Health, Safety and Welfare

Blasting

SPECIAL REGULATIONS, DATED 10TH NOVEMBER, 1950, MADE BY THE MINISTRY OF LABOUR AND NATIONAL INSURANCE UNDER SECTION 65 OF THE FACTORIES ACT (NORTHERN IRELAND), 1938, AND SECTION 8 OF THE FACTORIES ACT (NORTHERN IRELAND), 1949.

1950. No. 205

The Ministry of Labour and National Insurance for Northern Ireland by virtue of the powers conferred by Section 65 of the Factories Act (Northern Ireland), 1938, (**a**) (hereinafter referred to as " the principal Act "), Section 8 of the Factories Act (Northern Ireland), 1949, (**b**) and of all other powers in that behalf, hereby makes the following Special Regulations :—

PART I — GENERAL

Short title, commencement and revocation

1.—(1) These Regulations may be cited as the Blasting (Castings and Other Articles) Special Regulations (Northern Ireland), 1950, and shall come into operation on the 1st day of January, 1951.

(2) Regulation 17 of the Grinding of Metals Special Regulations (Northern Ireland), 1950 (**c**), shall not apply to ventilating plant to which Regulation 11 of these Regulations applies.

Interpretation

2.—(1) The Interpretation Act, 1889 (**d**), applies to the interpretation of these Regulations as it applies to the interpretation of an Act of the Parliament of Northern Ireland.

(2) These Regulations are in addition to and not in derogation of the provisions imposing requirements as to health or safety contained in Parts I, II and IV of the principal Act.

(3) In these Regulations, unless the context otherwise requires, the following expressions have the meanings hereby assigned to them respectively, that is to say :—

" Blasting " means the cleaning, smoothing, roughening, or removing of part of the surface of any article by the use as an abrasive of a jet of sand, metal shot, or grit or other material, propelled by a blast of compressed air or steam or by a wheel.

" Blasting enclosure " means a chamber, barrel, cabinet or other similar enclosure designed for the performance of blasting therein.

(a) 2 Geo. 6. c.23 (b) 13 Geo. 6. c.6
(c) S. R. & O. of N.I., 1950, No. 203 (d) 52 & 53 Vict. c.63

" Blasting chamber " means a blasting enclosure into which persons enter.

" Chief Inspector " has the same meaning as in the principal Act.

" Cleaning of castings " means, where done as an incidental or supplemental process in connection with the making of metal castings, the freeing of the castings from adherent sand or other substance and includes the removal of cores and the general smoothing of the castings where such freeing is done, but does not include the freeing of castings from scale formed during annealing or heat treatment.

Application of Regulations

3. Subject to the provisions of Regulation 4 of these Regulations :

(1) Part II of these Regulations shall apply to all factories in which blasting is done ; and

(2) Part III of these Regulations shall apply as respects blasting in any factory in or incidental to the cleaning of castings.

Exemptions

4.—(1) If the Chief Inspector is satisfied that in any factory, or in factories of any specified class or description, the use of sand or other substance containing free silica as an abrasive in blasting is necessary for a particular manufacture or process (other than a process incidental or supplemental to the making of metal castings), he may by certificate in writing (which he may in his discretion revoke at any time), as respects that manufacture or process, exempt that factory, or factories of that class or description, from the application of Part II of these Regulations either absolutely or subject to such conditions as may be specified in the certificate.

(2) If the Chief Inspector is satisfied in respect of any factory, or in respect of factories of any specified class or description, that owing to the special conditions or special methods of work or otherwise any requirement of these Regulations can be suspended or relaxed without danger to the health of the persons employed, or that the application of any such requirement is for any reason impracticable or inappropriate, he may by certificate in writing (which he may in his discretion revoke at any time) exempt that factory, or factories of that class or description, from the application of that requirement either absolutely or subject to such conditions as may be specified in the certificate.

(3) Where any certificate is issued under this Regulation a legible copy thereof, showing the conditions (if any) subject to which it has been granted, shall be kept posted up in every factory to which the exemption applies in a position where it may conveniently be read by the persons employed.

PART II — PROHIBITION OF SANDBLASTING

Abrasives in blasting apparatus

5. No sand or other substance containing free silica shall be introduced as an abrasive into any blasting apparatus.

PART III — PRECAUTIONS IN CONNECTION WITH BLASTING IN THE CLEANING OF CASTINGS

Blasting to be done in blasting enclosure

6. Blasting shall not be done except in a blasting enclosure, and no work shall be performed in a blasting enclosure except blasting and work immediately incidental thereto and the cleaning and repairing of the enclosure and of plant and appliances situated therein. Every door of a blasting enclosure shall be kept closed while blasting is being done therein.

