) and (5), 77, 79, 80, 87 to 89, 91, 92(2), 94(3), 96 and 111 and, in so far as they relate to the falling of materials and articles, regulations 19, 20, 22 to 24 and 28 to 30: and it shall be the duty of every contractor and every employer of workmen who erects or alters any scaffold to comply with such of the requirements of these Regulations as relate to the erection or alteration of scaffolds having regard to the purpose or purposes for which the scaffold is designed at the time of erection or alteration, and of every contractor and every employer of workmen who erects, installs, works or uses any other plant or equipment to which any of the provisions of regulations 6 to 33 applies, or plant or equipment being plant or equipment to which any of the provisions of regulations 34 to 68, 70, 71(6), 83, 86, 90, 98 or 110 applies, to erect, install, work or use any such plant or equipment in a manner which complies with those provisions.

5. (2) It shall be the duty of every person employed to comply with the requirements of such of these Regulations as relate to the performance of, or the refraining from, an act by him and to co-operate in complying with these Regulations and if he discovers any defect in the scaffolding, plant or equipment to report such defect without unreasonable delay to his employer or foreman, or

to a person appointed by the employer under regulation 72.

PART II
Safety of Working Places and Means of Access and Egress

Provisions of scaffolds, etc.

6. (1) Without prejudice to the other provisions of these Regulations, where work cannot safely be done on or from the ground or from part of a building or other permanent structure there shall be provided, placed and kept in position for use and properly maintained either scaffolds or, where appropriate, ladders or other means of support all of which shall be sufficient and suitable for the purpose.

6. (2) There shall, so far as is reasonably practicable, be suitable and sufficient safe access to and egress from every place at which any person has at any time to work.

Supervision of work and inspection of material.

7. No scaffold shall be erected or be substantially added to or altered or be dismantled except under the immediate supervision of a competent person and so far as possible by competent workmen possessing adequate experience of such work. All material for any scaffold shall be inspected by a competent person on each occasion before being taken into use.

Construction and material.

8. (1) Every scaffold and every part thereof shall be of good construction, of suitable and sound material and of adequate strength for the purpose for which it is used.

8. (2) Sufficient material shall be provided for and shall be used in the construction of scaffolds.

8. (3) Timber used for scaffolds shall be of suitable quality, be in good condition, and have the bark completely stripped off.

8. (4) Timber used for scaffolds, trestles, ladders and folding stepladders shall not be so painted or treated that defects cannot easily be seen.

8. (5) Metal parts used for scaffolds shall be of suitable quality and be in good condition and free from corrosion or other patent defect likely to affect their strength materially.

8. (6) All material and parts for scaffolds shall, when not in use, be kept under good conditions and apart from any materials or parts unsuitable for scaffolds,

Maintenance of scaffolds: partially dismantled scaffolds.

9. (1) Every scaffold shall be properly maintained, and every part shall be kept so fixed, secured or placed in position as to prevent so far as is practicable accidental displacement.

9. (2) No scaffold or part of a scaffold shall be partly dismantled and remain in such a condition that it is capable of being used unless either –

(a) the scaffold continues to comply and would, if used, comply with these Regulations; or

(b) if the scaffold or part thereof would, if used, not comply with these Regulations, a prominent warning notice indicating that the scaffold or part thereof is not to be used is affixed near any point at which the scaffold or part, as the case may be, is liable to be approached for the purpose of use.

Standards or uprights or putlogs.

10. (1) Standards or uprights of scaffolds shall -

(a) where practicable, be either vertical or slightly inclined towards the building or other structure; and

(b) be fixed sufficiently close together to secure the stability of the scaffold having regard to all the circumstances.

10. (2) The foot or base of any standard or upright shall be placed on an adequate base plate in a manner to prevent slipping or sinking, or its displacement shall be prevented in some other sufficient way.

10. (3) Ledgers shall be as nearly as possible horizontal and shall be securely fastened to the standards or uprights by efficient means.

10. (4) Putlogs or other supports on which a platform rests shall be securely fastened to the ledgers or to the standards or uprights. Where one end of a putlog is supported by a wall that end shall extend into or onto the wall sufficiently to provide a supporting surface of sufficient area.

10. (5) The distance between two consecutive putlogs and other supports on which a platform rests shall be fixed with due regard to the anticipated load and the nature of the platform flooring. The distance with single planking shall not normally exceed 3 feet 3 inches with planks of 11 inches in thickness, 5 feet with planks 12 inches in thickness, or 8 feet 6 inches with planks 2 inches in thickness.

Supports and stability for scaffolds.

11. (1) Every scaffold shall be securely supported or suspended and shall where necessary be sufficiently and properly strutted or braced to prevent collapse, and shall be rigidly connected with the building or other structure unless the scaffold is so designed and constructed as to ensure stability without such connection.

11. (2) Every structure and appliance used as a support for a scaffold shall be of sound construction, have a firm footing or be firmly supported. and shall where necessary be sufficiently and properly strutted or braced to prevent collapse and to ensure stability.

11. (3) Every scaffold which can be moved on wheels or skids (not being a suspended scaffold) shall—

(a) be constructed with due regard to stability and, if necessary for stability, be adequately weighted at the base;

(b) be used only on a firm and even surface not so sloping as to involve risk of instability of the scaffold or any load thereon;

(c) be adequately secured to prevent movement when any person is working upon it or upon any ladder or other plant or equipment, being a ladder, plant or equipment which is supported by the scaffold; and

(d) be moved only by the application of force at or near the base.

11. (4) Loose blocks, drain pipes, chimney pots or other unsuitable material shall not be used for the construction or support of scaffolds save that small blocks may, if they provide a firm support, be used to support a platform not more than 2 feet above the ground or floor.

Cantilever, jib and bracket scaffold.

12. (1) No cantilever scaffold or jib scaffold shall be used unless it is adequately supported, fixed and anchored, has out-riggers of adequate length and strength and is, where necessary, sufficiently and properly strutted or braced to ensure rigidity and stability.

12. (2) No bracket scaffold supported or held by dogs, spikes, or similar fixings liable to pull out of the stone-work, or other surface in which they are gripped or fixed, shall be used.

Scaffold supported by building or structure.

13. No part of a building or other structure shall be used as support for a scaffold, ladder, folding step-ladder or crawling ladder, unless the part of the

building or other structure is of sound material and sufficiently stable and of sufficient strength to afford safe support. Gutters shall not be used as such supports unless they and their fixings are suitable and are of adequate strength.

Suspended scaffolds.

14. (1) Every suspended scaffold shall be provided with adequate and suitable chains or ropes and winches or other lifting appliances or similar devices and shall be suspended from suitable out-riggers, joists, runways, rail tracks or other equally safe anchorage.

14. (2) The out-riggers for a suspended scaffold shall be of adequate length and strength and properly installed and supported and, subject to paragraph (12) shall be installed horizontally and provided with adequate stops at their outer ends. The out-riggers shall be properly spaced having regard to the construction of the scaffold and of the runway, joist or rail track on which the scaffold is carried.

14. (3) Where counterweights are used with out-riggers the counterweights shall be securely attached to the out-riggers and shall be not less in weight than three times the weight which would counterbalance the weight suspended from the out-rigger including the weight of the runway, joist or rail track, the suspended scaffold and persons and other load thereon.

14. (4) The points of suspension of every suspended scaffold shall be an adequate horizontal distance from the face of the building or other structure.

14. (5) Every runway, joist and rail track supporting a suspended scaffold shall be of suitable and sound material, adequate strength for the purpose for which it is used and free from patent defect, shall be provided with adequate stops at each end and shall be properly set to the building or other structure, or where out-riggers are used, to the out-riggers.

14. (6) The suspension ropes or chains of a suspended scaffold –

- (a) shall be securely attached to the out-riggers or other supports and to the platform framework or to any lifting appliance or other device attached thereto, as the case may be; and
- (b) shall be kept in tension.

14. (7) Where winches are used with suspended scaffolds the suspension ropes shall be of such length that at the lowest position at which the scaffold is intended to be used there are not less than two turns of rope remaining on each winch drum and the length of each rope shall be clearly marked on its winch.

14. (8) Every part of a suspended scaffold and all plant and equipment used for the purposes thereof shall be of good construction, suitable and sound

material, of adequate strength for the purpose for which it is used and shall be properly maintained, and, where constructed of metal, shall be free from corrosion and other patent defects, being corrosion and defects likely materially to affect its strength. Adequate arrangements shall be made to prevent undue tipping, tilting or swinging of a suspended scaffold and to secure it to prevent undue horizontal movement while it is being used as a working platform.

14. (9) No rope other than a wire rope shall be used for the raising, lowering and suspension of a suspended scaffold, except that the raising, lowering and suspension may be carried out by means of fibre ropes and pulley blocks in the case of work to which paragraph (12) applies.

14. (10) The platform of every suspended scaffold shall -

(a) except to the extent necessary for drainage, be closely boarded, planked or plated; and, subject to paragraph (12).

(b) be of adequate width to afford adequate working space at every working point and shall, in any event,

(i) be at least 25 inches wide if used as a footing only and not for the deposit of any material;

(ii) be at least 34 inches wide if used for the deposit of material; and

(iii) not be used for the support of any higher scaffold.

and shall be so arranged or secured that at each working position -the space between the face of the building or other structure and the platform is as small as reasonably practicable; so, however, that where workmen sit at the edge of the platform to work there may be a space not exceeding 12 inches.

14. (11) If a suspended scaffold is carried on fibre ropes and pulley blocks, the ropes shall be spaced not more than 10 feet 6 inches apart.

14. (12) Where the work to be carried out from a suspended scaffold is of such a light nature and the material required for the work is such that a cradle or similar light-weight suspended scaffold can be used with safety and where such suspended scaffold is used, the following requirements of this regulation shall not apply, that is to say—

(a) the requirement of paragraph (2) that the out-riggers shall be installed horizontally and that stops -shall be provided;

(b) the requirements of paragraph (10) (b) as to the width of the

platform.

The platform of a suspended scaffold to which this paragraph applies shall be not less than 17 inches wide.

Boatswain, chair, cages, skips, etc.

15. (1) No boatswain's chair, cage, skip or similar plant or equipment shall be used unless –

(a) it is of good construction, sound material, adequate strength. free from patent defect and properly maintained;

(b) the chains, ropes, lifting gear or other means of suspension used therewith are securely attached to the out-riggers or other supports and to the chair, cage, skip or similar plant or equipment or to any lifting appliance or other device attached thereto, as the case may be;

(c) suitable means are provided to prevent any occupant from falling out;

(d) it is free of materials or articles liable to interfere with the occupant's handhold or foothold or otherwise endanger him;

(e) suitable measures are taken to prevent spinning or tipping in a manner dangerous to any occupant;

(f) in the case of any skip or other receptacle it is at least 3 feet 6 inches deep; and

(g) its installation has been, and its use is supervised by a competent person.

15. (2) No boatswain's chair, cage, skip or similar plant or equipment shall be used as a working place in circumstances in which a suspended scaffold could be used unless the work is of such short duration as to make the use of the suspended scaffold unreasonable, or the use of a suspended scaffold is not reasonably practicable.

Trestle scaffolds.

16. (1) All trestles and supports used for the construction of any trestle scaffold shall be of good construction, suitable and sound material, adequate strength for the purposes for which they are used and free from patent defect and shall be properly maintained.

16. (2) A trestle scaffold shall not be used -

- (a) if the scaffold is so situated that a person would be liable to fall from its working platform a distance of more than 12 feet; or
 - (b) if constructed with more than one tier where folding supports are used;
 - (c) unless each trestle rests on firm and level ground or floorings.
16. (3) No trestle scaffold shall be erected on a scaffold platform unless—
- (a) the width of the said platform is- such as to leave sufficient clear space for the transport of materials along the platform; and
 - (b) the trestles or supports are firmly attached to the said platform and adequately braced to prevent displacement.

Inspection of scaffolds, boatswain chairs, etc.

17. Subject to the provisions of this regulation, no scaffold (including any boatswain's chair, cage, skip or similar plant or equipment) and no plant or equipment used for the purposes of any of the foregoing shall be used unless -

- (a) it has been inspected by a competent person within the immediately preceding 7 days;
- (b) it has been inspected by a competent person since exposure to weather conditions likely to have affected its strength or stability or to have displaced any part; and
- (c) a report has been made of the results of every such inspection in the form set out as Form No. 1 in the **First Schedule** and containing the particulars therein specified and signed by the person making the inspection:

Provided that paragraph (a) shall not apply in the case of a scaffold no part of which has been erected for more than 7 days. and paragraph (c) shall not apply to a trestle scaffold or a scaffold from no part of which a person is liable to fall a distance of more than 6 feet 6 inches.

Scaffolds used by workmen of different employers.

18. Where a scaffold or part of a scaffold to be used by or on behalf of an employer other than the employer for whose workmen it was first erected, the first-mentioned employer shall, before such use, and without prejudice to any other obligations imposed upon him by these Regulations, take express steps, either personally or by a competent agent, to satisfy himself that the scaffold or part thereof is stable, that the materials used in its construction are sound and that the safeguards required by these Regulations are in position.

Widths of working platforms, etc.

19. (1) This regulation applies to working platforms (other than working platforms of suspended scaffolds and working platforms to which regulation 30 applies) from which a person is liable to fall a distance of more than 6 feet 6 inches.

19. (2) Every working platform to which this regulation applies (other than working platforms to which paragraph (3) applies) shall be -

- (a) at least 25 inches wide if used as a footing only and not for the deposit of any material;
- (b) at least 34 inches wide if the platform is used for the deposit of material;
- (c) at least 42 inches wide if used for the support of any higher platform;
- (d) at least 50 inches wide if the platform is one upon which stone is dressed or roughly shaped, and in every case shall be of sufficient width to afford adequate working space at every part.

19. (3) The following working platforms to which this regulation applies shall be at least 11 inches wide -

- (a) a platform supported directly by folding trestles or folding step-ladders, or a platform under a roof used for work on or in the vicinity of the roof, being a platform which is supported by or suspended from roof members or the roof, where in any such case the work thereon is of a light nature and of short duration in any one position and a platform less than 25 or 34 inches wide (as the case may be) can be used with safety: and
- (b) a platform which is used for work in connection with cylindrical or spherical metal structures.

19. (4) Where work at the face of a building or other structure is done from a working platform to which this regulation applies the space between such face and the working platform shall be as small as practicable; so however, that where workmen sit at the edge of the platform to work, there may be a space not exceeding 12 inches.

Construction of working platforms.

20. Every working platform from which a person is liable to fall a distance of more than 6 feet 6 inches shall be closely boarded, planked or plated.

Boards and planks in working platforms, gangway and runs.

21. (1) Every board or plank forming part of a working platform, gangway or run shall be -

(a) of a thickness which is such as to afford adequate security having regard to the distance between the putlogs or other supports

(b) not less than 8 inches wide, or, in the case of boards or planks exceeding 2 inches in thickness not less than 6 inches wide.

21. (2) No board or plank which forms part of a working platform, gangway or run shall project beyond its support to a distance exceeding four times the thickness of the board or plank unless it is effectively secured to prevent tipping, or to a distance which, having regard to the thickness and strength of the plank, renders the projecting part of the plank an unsafe support for any weight liable to be upon it.

21. (3) Suitable measures shall be taken by the provisions of adequate bevelled pieces or otherwise to reduce to a minimum the risk of tripping and to facilitate the movement of barrows where boards or planks which form part of a working platform, gangway or run overlap each other or are not of reasonably uniform thickness where they meet each other or owing to warping or for some other reason do not provide an even surface.

21. (4) Every board or plank which forms part of a working platform, gangway or run shall—

(a) rest securely and evenly on its supports; and

(b) rest on at least 3 supports unless, taking into account the distance between the supports and the thickness of the board or plank, the conditions are such as to prevent undue or unequal sagging.

21. (5) Where work has to be done at the end of a wall or working face the working platform at such wall or face shall, wherever practicable, extend at least 24 inches beyond the end of the wall or face.

Guard-rails, toe-boards at working places.

22. (1) Every side of a working platform or working place; being a side thereof from which a person is liable to fall a distance of more than 6 feet 6 inches, shall, subject to paragraphs (3) to (6) and except as provided in paragraph (7) of this regulation, be provided with a suitable guard-rail or guard-rails of adequate strength to a height of at least 3 feet 6 inches above the platform or place and above any raised standing place on the platform, and with toe-boards or other barriers up to a sufficient height which shall in no case be less than 6 inches. Such guard-rails and toe-boards or other barriers shall be so placed as to prevent so far as possible the fall of persons, materials and articles

from such platform or place.

22. (2) Without prejudice to the provisions of regulation 9 the outward movement of guard-rails and toe-boards or barriers shall be prevented by placing them on the inside of the uprights or by other equally effective means.

22. (3) Where guard-rails are required to be provided, the distance between any toe-board or other barrier and the lowest guard-rail above it shall not exceed 30 inches.

22. (4) Guard-rails, toe-boards and barriers required by paragraph (1) may be removed or remain unerected for the time and to the extent necessary for the access of persons or the movement of materials or other purposes of the work; but guard-rails, toe-boards and barriers removed or remaining unerected for any of these purposes shall be replaced or erected as soon as practicable.

22. (5) On the side of a suspended scaffold next to the wall or working face

-

(a) guard-rails where required by this regulation need not extend to a height of more than 27 inches above the platform if the work is impracticable with a guard-rail at a greater height;

(b) guard-rails and toe-boards or other barriers shall not be required if the workers sit at the edge of the platform to work and ropes or chains affording all the workers a safe and secure handhold are provided.

22. (6) None of the requirements of paragraphs (1) and (2) shall apply to—

(a) the platform of a trestle scaffold when the platform is supported on folding trestles, split heads or similar devices or folding step-ladders, in so far as the provision of toe-boards or barriers is impracticable on account of the nature or circumstances of the work;

(b) a platform which is used only in the course of erecting any framework forming part of a building or other permanent structure for the purposes of jointing, bolting up, riveting or welding work and which is used for such a short period as to make the provision of guard-rails and toe-boards or barriers unreasonable if -

(i) the platform is at least 34 inches wide;

(ii) there is adequate handhold; and

(iii) the platform is not used for the deposit of materials or articles otherwise than in boxes or receptacles suitable to prevent

the fall of the materials or articles from the platform;

(c) a platform under a roof being a platform which is supported by or suspended from roof members or the roof and which is used only for work on or in the vicinity of the roof and which is of a light nature and of such short duration as to make the provision of guard-rails and toe-boards or bathers unreasonable if -

(i) there is adequate handhold at every working position. and

(ii) the material required for the work is such that the platform can be used with safety.

22. (7) Except as provided in regulation 30 the provisions of this regulation shall not apply to working platforms and working places being working platforms and working places to which that regulation applies.

Construction and use of gangways and runs.

23. (1) Every gangway and run from any part of which a person is liable to fall a distance of more than 6 feet 6 inches shall be -

(a) at least 17 inches wide; and

(b) closely boarded, planked or plated.

23. (2) No gangway, run or working platform shall be used for the passage of materials unless it affords a clear passage way which is adequate in width for the passage of the materials without removal of the guard-rails and toe-boards and in any case is not less than 25 inches wide.

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

23. (4) No gangway or run shall be used the slope of which exceeds 1 vertical to 1k horizontal.

23. (5) Where the slope of a gangway or run renders additional foothold necessary, and in every case where the slope is more than 1 vertical to 4 horizontal there shall be provided proper stepping laths which shall -

(a) be placed at suitable intervals; and

(b) be the full width of the gangway or run except that they may be interrupted over a width of not more than 4 inches to facilitate the movement of barrows.

Guard-rails for gang-ways, runs and stairs.

24. (1) Except for the time and to the extent necessary for the access of persons or the movement of materials, stairs shall be provided throughout their length with hand-rails or other efficient means to gain-prevent the fall of persons. If necessary to prevent danger to any person the hand-rails or other means shall be continued beyond the end of the stairs.

24. (2) Every side of any gangway, run or stairs from which a person is liable to fall a distance of more than 6 feet 6 inches shall be provided—

(a) with a suitable guard-rail or guard-rails of adequate strength to a height of at least 3 feet 6 inches above the gangway, run or stairs; and

(b) except in the case of stairs, with toe-boards or other barriers up to a sufficient height which shall in no case be less than 6 inches and so placed as to prevent as far as possible the fall of persons, materials and articles. The space between any such toe-board or barrier and the lowest guard-rail above it shall not exceed 30 inches:

Provided that the provisions of this paragraph shall not apply to a temporary gangway which is used only in the course of erecting any framework forming part of a building or other permanent structure for work of such short duration as to make the provision of a gangway with guard-rails and toe-boards or other barriers unreasonable.