Maintenance of blasting enclosure

7. Blasting enclosures shall be constantly maintained in good condition and all practicable measures shall be taken to prevent dust escaping from such enclosures, and from any apparatus connected therewith, into the air of any room.

Provision of separating apparatus

8. There shall be provided and maintained in connection with every blasting enclosure efficient apparatus for separating, so far as practicable, abrasive which has been used in blasting apparatus, and which is to be used again as an abrasive, from dust or particles of other material arising from blasting, and no such abrasive shall again be introduced into blasting apparatus until it has been so separated :

Provided that this Regulation shall not apply (except in the case of blasting chambers) to blasting enclosures constructed before the making of these Regulations and in connection with which it is not reasonably practicable to provide apparatus in accordance with this Regulation.

Provision of ventilating plant

9. There shall be provided and maintained in connection with every blasting enclosure efficient ventilating plant to extract, by exhaust draught effected by mechanical means, dust produced in the enclosure and to remove and dispose of such dust so that it shall not escape into the air of any room ; and every bag used for filtering the dust and every other filtering or settling device situated in a room in which persons, other than persons attending to such bag or other filtering or settling device, are employed shall be completely separated from the general air of that room in an enclosure ventilated to the open air.

Operation of ventilating plant

10. The ventilating plant provided for the purposes of Regulation 9 of these Regulations shall be kept in continuous operation whenever

the blasting enclosure is in use whether or not blasting is actually taking place therein, and in the case of a blasting chamber shall be in operation when any person is inside the chamber for the purpose of cleaning or repair work.

Inspection and examination of blasting enclosures, apparatus and ventilating plant

11.—(1) In every week in which it is used for blasting, every blasting enclosure shall be specially inspected by a person competent for the purpose. At least once in every month, every blasting enclosure, the apparatus connected therewith and the ventilating plant provided in connection with the enclosure shall be thoroughly examined and, in the case of ventilating plant, tested by a person competent for the purpose.

(2) Particulars of the result of every such inspection, examination and test shall forthwith be entered in a register which shall be kept in a form approved by the Chief Inspector and shall be available for inspection by any workman employed in or in connection with blasting in the factory. Any defect found on any such inspection, examination or test shall be immediately reported by the person carrying out the inspection, examination or test to the occupier, manager or other appropriate person and, without prejudice to the foregoing requirements of these Regulations, shall be remedied without avoidable delay.

Provision of protective helmets, gauntlets and overalls

12.—(1) There shall be provided and maintained for the use of all persons who are employed in a blasting chamber, whether in blasting or in any work connected therewith or in cleaning inside such a chamber, protective helmets of a type approved by certificate of the Chief Inspector ; and every such person shall wear the helmet provided for his use whilst he is in the chamber and shall not remove it until he is outside the chamber.

(2) Each protective helmet shall carry a distinguishing mark indicating the person by whom it is intended to be used, and no person shall wear or be allowed or required to wear a helmet not carrying his mark, or a helmet which has been worn by another person and has not since been thoroughly disinfected.

(3) Each protective helmet when in use shall be supplied with clean and not unreasonably cold air at a rate of not less than six cubic feet per minute.

(4) Suitable gauntlets and overalls shall be provided for the use of all persons while performing blasting or assisting at blasting, and every such person shall while so engaged wear the gauntlets and overalls provided.

Precautions in connection with cleaning and other work

13.—(1) Where any person is engaged upon the cleaning of any blasting apparatus or blasting enclosure, or of any apparatus or ventilating plant connected therewith or the surroundings thereof, or upon any

other work in connection with any blasting apparatus or blasting enclosure or with any apparatus or ventilating plant connected therewith, so that he is rendered liable to inhale dust which has arisen from blasting, all practicable measures shall be taken to prevent such inhalation.

(2) In connection with the cleaning operations referred to in the preceding paragraph of this Regulation and with the removal of dust from filtering or settling devices, all practicable measures shall be taken to dispose of the dust in such a manner that it does not enter the air of any room. Vacuum cleaners shall be provided and used wherever practicable for such cleaning operations.

Storage accommodation for protective wear

14. Adequate and suitable storage accommodation for the helmets, gauntlets, and overalls required by Regulation 12 of these Regulations shall be provided outside and conveniently near to every blasting enclosure and such accommodation shall be kept clean. Helmets, gauntlets and overalls, when not in actual use, shall be kept in this accommodation.