24. (3) Guard-rails, toe-boards and barriers required by paragraph (2) may be removed or remain unerected for the time and to the extent necessary for the access of persons or the movement of materials or other purposes of the work: but guard-rails, toe-boards and barriers removed or remaining unerected for any of those purposes shall be replaced or erected as soon as practicable.

Platforms, gang-ways, etc. to afford safe footholds.

25. If a platform, gangway, run or stair becomes slippery appropriate steps shall as soon as reasonably practicable be taken by way of sanding, cleaning or otherwise to remedy the condition.

Construction, maintenance of ladders, and folding step-ladders.

26. (1) Every ladder and folding step-ladder shall be of good construction, of suitable and sound material and of adequate strength for the purpose for which it is used and shall be properly maintained.

26. (2) No ladder shall be used in which a rung is missing or is defective.

26. (3) Except in the case of ladders to which regulation 30 applies, every

rung of a ladder shall be properly fixed to the stiles or sides and no ladder shall be used in which any rung depends for its support solely on nails, spikes or other similar fixing. Wooden stiles or sides and wooden rungs of ladders (except as aforesaid) shall be straight grained and have the grain running lengthwise and if the tenons are not secured by wedges, reinforcing ties shall be used.

Use of ladders and folding step ladders.

27. (1) This regulation shall -

- (a) apply to ladders and folding step-ladders being ladders and folding step-ladders which afford a means of access, egress, communication or support to a person or persons employed; and
- (b) not apply to any ladder lying upon a roof or to any crawling board or crawling ladder.

27. (2) No ladder standing on a base shall be used unless -

- (a) except as provided in paragraph (3), it is securely fixed near to its upper resting place, or in the case of a vertical ladder near to its upper end:
Provided that where such fixing is impracticable the ladder shall be securely fixed at or near to its lower end;
- (b) it has a level and firm footing and is not standing on loose blocks or other loose packing;
- (c) it is secured where necessary to prevent swaying or sagging;
and
- (d) it is equally and properly supported on each stile or side.

27. (3) Where it is impracticable in the case of a ladder standing on a base to comply with either of the requirements of sub-paragraph (a) of paragraph (2), a person shall be stationed at the foot of the ladder when in use to prevent it from slipping.

27. (4) No ladder shall be used unless -

- (a) either it extends to a height of at least 3 feet 6 inches above the place of landing or the highest rung to be reached by the feet of any person using the ladder, as the case may be, or there is other adequate handhold; and
- (b) there is sufficient space at each rung to provide adequate foothold.

27. (5) No folding step-ladder shall be used unless it has a level and firm footing or while it is standing on loose blocks or other loose packing.

27. (6) No ladder or run of ladders rising a vertical distance of over 30 feet shall be used unless it is, if practicable, provided with an intermediate landing place or intermediate landing places so that the vertical distance between any two successive landing places shall not exceed 30 feet. Every landing place shall be of adequate dimensions, and, if a person is liable to fall therefrom a distance of more than 6 feet 6 inches, shall, except in so far as it is not reasonably practicable, be provided with sufficient and suitable guard-rails to a height of at least between 3 feet 6 inches above the landing place and with toe-boards or other barriers up to a sufficient height which shall in no case be less than 6 inches, so placed as to prevent as far as possible the fall of persons, materials and articles and so that the space between any toe-board or other barrier and the lowest guard-rail above it shall not exceed 30 inches. Where a ladder passes through an opening in the floor of a landing place, the opening shall be as small as is reasonably practicable.

Openings, corners, breaks and edges.

28. (1) This regulation applies to every opening, corner, break or edge which any person employed is liable to pass near or across being an opening, corner, break or edge -

(a) in or of a roof, floor, wall or other part either of a building or of any other structure whether the roof, floor, wall or other part of the building or of the other structure is complete or only partly complete or is in course of construction, maintenance, repair or demolition; or

(b) in or of a working platform, gangway or run.

28. (2) Subject to regulation 29 in the case of any such opening, corner, break or edge through or from which any person is liable to fall a distance of more than 6 feet 6 inches or to fall into any liquid or material so as to involve risk of drowning or serious injury there shall be provided either—

(a) a suitable guard-rail or guard-rails of adequate strength to a height of at least 3 feet 6 inches above the surface across which persons are liable to pass together with toe-boards or other barriers up to a sufficient height which shall in no case be less than 6 inches so placed as to prevent as far as possible the fall of persons, materials and articles and so that the space between any toe-board or other barrier and the lowest guard-rail above it shall not exceed 30 inches; or

(b) a covering so constructed as to prevent the fall of persons, materials and articles; any such covering shall be clearly and boldly marked to show its purpose or be securely fixed in position.

Exceptions from regulation 28.

29. (1) Guard-rails, toe-boards, barriers and coverings required by regulation 28 may be removed or remain unerected –

- (a) where and when this is necessary in order to proceed with any permanent filling in, covering or enclosure; or
- (b) for the time and to the extent necessary for the access of persons or the movement of materials or other purposes of the work.

but guard-rails, toe-boards, barriers and coverings removed or remaining unerected for any of those purposes shall be replaced or erected as soon as practicable.

Sloping roofs.

30. (1) In this regulation “sloping roof” means a roof or part of a roof being a roof or part having a pitch of more than 10 degrees which is covered either wholly or partly and -

- (a) which is in the course of construction, maintenance, repair or demolition; or
- (b) which is used as a means of access to or egress from operations or works on a roof or part of a roof being operations or works to which these Regulations apply.

30. (2) Except as provided in paragraphs (6) and (7), where any sloping roof has—

- (a) a pitch of more than 30 degrees; or
- (b) a pitch of 30 degrees or less and a surface on or from which a person is by reason of the nature or condition of the surface or of the weather liable to slip or fall to such an extent that he is liable to fall from the edge of the roof,

work thereon or therefrom shall only be carried out by workmen who are suitable for such work and the requirements of paragraphs (3) and (4) shall be complied with.

30. (3) Where any sloping roof is used as a means of access to or egress from operations or works on a roof or a part of a roof being operations or works to which these Regulations apply, sufficient and suitable crawling ladders or crawling boards shall be provided on that sloping roof.

30. (4) Where any work is done on or from any sloping roof sufficient and suitable crawling ladders or crawling boards shall be provided on that sloping roof and (except where the work is not extensive) either -

(a) a barrier shall, be provided at the lower edge of the sloping roof of such a design and so constructed as to prevent any person falling from that edge: or

(b) the work shall be done from a securely supported working platform not less than 17 inches wide which complies with the requirements of paragraphs (1), (2), (3) and (4) of regulation 22.

30. (5) Crawling ladders and crawling boards provided in pursuance of paragraph (3) or (4) shall be -

(a) of good construction, suitable and sufficient material, adequate strength for the purposes for which they are used, free from patent defect and properly maintained;

(b) properly supported; and

(c) securely fixed or anchored to the sloping surface or over the roof ridge or securely fixed in some other effective way, so as, in every case, to prevent slipping.

30. (6) The provision of crawling ladders or crawling boards shall not be required in the case of any sloping roof where the handhold and foothold afforded by the battens or other similar members of the structure are such that the said sloping roof is as safe for every person thereon as it would be if the said provision had been made.

30. (7) The requirements of paragraph (4) shall apply only in the case of any sloping roof from the eaves of which a person is liable to fall a distance of more than 6 feet 6 inches.

30. (8) Suitable and sufficient means shall be provided to prevent the fall of materials or articles from a sloping roof.

Work on or near fragile materials.

31. (1) Without prejudice to the provisions of regulations 28 and 30. no person shall pass across, or work on or from material which would be liable to fracture if his weight were to be applied to it and so situated that if it were to be so fractured he would be liable to fall a distance of more than 6 feet 6 inches, unless such suitable and sufficient ladders or crawling ladders or crawling boards or duck-boards (which shall in any case be securely supported and, if necessary, secured so as to prevent theft slipping) as are necessary are provided and so

used that the weight of any person so passing or working is wholly or mainly supported by such ladders or boards unless his weight is supported by other equally safe and sufficient means.

31. (2) Without prejudice to the provisions of regulations 28 and 30 no person shall pass or work near material of the kind and situated as specified in paragraph (1) unless provision is made by means of such suitable guard-rails, or suitable coverings, or other suitable means as are necessary for preventing, so far as reasonably practicable, any person so passing or working from falling through the said material.

31. (3) Where any person passes across or near or works on or near material of the kind and situated as specified in paragraph (1) prominent warning notices shall, except where the material consists wholly of glass, be affixed at the approaches to the place where the material is situated.

31. (4) References in this regulation to a person's weight shall be construed as references to the aggregate of his weight and that of anything he may for the time being be supporting by his person.

31. (5) All plant and equipment provided in pursuance of this regulation shall be of good construction, suitable and sound material adequate strength for the purpose for which it is used, free from patent defect and properly maintained.

Loads on scaffolds.

32. (1) A scaffold shall not be overloaded and so far as practicable the load thereon shall be evenly distributed.

32. (2) When any material is transferred on or to a scaffold it shall be moved or deposited without imposing any violent shock. Materials shall not be kept upon a scaffold unless needed for work within a reasonable time.

Prevention of falls and provision of safety nets and belts.

33. If the special nature or circumstances of any part of the work or of the access thereto or the egress therefrom render impracticable compliance with the provisions of these Regulations designed to prevent the fall of any persons engaged on that part of the work, then those provisions shall be complied with so far as practicable and except for persons for whom there is adequate handhold and foothold either there shall be provided suitable nets or safety sheets or there shall be available safety belts attached continuously to a suitable and securely fixed anchorage or other contrivances which will so far as practicable enable such persons to carry out their work without risk of serious injury.

All safety nets, safety belts and other equipment provided in pursuance of this regulation shall be properly maintained.

PART III

Lifting Appliances

Construction, maintenance and inspection.

34. (1) Every lifting appliance and every part thereof including all working gear and all other plant or equipment used for anchoring or fixing such appliances shall –

- (a) be of good mechanical construction, sound material, adequate strength and free from patent defect;
- (b) be properly maintained;
- (c) as far as the construction permits be inspected at least once in every week by the driver, if competent for the purpose or some other competent person.

34. (2) A report of the results of every such inspection signed by the person carrying out the inspection, shall be made forthwith in the form set out as **Form No. 2** in the **First Schedule** and containing the particulars therein specified.

Support, anchoring, fixing and erecting.

35. (1) Every lifting appliance shall be adequately and securely supported.

35. (2) Every part of a stage, scaffold, framework or other structure, and every mast, beam, pole or other article of plant or equipment, supporting a lifting appliance or any part thereof shall (having regard to the nature of the lifting appliance, its lifting and reaching capacity and the circumstances of its use) be of good construction and adequate strength and shall be of sound material and free from patent defect.

35. (3) Every part of the framework of every crab or winch, including its bearers, shall be of metal.

35. (4) Any anchoring or fixing arrangements provided in connection with a lifting appliance shall be adequate and secure.

35. (5) In the case of a crane which is on occasion dismantled or partially dismantled, any jib or boom which is separated from the crane in dismantling shall be clearly marked so as to indicate the crane of which it was a part.

35. (6) Every temporary attachment or connection of a rope, chain or other plant or equipment, used in the erection or dismantling of any lifting appliance shall be adequate and secure.

Precautions where lifting appliance has travelling or slewing motion.

36. (1) On every stage, gantry or other place where a lifting appliance having a travelling or slewing motion is in use, an unobstructed passageway not less than 2 feet wide shall be maintained between any part of the appliance liable so to move and any guard-rails, fencing or other nearby fixture:

Provided that if at any time it is impracticable to maintain such a passageway 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.

36. (2) Every such lifting appliance shall be provided with effective means of warning persons liable to be struck by the appliance or any load carried thereon.

Platforms for crane drivers and signallers.

37. (1) Where a platform is provided for the person or persons operating a crane, or for any signaller, it shall be –

- (a) of sufficient area for the persons employed thereon;
- (b) close planked or plated; and
- (c) provided with safe means of access,

and every side of every such platform, being a side thereof from which a person is liable to fall a distance of more than 6 feet 6 inches shall be provided with a suitable guard-rail or guard-rails of adequate strength to a height of at least 3 feet 6 inches above the platform and above any raised standing place on the platform, and with toe-boards up to a sufficient height being in no case less than 6 inches and so placed as to prevent as far as possible the fall of persons, materials and tools from such platform.

37. (2) The space between any toe-board and the lowest guard-rail above it on any platform for the person or persons driving or operating a crane, or for any signaller, shall not exceed 30 inches.

37. (3) Guard-rails and toe-boards required by this regulation may be removed or remain unerected only for the time and to the extent necessary for the access of persons or the movement of materials.

Cabins for drivers.

38. (1) Subject to paragraph (2) of this regulation, the driver of every power-driven lifting appliance shall be provided with a suitable cabin which shall–

- (a) afford him adequate protection from the weather; and

(b) be so constructed as to afford ready access to such parts of the lifting appliance as are within the cabin and need periodic inspection of maintenance,

so, however, that no cabin shall be provided which prevents the driver from having such clear and unrestricted view as is necessary for the safe use of the appliance.

38. (2) Paragraph (1) shall not apply –

(a) in cases where the driver is indoors or otherwise adequately protected from the weather; or

(b) to a hoist other than a hoist operated only from one position alongside the winch; or

(c) to lifting appliances mounted on wheels and having a maximum safe working load of one ton or less; or

(d) to any machine incorporating a lifting appliance where the primary purpose of that machine is not that of a lifting appliance; or

(e) to lifting appliances for occasional use or for use for only short periods.

Drums and pulleys.

39. Every drum or pulley around which the chain or wire rope of any lifting appliance is carried shall be of suitable diameter and proper construction for the chain or rope used. Every chain or rope which terminates at the winding drum of a lifting appliance shall be properly secured thereto and at least two turns of such chain or rope shall remain on the drum in every operating position of the appliance.

Brakes control, safety devices, etc.

40. (1) Every crane, crab and winch shall be provided with an efficient brake or brakes or other safety device which will prevent the fall of the load when suspended, and by which the load can be effectively controlled whilst being lowered.

40. (2) Every crane, so far as reasonably practicable, shall be provided with a suitable automatic device which will ensure that the point of attachment for the load comes to rest at a point below the highest point to which the point of attachment can travel.

40. (3) On every lifting appliance every lever, handle, switch or other device provided for controlling the operation of any part of the appliance being a

lever, handle, switch or other device whose accidental movement or displacement is liable to cause danger, shall where practicable (unless it is so placed or the appliance is so constructed as to prevent accidental movement or displacement), be provided with a suitable spring or other locking arrangement to prevent the accidental movement or displacement:

Provided that in the case of a lifting appliance which at the 1st day of October, 1968 is used and so long thereafter as it is continued to be used, it shall be sufficient if the requirements of paragraphs (2) and (3) are complied with within two years from the aforesaid date.

40. (4) Every lever, handle, switch or other device provided for controlling the operation of any part of a lifting appliance shall have upon or adjacent to it clear markings to indicate its purpose and mode of operation:

Provided that this paragraph shall not apply to rotating handles for raising or lowering the load in the case of a winch or non-derricking jib cranes not operated by mechanical power.

Safe means of access.

41. Where any person engaged on the examination, repair or lubrication of any lifting appliance is liable to fall a distance of more than 6 feet 6 inches there shall, so far as is reasonably practicable, be provided and maintained safe means of access to and egress from the place at which the person has to work, with (where necessary) adequate handholds and footholds.

Poles or beams supporting pulley blocks or gin wheels.

42. No pulley block or gin wheel suspended from or supported by a pole or beam shall be used for raising or lowering materials unless it is effectively secured to the pole or beam and the pole or beam –

(a) is of adequate strength for the purpose for which it is being used; and

(b) is adequately and properly secured so as to support the pulley block or gin wheel and the load with safety and so as to prevent undue movement of the pole or beam.

Stability of lifting appliance.

43. (1) Appropriate precautions shall be taken to ensure the stability of lifting appliances used on a soft or uneven surface or on a slope.

43. (2) No crane shall be used for raising or lowering unless, so as to ensure stability, it is either –

(a) securely anchored; or

- (b) adequately weighted by suitable ballast which shall be properly placed on the crane structure and sufficiently secured to prevent its being accidentally displaced.

No part of any rails on which a crane is mounted or the sleepers supporting such rails shall be used as anchorage for this purpose.

43. (3) The whole of the appliances for the anchorage or ballasting of a crane shall be examined by a competent person on each occasion before the crane is erected.

43. (4) After each erection of a crane on a site of operations or works to which these Regulations apply and after each removal of a crane about or to such a site, or any adjustment to any member of a crane, being a removal or adjustment which involves changes in the arrangements for anchoring or ballasting the crane, the security of the anchorage or the adequacy of the ballasting, as the case may be, shall, before the crane is taken into use, be tested by a competent person, by the imposition either –

- (a) of a load of twenty-five per cent above the maximum load to be lifted by the crane as erected at the positions where there is the maximum pull on each anchorage; or
- (b) of a less load arranged to provide an equivalent test of the anchorage or ballasting arrangements.

A report of every such test and the results thereof: signed by the person carrying out the test, shall be made forthwith in the form set out as **Form No. 3** in the **First Schedule** and containing the particulars Form No. 3, specified therein.

43. (5) Where the stability of a crane is secured by means of removable weights a diagram or notice indicating the position and amount of such weights shall be affixed on the crane where it can be readily seen.

43. (6) No crane shall be used or erected under weather conditions likely to endanger its stability. After exposure to weather conditions likely to have affected the stability of a crane, the anchorage arrangements and ballast shall be examined by a competent person as soon as practicable and before the crane is used, and such steps as may be necessary shall be taken to ensure the stability of the crane.

Rail mounted cranes.

44. (1) All rails on which a crane moves shall -

- (a) be supported on a surface sufficiently firm to prevent undue

movement of the rails;

- (b) have an even running surface, be sufficiently supported and of adequate section;
- (c) be jointed by fish plates or double chairs;
- (d) be securely fastened to sleepers or bearers;
- (e) be laid in straight lines or in curves of such radii that the crane can be moved freely and without danger of derailment; and
- (f) be provided with adequate stops or buffers on each rail at each end of the track.

All rails and equipment referred to in this paragraph shall be properly maintained:

Provided that sub-paragraphs (c) and (d) shall not apply in the case of cranes on bridge rails or in the case of any crane if other adequate steps are taken to ensure the proper junction of the rails and to prevent any material variation in their gauge.

44. (2) In the case of every crane mounted on rails either –

- (a) the crane shall be provided with effective brakes for the travelling motion; or
- (b) sprags, scotches or chocks shall be available and used when necessary.

44. (3) Every travelling crane on rails shall be provided with guards to remove from the rails any loose materials likely to cause danger.

44. (4) Where a Scotch derrick crane is mounted on more than one bogie, trolley or wheeled carriage, the crane sleepers or land ties, and if necessary the bogies, trolleys or wheeled carriages shall be rigidly braced and properly connected together, and the rails on which each bogie, trolley or wheeled carriage moves shall be level. The crane shall be moved on the track only in a manner not liable to cause instability, rocking or distortion either of the crane structure or of the supporting framework or track.

Cranes with derricking jobs.

45. On every crane having a derricking jib operated through a clutch there shall be provided and properly maintained an effective interlocking arrangement between the derricking clutch and the pawl sustaining the derricking drum which shall ensure that the clutch cannot be disengaged unless the pawl is in effective

engagement with the derricking drum and the pawl cannot be disengaged unless the clutch is in effective engagement with the derricking drum:

Provided that this regulation shall not apply to any crane in which –

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

Restriction on use of cranes.

46. (1) Without prejudice to paragraph (2), the hoisting mechanism of a crane shall not be used for any purpose other than raising or lowering a load vertically unless no undue stress is imposed on any part of the crane structure or mechanism, and the stability of the crane is not thereby endangered and unless such use is supervised by a competent person.

46. (2) A crane with derricking jib shall not be used with the jib at a radius exceeding the maximum radius required to be specified for the jib in the certificate of test and examination required by regulation 51.

Use of cranes with timber structural member prohibited.

47. No crane which has any timber structural member shall be used.

Erection of cranes under supervision.

48. A crane shall not be erected except under the supervision of a competent person.

Competent persons to operate lifting appliances and give signals.