Maintenance and cleaning of protective wear

15. All helmets, gauntlets, overalls and other protective devices or clothing provided and worn for the purposes of these Regulations shall be kept in good condition and freed so far as reasonably practicable from dust on every week-day on which they are used. Where dust arising from the cleaning of such protective clothing or devices is likely to be inhaled, all practicable measures shall be taken to prevent such inhalation. Vacuum cleaners shall wherever practicable be used for removing dust from such clothing, and compressed air shall not be used for removing dust from any clothing.

Maintenance of vacuum cleaning plant

16. Vacuum cleaning plant used for the purposes of these Regulations shall be properly maintained.

Restrictions on employment of young persons

17.—(1) No person under 18 years of age shall be employed in blasting or assisting at blasting or in any blasting chamber or in the cleaning of any blasting apparatus or any blasting enclosure or apparatus or ventilating plant connected therewith, or be employed on maintenance or repair work at such apparatus, enclosure or plant.

(2) No person under 18 years of age shall be employed to work regularly within twenty feet of any blasting enclosure in which blasting is done by means of compressed air or steam, unless the enclosure is in a room and he is outside that room where he is effectively separated from any dust coming from the enclosure.

Reporting of defects

18. If any person engaged in blasting, cleaning or other work connected with the observance of these Regulations finds any defect in any enclosure, apparatus, plant, clothing or accommodation provided for the purposes of these Regulations, he shall without delay report the defect to the occupier, manager or other appropriate person.

Sealed with the Official Seal of the Ministry of Labour and National Insurance for Northern Ireland this 10th day of November, 1950, in the presence of

(L.S.) *R. W. Steele,*
Assistant Secretary.

The Building Regulations (Northern Ireland), 1950

REGULATIONS, DATED 19TH DECEMBER, 1950, MADE BY THE MINISTRY OF LABOUR AND NATIONAL INSURANCE UNDER SECTIONS 18, 47 AND 65 OF THE FACTORIES ACT (NORTHERN IRELAND), 1938, SECTION 8 OF THE FACTORIES ACT (NORTHERN IRELAND), 1949, AND THE FACTORIES ACT (NORTHERN IRELAND), 1938 (EXTENSION OF SECTION 47) REGULATIONS (NORTHERN IRELAND), 1948.

1950. No. 221

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The Ministry of Labour and National Insurance for Northern Ireland by virtue of the powers conferred by Sections 47 and 65 of the Factories Act (Northern Ireland), 1938, (a) (hereinafter referred to as

(a) 2 Geo. 6. C.23.

" the principal Act "), Section 8 of the Factories Act (Northern Ireland), 1949, (**a**) and the Factories Act (Northern Ireland), 1938 (Extension of Section 47) Regulations (Northern Ireland), 1948, (**b**) hereby makes as Special Regulations the Regulations set out in Parts I to VII hereof and by virtue of Section 18 of the principal Act also makes the Regulation set out in Part VIII hereof.

Part I — Interpretation and General

Short title, commencement and revocation

1.—(1) These Regulations may be cited as the Building Regulations (Northern Ireland), 1950, and shall, except as otherwise provided, come into force on the 1st day of June, 1951.

(2) The Building Regulations (Northern Ireland), 1926 and 1932 (**c**), are hereby revoked.

Application of Regulations

2.—(1) These Regulations shall apply to the following operations where undertaken by way of trade or business or for the purpose of any industrial or commercial undertaking, or by or on behalf of the Crown or any municipal or other public authority, namely, the construction, structural alteration, repair or maintenance of a building (including re-pointing, re-decoration and external cleaning of the structure), the demolition of a building, and the preparation for, and laying the foundation of, an intended building whether or not the building is on or adjacent to the site of work of engineering construction within the meaning of the principal Act, and to machinery or plant used in such operations ; and Part VI of these Regulations shall apply as respects persons employed in such operations as aforesaid :

Provided that the following shall not be deemed to be buildings for the purposes of this Regulation :

Docks, harbours, wharves, quays, piers, sea defence works, lighthouses at sea, river works, canals, dams, reservoirs, aqueducts, viaducts, bridges, tunnels, sewers, pipelines, filter beds, gasholders, or pole or lattice work structures designed solely for the support of machinery, plant or electric lines.

(2) If the Chief Inspector is satisfied that in the case of any particular class or description of plant or of any special description or method of work the application of any requirement of these Regulations relating to safety or health is, in any class or description of circumstances, not necessary in the interests of safety or not reasonably practicable, he may by certificate in writing (which he may at his discretion revoke at any time) grant an exemption from that requirement in the case of

(**a**) 13 Geo. 6. C.6. (**b**) S. R. & O. of N.I., 1948, No. 151.
(**c**) S. R. & O. of N.I. 1926, No. 116, and S. R. & O. of N.I., 1932, No. 102.

that class or description of plant or of that special description or method of work in such circumstances and subject to such conditions as may be specified in the certificate.