49. (1) A lifting appliance shall not be operated otherwise than by a person trained and competent to operate that appliance except that it shall be permissible for the appliance to be operated by a person who is under the direct supervision of a qualified person for the purpose of training.

49. (2) No person under eighteen years of age shall be employed (except under the direct supervision of a competent person for the purpose of training) either to give signals to the operator of any lifting appliance driven by mechanical power or to operate any such appliance.

49. (3) If the person operating a lifting appliance has not a clear and unrestricted view of the load or, where there is no load, of the point of attachment for a load and of its vicinity, throughout the operation, except at any place where such view is not necessary for safe working, there shall be appointed and suitably stationed one or more competent persons as may be necessary to give necessary signals to the operator.

Signals.

50. (1) Every signal given for the movement or stopping of a lifting appliance shall be distinctive in character and such that the person to whom it is given is able to hear or see it easily.

50. (2) Devices or apparatus used for giving sounds, colour or light signals for the purposes aforesaid shall be properly maintained and the means of communication shall be adequately protected from accidental interference.

Testing and examination of cranes, etc.

51. (1) Subject to paragraph (3), no crane, crab or winch shall be used after any substantial alteration or repair affecting its strength or stability until it has been tested and thoroughly examined by a competent person and no pulley block, gin wheel or sheer legs shall, after any substantial alteration or repair, be used in the raising or lowering of any load weighing one ton or more until it has been tested and thoroughly examined by a competent person.

51. (2) Subject to paragraph (3), no lifting appliance shall be used unless it has been thoroughly examined by a competent person within the previous fourteen months and since it has undergone any substantial alteration or repair.

51. (3) Nothing in paragraphs (1) and (2) shall apply to a hoist.

51. (4) No crane, crab, winch, pulley block or gin wheel shall be used unless there has been obtained in the form set out as **Form No. 4** or **Form No. 5** in the **First Schedule**, as the case may be, as respects the kind of lifting appliance tested and examined, a certificate of any test and examination required by paragraphs (1) and (2) signed by the person making or responsible for the carrying out of the test and examination and specifying –

(a) the safe working load or loads;

(b) in the case of a crane with a variable operating radius (including a crane with a derricking jib) the radii of the jib, trolley or crab appropriate to the specified safe working loads; and

(c) in the case of a crane with a derricking jib, the maximum radius at which the jib may be worked.

51. (5) A report of the results of every test or examination required by paragraphs (1) and (2) in the form and including the particulars set out as **Form No. 6** in the **First Schedule** and signed by the person carrying out the examination shall be made within 28 days:

Provided that this paragraph shall not apply to a test or examination of which a certificate has been obtained in accordance with paragraph (4).

51. (6) The person making the report of any test or examination required by paragraphs (1) and (2) shall within 28 days of the completion of the test or examination send to the Chief Factory Inspector a copy of the report in every case where the test or examination shows that the plant or equipment cannot continue to be used with safety unless certain repairs are carried out immediately or within a specified time.

Marking of safe working loads.

52. (1) The safe working load or safe working loads and a means of identification shall be plainly marked –

- (a) upon every crane, crab or winch:
- (b) upon every pulley block, gin wheel, sheer legs, derrick pole or derrick mast used in the raising or lowering of any load weighing one ton or more.

52. (2) Every crane of variable operating radius (including a crane with a derricking jib) shall –

- (a) have plainly marked upon it the safe working load at various radii of the jib, trolley or crab, and in the case of a crane with a derricking jib, the maximum radius at which the jib may be worked; and
- (b) be fitted with an accurate indicator, clearly visible to the driver, showing the radius of the jib, trolley or crab at any time and the safe working load corresponding to that radius.

Load not to exceed safe working loads.

53. None of the following appliances, nor any part of any such appliance, shall be loaded beyond the safe working load, that is to say, cranes, crabs, winches, pulley blocks, gin wheels, sheer legs, derrick loads, poles and derrick masts, so, however, that for the purpose of making tests of any such appliance the safe working load may be exceeded by such an amount as a competent person appointed to carry out the tests may authorize.

Precautions on raising or lowering loads.

54. (1) Where there is lifted on a crane, crab, winch (other than a piling winch), sheer legs or aerial cableway a load which is equal to or slightly less than the relevant safe working load and which is not already sustained wholly by the appliance, the lifting shall be halted after the load has been raised a short distance and before the operation is proceeded with.

54. (2) Where more than one lifting appliance is required to raise or lower one load –

(a) the plant or equipment used shall be so arranged and fixed that no such lifting appliance shall at any time be loaded beyond its safe working load or be rendered unstable in the raising or lowering of the load: and

(b) a competent person shall be specially appointed to supervise the operation.

Scotch and guy derrick cranes.

55. (1) The jib of a Scotch derrick crane shall not be erected derrick between the back stays of the crane.

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

55. (3) Appropriate measures shall be taken to prevent the foot of the king post of any Scotch derrick crane from being lifted out of its socket of support whilst in use.

55. (4) Where the guys of a guy derrick crane cannot be fixed at approximately equal inclinations to the mast and so that the angles between adjacent pairs of guys are approximately equal such other measures shall be taken as will ensure the stability of the crane.

PART IV

Chains, Ropes and Lifting Gear

Construction, testing, examination and safe working load.

56. (1) Subject to the provisions of paragraph (2), no chain, rope or lifting gear shall be used in raising or lowering as a means of suspension unless –

(a) it is of good construction, sound material, adequate strength, suitable quality, and free from patent defect; and

(b) (except in the case of a wire rope used before the 1st day of October, 1968, or of a fibre rope sling) it has been tested and examined by a competent person and there has been obtained in the form set out as **Form No. 7**, or in the case of wire rope, **Form No. 8** in the **First Schedule** a certificate of such test and examination specifying the safe working load and signed by the person making or responsible for the carrying out of the test and examination; and

(c) it is marked in plain legible figures and letters with the safe working load and means of identification.

56. (2) No wire rope shall be used in raising or lowering or as a means of

suspension if in any length of ten diameters the total number of visible broken wires exceeds five per cent of the total number of wires in the rope.

56. (3) No chain, rope or lifting gear shall be loaded beyond its safe working load except for the purpose of making tests and then only to such extent as a competent person appointed to carry out the tests may authorize.

Testing of chains, links, etc. altered or repaired by welding.

57. No chain, ring, link, hook, plate clamp, shackle, swivel or eye of bolt which has been lengthened, altered or repaired by welding shall be used in raising or lowering or as a means of suspension unless since such lengthening, alteration or repair it has been tested and welding. thoroughly examined by a competent person and there has been obtained in the form set out as Form No. 7 in the First Schedule a certificate of such test and thorough examination signed by him or by the person responsible for the carrying out of the test and thorough examination and specifying the safe working load:

Provided that the requirements of this regulation as to testing and certification shall not apply to a chain attached to the bucket of either a dragline or an excavator.

Hooks.

58. Every hook used for raising or lowering or as a means of suspension shall either –

- (a) be provided with an efficient device 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 shape displacement.

Slings.

59. (1) Every sling used for raising or lowering on a lifting suns appliance shall be securely attached to the appliance, and the method of attachment shall not be a method likely to result in damage to any part of the sling or to any lifting gear supporting it.

59. (2) No double or multiple sling shall be used for raising or lowering if –

- (a) the upper ends of the sling legs are not connected by means of a shackle, ring or link of adequate strength; or
- (b) the safe working load of any sling leg is exceeded as a result of the angle between the sling legs.

Edges of load not to come into contact with slings, etc.

60. Adequate steps shall be taken by the use of suitable packing or otherwise to prevent the edges of the load from coming into contact with any sling, rope or chain, where this could cause danger.

Knotted chains, etc.

61. (1) A load shall not be raised, lowered or suspended on a chain or wire rope which has a knot tied in any part of the chain or rope chain, etc. under direct tension.

61. (2) No chain which is shortened or joined to another chain by means of bolts and nuts inserted through the links shall be used for raising, lowering or suspending any load.

Examination of chains, ropes and lifting gear.

62. (1) No chain, rope or lifting gear shall be used for raising or lowering or as a means of suspension unless it has been thoroughly examined by a competent person at least once within the previous six months.

62. (2) A report of the results of every such examination in the form and including the particulars set out as **Form No. 9** in the **First Schedule** and signed by the person carrying out the examination shall be made forthwith.

Annealing of chains and lifting gear.

63. A chain or lifting gear (other than a rope sling or lifting gear of a class or description specified in the Second Schedule, or exempted by certificate of the Chief Factory Inspector upon the ground that it is made of such material or so constructed that it cannot be subjected to heat treatment without risk of damage) shall not be used in raising or lowering or as a means of suspension unless –

(a) it has been effectively annealed or subjected to some appropriate form of heat treatment under the supervision of a competent person within the previous fourteen months or, in the case of chains, or slings or half-inch bar or smaller material, within the previous six months, so, however, that chains or lifting gear not in regular use or used solely on lifting appliances worked by hand need be annealed or subjected to appropriate heat treatment only when necessary: and

(b) a report has been made in the form and including the particulars set out as **Form No. 10** in the **First Schedule** of every annealing or appropriate heat treatment and signed by the competent person under whose supervision the annealing or heat treatment was carried out.

PART V
Special Provisions as to Hoists

Safety of hoistways, platforms and cages.

64. (1) The hoistway of every hoist shall at all points at which access to the hoistway is provided or at which persons are liable to be struck by any moving part of the hoist be efficiently protected by a substantial enclosure, and the enclosure shall, where access to the hoist is needed, be fitted with gates. Such enclosure and gates shall where practicable extend to a height of at least 6 feet 6 inches except where a lesser height is sufficient to prevent any person falling down the hoistway and there is no risk of any person coming into contact with any moving part of the hoist, but shall in no case be less than 3 feet 6 inches. Gates so fitted shall be kept closed except at a landing place where the platform or cage is at rest and it is for the time being necessary for the gate to be open for the purpose of loading or unloading goods, plant or material or to allow persons to enter or leave the cage; and without prejudice to the obligation of every contractor and employer of workmen under these Regulations, it shall be the duty of every person immediately after using the gateway, to see that the gate is closed unless it is for the time being necessary for the gate to be open for any of the purposes aforesaid.

64. (2) In connection with every hoist there shall where practicable be provided and maintained efficient devices which will support the platform, cage, skip or bucket together with its safe working load in the event of failure of the hoist, rope or ropes or any part of the hoisting gear.

64. (3) In connection with every hoist there shall be provided and maintained efficient automatic devices which will ensure that the platform or cage does not over-run the highest point to which it is for the time being constructed to travel.

Operation of hoists.

65. (1) The construction and the installation arrangements of every hoist shall where practicable be such that it can be operated at any one time only from one position and a hoist shall not be operated from the cage unless the requirements of regulation 70 are complied with.

65. (2) If a person operating a hoist has not a clear and unrestricted view of the carriage, platform or cage throughout its travel, except at points where such a view is not necessary for safe working, then effective arrangements shall be made for signals for operating the hoist to be given to him from each landing place at which the hoist is used and to enable him to stop the carriage, platform or cage at the appropriate level.

Winches.

66. Where a hoist is operated by means of a winch, the winch shall be so constructed that the brake is applied when the control lever, handle or switch is not held in the operating position, and the winch shall not be a winch fitted with a pawl and ratchet gear on which the pawl has to be disengaged before the

platform or cage can be lowered.

Safe working load and marking of hoists.

67. The safe working load shall be plainly marked on every hoist platform, cage or carriage and no load greater than that load shall be carried except that for the purpose of carrying out a test; the safe working load may be exceeded by such amount as a competent person appointed to carry out the test may authorize. In the case of a hoist used for carrying persons the maximum number of persons to be carried at any one time shall also be so marked, and a greater number of persons shall not be so carried. In the case of any other hoist there shall be a readily legible notice on the platform or cage stating that the carriage of persons is prohibited.

Test and examination of hoists.

68. (1) No hoist shall be used unless –

(a) in the case of a hoist manufactured or substantially altered or substantially repaired after the 1st day of October, 1968, it has since such manufacture, alteration or repair, as the case may be, been tested and thoroughly examined by a competent person, and there has been obtained in the form and including the particulars set out as **Form No. 11** in the **First Schedule** a certificate of such test and examination signed by the person making or responsible for the carrying out of the test and examination and specifying the safe working load of the hoist and in the case of a hoist used for carrying persons the maximum number of persons to be carried at any one time;

(b) in the case of use for carrying persons, it has, since it was last erected or the height of travel of the cage was last altered, whichever is the later, been tested and thoroughly examined by a competent person and a report of the results of such test and examination in the form and including the particulars set out as **Form No. 12** in the **First Schedule** and signed by the person making or responsible for the carrying out of the test and examination, has been made:

(c) it has been thoroughly examined by a competent person at least once within the previous six months.

68. (2) A report in the form and including the particulars set out as **Form No. 13** in the **First Schedule** of the results of every examination required by subparagraph (c) of paragraph (1), signed by the person making or responsible for the carrying out of the examination, shall be made within twenty-eight days.

68. (3) The person making the report of any test or examination required by paragraph (1), shall within twenty-eight days of the completion of the test and examination send to the Chief Factory Inspector a copy of the report in every

case where the test or examination shows that the hoist cannot continue to be used with safety unless certain repairs are carried out immediately or within a time specified in the report.

PART VI

Carriage of Persons and Secureness of Loads

Carrying persons by means of lifting appliances.

69. (1) No person shall be raised, lowered or carried by a power driven lifting appliance except –

- (a) on the driver's platform of a crane; or
- (b) on a hoist; or
- (c) on a suspended scaffold; or
- (d) as permitted by paragraph (2).

69. (2) A person may be raised, lowered or carried by a crane otherwise than in accordance with the provisions of sub-paragraphs (a), (1) and (c) of paragraph (1) only in circumstances where the use of a hoist or a suspended scaffold is not reasonably practicable and the requirements of paragraph (3) are complied with.

69. (3) No person shall be carried except –

- (a) in a suitable chair or cage; or
- (b) in a suitable skip or other receptacle at least 3 feet 6 inches deep.

and any such chair, cage, skip or other receptacle shall be of good construction, sound material, adequate strength and properly maintained, and shall be provided with suitable means to prevent any occupant from falling out and shall not contain material or tools liable to interfere with his handhold or foothold or otherwise endanger him.

Suitable measures shall be taken to prevent the chair, cage, skip or other receptacle from spinning or tipping in a manner dangerous to any occupant.

Hoists carrying persons.

70. (1) No person shall be carried by a hoist unless it is provided Hoists with a cage which –

- (a) is so constructed as to prevent, when the cage gate or gates are

shut, any person carried from falling out or from being trapped between any part of the cage and any fixed structure or other moving part of the hoist or from being struck by articles or materials falling down the hoistway; and

(b) is fitted on each side from which access is provided to a landing place with a gate which, so far as is reasonably practicable, shall have efficient interlocking or other devices to secure that the gate cannot be opened except when the cage is at a landing place and that the cage cannot be moved away from any such place until the gate is closed.

70. (2) Every gate in the hoistway enclosure of a hoist used for carrying persons shall be fitted with efficient interlocking or other devices to ensure that the gate cannot be opened except when the cage is at the landing place. and that the cage cannot be moved away from the landing place until the gate is closed.

70. (3) In connection with every hoist used for carrying persons there shall be provided suitable efficient automatic devices which will ensure that the cage comes to rest at a point above the lowest point to which the cage can travel.

Secureness of loads.

71. (1) Every part of a load shall be securely suspended or supported whilst being raised or lowered and shall be adequately secured to prevent danger from slipping or displacement.

71. (2) Every container or receptacle used for raising or lowering stone, blocks, tiles or other object shall be so enclosed, constructed or designed as to prevent the accidental fall of such objects:

Provided that this requirement shall not apply to a grab, shovel or other similar excavating receptacle if effective steps are taken to prevent any person being endangered by a fall of objects therefrom.

71. (3) Goods or loose material shall not be placed directly on a platform of a hoist unless such platform is enclosed or other effective precautions are taken where necessary to prevent the fall of any such goods or material.

71. (4) No truck or wheelbarrow shall be carded on a hoist platform unless it is efficiently scotched or secured on the platform.

71. (5) No loaded truck or wheelbarrow shall be carried on the open platform of a hoist unless the truck or wheelbarrow is so loaded that no part of the load is liable to fall off.

71. (6) No load shall be left suspended from a lifting appliance unless a competent person is actually in charge of the appliance.

71. (7) Where by reason of the nature or position of the operation a load is liable, whilst being moved on a lifting appliance or lifting gear, to come into contact with any object so that the object may become displaced, special measures shall be adopted to prevent the danger so far as reasonably practicable.

PART VII

Supervision of Safe Conduct of Work

Appointment of Safety Supervisors.

72. Every contractor, and every employer of workmen, who undertakes operations or works to which these Regulations apply and who normally employs more than fifty persons thereon at any one time (whether or not all those persons are employed on the same site or are all at work at any one time) shall specifically appoint in writing one or more persons experienced in such operations or works and suitably qualified for the purpose to be specially charged with the duties –

- (a) of advising the contractor or employer as to the observance of the requirements for the safety or protection of persons employed imposed by these Regulations and as to other safety matters; and
- (b) of exercising a general supervision of the observance of these Regulations and other safety matters and of promoting the safe conduct of the work generally.

Other duties and joint appointment of Safety Supervisors.

73. (1) The duties assigned to any person appointed under regulation 72 by the contractor or employer appointing him, including any duties other than those mentioned in that regulation, shall not be such as to prevent that person from discharging with reasonable efficiency the duties assigned to him under that regulation.

73. (2) Nothing in these Regulations shall be construed as preventing the same person or persons being appointed for a group of sites or as preventing two or more contractors or employers from jointly appointing the same person or persons.

PART VII

Excavations, Shafts and Tunnels

Supply and use of timber and inspection of excavations, etc.

74. (1) An adequate supply of timber of suitable quality or other suitable

support shall where necessary be provided and used to prevent so as is reasonably practicable and as early as is practicable in the course of the work, danger to any person employed from a fall or dislodgement of earth, rock or other material forming a side or the roof of or adjacent to any excavation, shaft, earthwork or tunnel.

74. (2) Without prejudice to the carrying out of any other examination found necessary to ensure compliance with this regulation every part of any excavation, shaft, earthwork or tunnel where persons are employed, not being a part to which proviso (a) below applies, shall be specially examined by a competent person at least once in every period of seven days for the purpose of assisting to ensure compliance with this regulation and in particular to see that timber and other support are adequate and in good condition; and a report in the form and including the particulars set out as **Form No. 14** in the **First Schedule** of the results of every such examination and signed by the person carrying out the examination shall be made forthwith:

Provided that this regulation shall not apply –

- (a) to any excavation, shaft or earthwork where, having regard to the nature and slope of the sides of the excavation, shaft or earthwork and other circumstances, no fall or dislodgement of earth or other material so as to bury or trap a person employed or so as to strike a person employed from a height of more than four feet is liable to occur; or
- (b) in relation to a person actually engaged in timbering or other work which is being carried out for the purpose of compliance with this regulation. if appropriate precautions are taken to ensure his safety as far as circumstances permit.

Supervision and execution of timbering and other work.

75. (1) No timbering or other support for any part of an excavation shaft, earthwork or tunnel shall be erected or be substantially added to, altered or dismantled except under the direction of a competent person and so far as possible by competent workmen possessing adequate experience of such work. All material for any such work shall be inspected by a competent person on each occasion before being taken into use and material found defective in any respect shall not be used.

75. (2) Timbering or other support for any part of an excavation shaft, earthwork or tunnel shall be of good construction, sound material, free from patent defect and of adequate strength for the purpose for which it is used and shall be properly maintained.

75. (3) All struts and braces in any excavation, shaft, earthwork or tunnel shall be properly and adequately secured so as to prevent their accidental

displacement or fall.

Means of egress in case of flooding.

76. In any excavation, shaft or tunnel where there is reason to apprehend danger to persons employed therein from rising water or from an eruption of water or material there shall be provided, so far as practicable, means to enable such persons to reach positions of safety.

Excavations, etc. likely to reduce security of a structure.

77. No excavations, shaft, earthwork or tunnel which is likely to reduce, so as to endanger any person employed, the security or stability of any part of any structure, whether temporary or permanent, shall be commenced or continued unless adequate steps are taken before and during the progress of the work to prevent danger to any person employed from collapse of the structure or the fall of any part thereof.

Fencing of excavations, etc.