(3) (*a*) Lifting appliances, chains, ropes and lifting gear to which this paragraph applies shall, as respects the incidental or occasional use thereof in or for the purposes of operations to which these Regulations apply, be excluded from the operation of the Regulations specified in column 1 of the Third Schedule hereto to the extent specified in column 2 thereof and subject to the exceptions and conditions specified in column 3 thereof.

(*b*) This paragraph applies to any lifting appliance, chain, rope or lifting gear

(i) which forms part of the permanent equipment of a factory or other premises to which the safety provisions in Sections 24 and 25 of the principal Act, apply and which is used at that factory or premises in raising or lowering for purposes other than operations to which these Regulations apply but is being used for such an operation at that factory or premises; or

(ii) which is regularly and ordinarily used in the processes of loading, unloading, moving or handling goods in, on or at any dock, wharf or quay or of loading, unloading or coaling any ship in any dock, harbour or canal, but is being used for an operation to which these Regulations apply in on or at a dock, wharf, quay, harbour or canal.

(4) Where any article, material or other load intended for use in operations to which these Regulations apply is delivered at, or adjacent to, the site of such operations with a chain, rope or lifting gear attached thereto and designed for use as a means of raising and lowering that class of load when removing the same from the point of delivery to a position on the site, and the chain, rope or gear is free of patent defect whether of construction or quality and is not owned or hired by any contractor or employer of workmen who is undertaking any such operations as aforesaid on the site, then the requirements of Regulations 58, 59, 64 and 65 shall not apply in respect of the use of such chain, rope or lifting gear for raising or lowering the load so long as the chain, rope or gear remains attached to the article, material or load.

Interpretation

52 & 53 Vict. c. 63.

3.—(1) The Interpretation Act, 1889, applies to the interpretation of these Regulations as it applies to the interpretation of an Act of the Parliament of Northern Ireland.

(2) In these Regulations, unless the context otherwise requires, the following expressions have the meanings hereby assigned to them :—

" Approved " means approved for the time being by certificate of the Chief Inspector.

" Chief Inspector " has the same meaning as in the principal Act.

" Hoist " means a lifting machine, whether worked by mechanical power or not, with a carriage, platform or cage the direction of movement of which is restricted by a guide or guides.

" Ladder " does not include step-ladder.

" Ladder scaffold " means a scaffold with a working platform which is supported directly or by means of a crutch or bracket on a rung or rungs of a 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, pile driver, pile extractor, aerial cableway or overhead runway.

" Lifting gear " means a chain sling, rope sling, ring, link, hook, shackle, swivel or eyebolt.

" Raising or lowering or as a means of suspension " where that expression occurs in Regulations 58, 59, 60, 64 and 65, 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.

" Safe working load " means either the relevant safe working load specified in the latest certificate of test obtained for the purposes of Regulation 52, 57, 58, 59 or 71 as the case may be, or, where no such certificate is required, the relevant safe working load marked or exhibited on the lifting appliance, lifting gear, chain, rope or other article of plant or appliance.

" Scaffold " means any temporary structure on or from which persons perform work in connection with an operation to which these Regulations apply, and any temporary 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 machinery or plant.

" Suspended scaffold " means a scaffold suspended by means of ropes or chains and capable of being lowered or raised 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 step-ladders, tripods or similar movable contrivances.

" Working platform " includes a working stage.

Obligations under Regulations

4. It shall be the duty of every contractor and employer of workmen who is undertaking any of the operations to which these Regulations apply

(i) to comply with such of the requirements of Regulations 5-30, 66 (1) in so far as it relates to the protection of the hoistway, 73, 75, 77, 80-84, 89, 90 (1), 91, 92, 93 and 95 as affect any workman employed by him ; 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 authorised or permitted by his employer ;

(ii) to comply with such of the requirements of Regulations 31-33, 74 (1), (2), (3), (4) and (5), 76, 78, 79, 88, 90 (2), 94, 96 and 97 as relate to any work, act or operation performed or about to be performed by such contractor or employer of workmen ;

and it shall be the duty of every contractor and employer of workmen who erects or alters any scaffold to comply with such of the requirements of Regulations 5-30 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 employer of workmen who erects, instals, works or uses any crane, machine, or other appliance or plant or any part thereof, being a crane, machine, appliance, plant or part thereof to which any of the provisions of Regulations 34-72, 74 (6), or 85-87 applies, to erect, instal, work or use any such crane, machine, appliance, plant or part thereof in a manner which complies with those provisions.