78. Every accessible part of an excavation, shaft, pit or opening in the ground near to which employed persons are working and into or down a side of which a person is liable to fall a distance of more than 6 feet 6 inches shall be provided with a suitable barrier placed as close as is reasonably practicable to the edge, or shall be securely covered:

Provided that the foregoing requirement shall not apply to any part of an excavation, shaft, pit or opening while (and to the extent to which) the absence of such barrier and covering is necessary for the access of persons or for the movement of plant or equipment or materials.

Safeguarding edges of excavations, etc.

79. (1) Material shall not be placed or stacked near the edge of any excavation, shaft, pit or opening in the ground so as to endanger persons employed below.

79. (2) No load or plant or equipment shall be placed or moved near the edge of any excavation, shaft, pit or opening in the ground where it is likely to cause a collapse of the side of the excavation, shaft, pit or opening and thereby endanger any person.

PART IX Explosives

Explosives.

80. Explosives shall not be handled or used except by or under the immediate control of a competent person with adequate knowledge of the dangers connected with their use and steps shall be taken to ensure that, when a

charge is fired, persons employed are in positions in which, so far as can reasonably be anticipated, they are not exposed to risk of injury from the explosion or from flying material.

PART X

Work on or Adjacent to Water

Transport by water.

81. When any person employed is conveyed to or from any working place by water, proper measures shall be taken to provide for his safe transport. Vessels used for this purpose shall be of suitable construction, shall be properly maintained, shall be in the charge of a competent person and shall not be over-crowded or over-loaded.

Prevention of drowning.

82. Where, on or adjacent to the site of any operations or works to which these Regulations apply, there is water into which a person employed is, in the course of his employment, liable to fall with risk of drowning, suitable rescue equipment shall be provided and kept in an efficient state and ready for use and measures shall be taken to arrange for the prompt rescue of any such person in danger of drowning. Where there is special risk of such fall from the edge of adjacent land or of a structure adjacent to or above water or of a floating stage, secure fencing shall be provided near the edge to prevent such fall, so, however, that such fencing may be removed or remain unerected for the time and to the extent necessary for the access of persons or the movement of materials.

PART XI

Transport

Mechanically propelled vehicles or trailers.

83. A mechanically propelled vehicle or a mechanically drawn trailer-vehicle if owned or used by, or hired by and operated under the control of a contractor or employer undertaking operations or works to which these Regulations apply and used for conveying workmen, goods or materials for the purpose of such operations or works shall, when being moved at a site where such operations or works are carried on (whether or not workmen, goods or materials are actually being conveyed on the vehicle at the time) –

- (a) be in an efficient state, in efficient working order and in good repair;
- (b) not be used in an improper manner;
- (c) not be loaded in such a manner or to such extent as to interfere with the safe driving or operation of the vehicle.

Riding in insecure positions, etc.

84. No person shall ride or be required or permitted to ride on the buffer, running board or other insecure position on any vehicle to which regulation 83 applies or on any other part thereof except the place thereon provided for that purpose.

Remaining on vehicle during loading.

85. No person shall remain or be required or permitted to remain on any vehicle to which regulation 83 applies or on any truck or wagon during the loading of loose materials by means of a grab, excavating or similar appliance, if he is endangered by so remaining.

Vehicles near edge of excavations, etc.

86. Where any vehicle is used for tipping material into any excavation or pit or over the edge of any embankment or earthwork, adequate measures shall be taken where necessary so as to prevent such vehicle from over-running the edge of such excavation, pit, embankment or earthwork.

PART XII Demolition

Application of Part XII and supervision.

87. (1) The requirements of this Part shall apply as respects the demolition of the whole or any substantial part of a building or other structure.

87. (2) Every contractor undertaking demolition operations to which this Part applies shall appoint a competent person experienced in such operations to supervise the work; so, however, that where more than one contractor takes part in such demolition operations, each such contractor shall appoint a competent person aforesaid and either the same person shall be jointly appointed by every contractor or each contractor shall make arrangements to ensure that no operation is undertaken by his workmen except after consultation between all the persons so appointed as to the method by which and the time at which the operation is to be carried out.

Fire and flooding.

88. Before demolition is commenced and also during the progress of the work all practicable steps shall be taken to prevent danger to persons employed –

- (a) from risk of fire or explosion through leakage or accumulation of gas or vapour; and
- (b) from risk of flooding.

Precautions in connection with demolitions.

89. (1) No part of a building or other structure shall be so over loaded with debris or materials as to render it unsafe to persons employed.

89. (2) The following operations shall be carried out only under the immediate supervision of a competent foreman or charge-hand with adequate experience of the particular kind of work or by a workman experienced in the kind of work and under the direction of a competent foreman or charge-hand as aforesaid, that is to say –

(a) the actual demolition of a building or part thereof or any other structure or part thereof except where there is no risk of a collapse of any part of the building or the structure in the course or as a result of the said demolition, so as to endanger any person employed, other than a risk which could not reasonably have been foreseen:

(b) the actual demolition of any part of a building or other structure where there is a special risk of collapse. whether of that or of any other part of the building or structure, in the course or as a result of the said demolition, so as to endanger any person employed;

(c) the cutting of reinforced concrete, steel-work or iron-work forming part of the building or other structure which is being demolished,

and before any steel-work or iron-work is cut or released, precautions shall be taken to avoid danger from any sudden twist, spring or collapse.

89. (3) All practicable precautions shall be taken to avoid danger from collapse of the building or other structure when any part of the framing is removed from a framed or partly framed building or other structure.

89. (4) Before demolition is commenced and also during the progress of the work, precautions shall, where necessary, be taken by adequate shoring or otherwise to prevent, as far as practicable, the accidental collapse of any part of the building or structure, or of any adjoining building or structure the collapse of which may endanger any person employed:

Provided that this requirement shall not apply in relation to any person actually engaged in erecting or placing shoring or other safeguards for the purpose of compliance with the requirement, if appropriate precautions are taken to ensure his safety as far as circumstances permit.

PART XIII

Miscellaneous

Fencing of machinery; fencing of new machinery.

90. (1) Every flywheel and every moving part of any prime mover, every part of transmission machinery and every dangerous part of other machinery (whether or not driven by mechanical power) shall be securely fenced unless it is in such a position or of such construction as to be as safe to every person employed or working on the site of the operations or works as it would be if it were securely fenced.

90. (2) Without prejudice to the provisions of paragraph (1), every prime mover and other machine intended to be driven by mechanical power (being a prime mover or machine used in operations or works to which these Regulations apply) shall, unless constructed before the 1st day of October, 1968, be so constructed that the following parts of such prime mover or machine are securely fenced or are in such a position or of such construction as to be as safe as they would be if they were securely fenced that is to say, all revolving shafts, fly-wheels, couplings, toothed gearing, friction gearing, belt and pulley drives, chain and sprocket drives and all projecting screws, bolts or keys on any revolving shaft, wheel or pinion:

Provided that where a prime mover provides energy for another machine the foregoing requirements of this regulation shall not apply to parts which transmit energy from the prime mover to that other machine unless the prime mover and that machine are constructed as a unit.

90. (3) No person shall sell or let or hire, or as agent of the seller or hirer cause or procure to be sold or let or hired, for use on any building operation or work of engineering construction any prime mover or machine which does not comply with the requirements of paragraph (2).

Electricity.

91. (1) All electrical equipment and conductors shall be so designed, constructed, installed, protected, worked and maintained as to prevent danger so far as is reasonably practicable.

91. (2) Before any operations or works to which these Regulations apply are commenced, and also during the progress thereof, all practicable steps shall be taken to prevent danger to persons employed from any live electric cable or apparatus which is liable to be a source of such danger, either by rendering such cable or apparatus electrically dead or otherwise,

91. (3) Where any electrically charged overhead cable or apparatus is liable to be a source of danger to persons employed during the course of any operations or works to which these Regulations apply, whether from the operation of a lifting appliance or otherwise, all practicable precautions shall be taken to prevent such danger either by the provision of adequate and suitably placed barriers or otherwise.

Protection from falling material.

92. (1) At any place on the site of the operations or works where any person is habitually employed steps shall be taken to prevent any person who is working in that place from being struck by any falling material or article.

92. (2) Scaffold materials, tools, other objects and material (including waste material) shall not be thrown, tipped or shot down from a height where they are liable to cause injury, but where practicable shall be properly lowered. In any place where proper lowering is not practicable and also where any part of a building or other structure is being demolished or broken off adequate steps shall be taken to protect persons employed from falling or flying debris.

Lighting of working places, etc.

93. (1) Every working place and approach thereto, every place where raising or lowering operations with the use of a lifting appliance are in progress. and all openings dangerous to persons employed, shall be adequately and suitably lighted.

93. (2) Measures shall be taken to prevent. so far as practicable, steam, smoke or other vapour generated on the site from obscuring any part of the work, scaffolding machinery, or other plant or equipment where any person is employed.

Projecting nails and loose materials: wet paint or cement wash on iron-work or steel-work.

94. (1) No timber or material with projecting nails shall be used in any work in which they are a source of danger to persons employed or be allowed to remain in any place where they are a source of danger to such persons.

94. (2) Loose materials where not required for use shall not be placed or left so as to restrict unduly the passage of persons upon platforms, gangways, floors or other place on the site used for such passage, but shall be removed, stacked or stored so as to leave an unobstructed passage. Materials shall not be insecurely stacked in a place where they may be dangerous to persons employed, or so stacked as to overload and render unsafe any floor, roof or other part of a building or other structure.

94. (3) No iron-work or steel-work which has been painted or cement-washed shall be moved or manipulated on the site of the operations or works unless all the paint or wash on it (other than paint for the purpose of jointing) is dry and no person shall walk or work or be required or permitted to walk or work on erected iron-work or steel-work on which the paint (other than paint for the purpose of jointing) or cement wash is wet:

Provided that the requirement of this regulation as to moving or manipulating

shall not apply to moving or manipulating in connection with the painting or cement-washing of iron-work or steel-work on the site.

Construction of temporary structures.

95. Any temporary structure erected for the purpose of operations or works to which these Regulations apply, not being a scaffold or other structure to which regulation 35 applies, shall, (having regard to the purpose for which it is used) be of good construction and adequate strength and stability and shall be of sound material, free from patent defect and properly maintained.

Avoidance of danger from collapse of structures.

96. (1) All practicable precautions shall be taken by the use of temporary guys, stays, supports and fixings or otherwise where necessary to prevent danger to any person employed through the collapse of any part of a building or other structure during any temporary state of weakness or instability of the building or structure or part thereof before the building or structure is completed.

96. (2) Where any work is carried on which is likely to reduce, so as to endanger any person employed, the security or stability of any of an existing building or structure, or of a building or structure in course of construction, all practicable precautions shall be taken by shoring or otherwise to prevent danger to any person employed from the collapse of the building or structure or the fall of any part thereof.

Protection of the eyes.

97. Where there is carried on any process specified in the **Third Schedule** suitable goggles or effective screens shall be provided to protect the eyes of persons employed in the process, and no person so employed, shall carry on, or be required or permitted to carry on, any such process, without utilizing such goggles or screens.

Helmets or crowns for pile driving.

98. Every helmet or crown used in connection with pile driving shall be of good construction, of sound and suitable material, of adequate strength and free from patent defect.

PART XIV **Health and Welfare**

Provision of First Aid boxes or cases.

99. (1) In the case of a site where more than five persons are employed in operations to which these Regulations apply, there shall be provided and kept clean and in good repair a sufficient number of suitable first-aid boxes or cases, which shall, while work is going on be reasonably accessible to all positions on the site where persons are working.

99. (2) Every first-aid box or case provided in pursuance of this regulation shall be distinctively marked "FIRST-AID" and placed under the charge of a responsible person who –

(a) while in charge of the box or case shall be readily available while persons for whom it is provided are working on the site and whose name shall be plainly indicated in a prominent place on or near the box or case; and

(b) in the case of a site where more than 25 persons are employed shall be a person trained in first-aid treatment, including competence to administer artificial respiration.

First Aid boxes or cases.

100. (1) Nothing except appliances or requisites for first-aid shall or be kept in a first-aid box or case.

100. (2) Each first-aid box or case provided in pursuance of these Regulations shall contain the equipment and materials specified in the appropriate Part of the Fourth Schedule.

100. (3) All materials for dressings contained in first-aid boxes or cases shall be those designated in, and of a grade or quality not lower than the standard specified by the British Pharmaceutical Codex and any supplement thereto, being the British Pharmaceutical Codex and any supplement current at the 1st day of October, 1968.

Ambulances.

101. In the case of a site where more than 50 persons are employed in operations to which these Regulations apply, there shall be provided and maintained at or in the immediate vicinity of the site so as to be readily available during working hours –

(a) suitable and sufficient stretchers;

(b) a motor vehicle constructed or adapted so as to be able to carry a person or persons on the stretcher or stretchers provided under this regulation:

Provided that sub-paragraphs (a) and (b) shall not apply if specific arrangements have been made for obtaining an ambulance and stretcher promptly, when required, from a hospital or other place to which telephonic communication from the site or from a place in the immediate vicinity of the site, is readily obtained.

First-Aid rooms.

102. (1) In the case of a site where the number of persons employed exceeds 250 there shall be provided and maintained in good order and in a clean condition a properly constructed and suitable first-aid room with smooth interior surfaces. The first-aid room shall be used only for purposes of treatment and rest and shall be in the charge of a suitably qualified person who shall always be readily available during working hours, and a record shall be kept of all cases of accident or sickness treated at the room.

102. (2) Every first-aid room provided in pursuance of this regulation shall contain at least the following equipment, namely –

- (a) a sink having smooth impervious surface with hot and cold water always available;
- (b) a table with a smooth impervious top;
- (c) means of sterilizing instruments:
- (d) a supply of suitable dressings, bandages and splints;
- (e) a couch;
- (f) suitable and sufficient stretchers including a sling stretcher;
- (g) sufficient blankets and hot water bottles; and a foot bath or basin or bowl suitable for use as a foot bath.

Accommodation for clothing and for taking meals.

103. (1) There shall be provided at or in the immediate vicinity of every site for the use of the persons employed and conveniently accessible to them –

- (a) adequate and suitable accommodation for clothing not worn during working hours. Where persons of both sexes are employed proper separate accommodation shall be provided for persons of each sex;
- (b) adequate and suitable accommodation, affording protection from the weather and including sufficient tables and seats or benches for taking meals, with facilities for boiling water and. where a contractor has more than 10 persons in his employment on a site and heated food is not otherwise available on the site, adequate facilities for heating food.

103. (2) The accommodation provided in pursuance of paragraph (1) shall be kept in a clean and orderly condition.

103. (3) No building or part of a building or structure provided for the use of paragraph (1) shall be used for the deposit or storage of materials or plant.

Drinking water.

104. An adequate supply of wholesome cool drinking water shall be provided and maintained at a convenient point or convenient points and shall be clearly marked "Drinking Water" or be patently intended to be used as such.

A supply of drinking water which is not laid on shall be contained in suitable vessels (provided with a cover and tap or spout), which shall be renewed at least daily, and all practicable steps shall be taken to preserve the water and vessels from contamination.

Washing and bathing facilities.

105. (1) Where a contractor has more than 20 persons in his employment on a site or has reasonable grounds for believing that the operations or works to be undertaken by him will not be completed within 6 weeks, he shall provide for the persons employed adequate and suitable facilities for washing which shall include –

(a) troughs, basins or buckets having in every case a smooth, impervious, internal surface;

(b) a sufficient supply of clean water, which, where reasonably practicable, shall be running water.

105. (2) In any other case, there shall, where practicable, be provided for the use of persons employed on a site adequate and suitable facilities for washing.

105. (3) In any case where persons are employed on a site in a process in which a lead compound or other poisonous substance is used (whether or not the case is one to which paragraph (1) applies) facilities shall be provided in accordance with that paragraph and shall include soap and clean towels or other suitable means of cleaning or drying. on the scale of one for every 5 persons employed.

105. (4) There shall be provided, where reasonably practicable, adequate and suitable facilities for taking shower baths; with suitable arrangements for privacy including, in close proximity to such facilities, suitable accommodation for dressing and undressing. Where persons of both sexes are employed, the facilities provided shall afford proper separation for persons of each sex.

105. (5) Washing facilities provided in pursuance of this regulation shall be conveniently accessible from the accommodation for taking meals provided in pursuance of regulation 103 and shall be kept in a clean and orderly condition.

Numbers of sanitary conveniences.

106. (1) A contractor shall provide at least one suitable sanitary convenience (not being a convenience suitable only as a urinal) for every 25 persons in his employment on a site.

106. (2) In calculating the number of conveniences required by this regulation any number of persons less than 25 or in excess of a multiple of 25 shall be reckoned as 25.

Other requirements as to sanitary conveniences.

107. (1) Every sanitary convenience shall be sufficiently ventilated and shall not communicate with any workroom or messroom except through the open air or through an intervening ventilated space.

107. (2) Every sanitary convenience (other than a convenience suitable merely as a urinal) shall be under cover and so partitioned off as to secure privacy and shall have a proper door fastening. Urinals shall be so placed or so screened as to ensure privacy.

107. (3) The sanitary conveniences shall be so arranged as to be conveniently accessible to the persons employed at all times while they are on the site.

107. (4) The sanitary conveniences shall be maintained and kept clean and effective provision shall be made where necessary for lighting the conveniences. Where persons of both sexes are, or are intended to be employed, the conveniences shall afford proper separate accommodation for persons of each sex.

Inhalation of dusts and fumes to be prevented.

108. Where in connection with any grinding, cleaning, spraying or manipulation of any material, there is given off any dust or fume of such a character and to such extent as to be likely to be injurious to the health of persons employed, all reasonably practicable measures shall be taken either by securing adequate ventilation or by the provision and use of suitable respirators or otherwise to prevent inhalation of such dust or fume.

Ventilation of excavations, etc.

109. (1) Effective steps shall be taken to secure and maintain the adequate ventilation of every working place in any excavation, pit, hole, adit, tunnel, shaft, caisson or other enclosed or confined space and of every approach to any such working place so as –

- (a) to maintain an atmosphere which is fit for respiration; and
- (b) to render harmless, so far as is reasonably practicable, all fumes, dust or other impurities which may be dangerous or injurious to health,

and which are generated, produced or released by explosives or by any other means in such working place or approach thereto.

109. (2) Where there is reason to apprehend that the atmosphere in any of the working places or approaches thereto mentioned in paragraph (1) is poisonous or asphyxiating, then, without prejudice to the requirements of the said paragraph, no person shall be employed in or allowed to enter such working place or approach –

(a) until the atmosphere has been suitably tested by or under the immediate supervision of a competent person and he is satisfied that the working place or approach is, for the time being, free from the danger of a person being overcome by poisoning asphyxiation; or

(b) unless the person employed is wearing a suitable breathing apparatus and has been authorized by a responsible person to enter, and where practicable, is wearing a belt with a rope securely attached and a person keeping watch outside and capable of pulling him out is holding the free end of the rope.

Internal combustion engines.

110. No stationary internal combustion engine shall be used in any enclosed or confined place unless specific provision is made for conducting the exhaust gases from the engine into the open air or the place is adequately ventilated so as to prevent danger to health from such exhaust gases.

PART XV Keeping of Records

Reports and certificates.

111. (1) The reports required by regulations 17, 34, 43(4), 68 (1) (b) and 74(2) shall be kept on the site of the operations or works, and when there are no relevant operations or works shall be kept at an office of the contractor or employer for whom the examination was carried out:

Provided that in the case of a site where the contractor or employer has reasonable grounds for believing that the operations or works will be completed in a period of less than six weeks the contractor or employer may keep the reports required by regulations 17, 34 and 74 (2) at his office.

111. (2) All other reports and every certificate or other document required for the purposes of these Regulations shall be kept either on the site of the relevant operations or works or at an office of the contractor or employer for whom the report was made or the certificate or document was obtained or of the owner of the plant or equipment to which the certificate relates.

111. (3) All reports, certificates and other documents required for the purposes of these Regulations shall at all reasonable times be open to inspection by a Factory Inspector, and the persons keeping any such report, certificate or other document shall send to any such Inspector such extracts therefrom, or copies thereof, as that Inspector may from time to time require for the purpose of the execution of his duties under the Act.

Printed copy of Regulations to be posted.

112. A printed copy of these Regulations shall be kept posted on the site of every operation or works to which these Regulations apply, in such a position as to be conveniently read by the persons ~ employed at the site.