It shall be the duty of every person employed to comply with the requirements of such Regulations as relate to the performance of an act by him and to co-operate in carrying out Parts II to VII of these Regulations and if he discovers any defect in the scaffolding, plant or appliances to report such defect without unreasonable delay to his employer or foreman, or to a person appointed by the employer under Regulation 98.

PART II.— SCAFFOLDS AND MEANS OF ACCESS

Provision of scaffolds and means of access

5. Suitable and sufficient scaffolds shall be provided for all work that cannot safely be done on or from the ground or from part of the

building, or from part of a permanent structure or from a ladder or other available means of support, and sufficient safe means of access shall so far as is reasonably practicable be provided to every place at which any person has at any time to work.

Supervision of work and inspection of material

6. 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

7.—(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.

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

(3) Timber used for scaffolds shall be of suitable quality, be in good condition, have the bark completely stripped off, and not be painted or treated in any way so that defects cannot easily be seen.

(4) 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.

Defective material

8.—(1) No defective material or part which cannot be satisfactorily repaired shall be used for a scaffold. Defective parts or materials which can be satisfactorily repaired shall not be used until they are so repaired.

(2) No rope which is defective whether through contact with an acid or other corrosive substance or otherwise shall be used.

(3) 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

9.—(1) All scaffolds 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.

(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, uprights, ledgers and putlogs

10.—(1) Standards or uprights of scaffolds shall be —

(*a*) where practicable vertical or slightly inclined towards the building ; and

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

(2) The displacement of the foot of any standard or upright shall, unless prevented in some other sufficient way, be prevented either —

(*a*) by sinking the standard or upright a sufficient distance into the ground ; or

(*b*) by placing the standard or upright on an adequate base plate in a manner to prevent slipping.

(3) Ledgers shall be as nearly as possible horizontal and shall be securely fastened to the uprights or other means of support or suspension by bolts, dogs, ropes or other efficient means.

(4) Where two ledgers are connected together the connection shall be secure and in the case of timber ledgers not connected together at an upright or point of suspension both ledgers shall be connected to a separate splicing ledger of adequate strength spanning between and properly secured to the uprights or points of suspension on opposite sides of the connection of the ledgers.

(5) Putlogs shall be straight or approximately straight and shall be securely fastened to the ledgers or the standards or uprights, except in the case of a timber putlog so shaped and placed that fastening is not necessary to prevent its displacement. Putlogs which have one end supported by a wall shall have at that end a flat supporting surface of sufficient area. Nails shall not be used for fastening putlogs.

(6) The distance between two consecutive putlogs or other supports on which a platform rests shall be fixed with due regard to the anticipated load and the nature of the platform flooring. As a general rule the distance with single planking shall not exceed 3 feet 3 inches with planks $1\frac{1}{4}$ inches in thickness, 5 feet with planks $1\frac{1}{2}$ inches in thickness, or 8 feet 6 inches with planks 2 inches in thickness.

Ladders used as uprights and ladder scaffolds

11.—(1) Ladders serving as uprights of scaffolds shall —

(*a*) be of adequate strength ; and

(*b*) (i) be sunk into the ground to such a depth as to secure stability, or be placed on sole plates or boards so that the two uprights of each ladder rest evenly on the base ; and

(ii) be secured to prevent slipping.

(2) Ladder scaffolds shall not be used unless the work is of such a light nature and the material required for the work is such that this type of scaffold can be used with safety.

Support and stability of scaffolds

12.—(1) Every scaffold shall be securely supported or suspended and shall where necessary be sufficiently and properly strutted or braced to ensure stability and, unless it is properly designed and constructed as an independent scaffold, shall be rigidly connected with the building.

(2) All structures and appliances used as supports for scaffolds, working platforms, gangways or runs 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 ensure stability.

(3) Any travelling scaffold or scaffold which can be moved on wheels or skids shall, unless it is a suspended or slung scaffold, be—

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

(*b*) 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*) adequately secured to prevent movement when any person is working upon it ;

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

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

Gear for suspension of scaffolds

13.—(1) Chains, ropes and lifting gear used for the suspension of scaffolds shall be of sound material, adequate strength and suitable quality, and in good condition.

(2) No rope other than a wire rope shall be used for the suspension of a scaffold, but this requirement shall not apply in the case of a suspended scaffold which is raised or lowered otherwise than by means of winches or in the case of equipment being used for the purposes of a suspended scaffold in accordance with Regulation 18.

(3) Chains, ropes and metal tubes used for the suspension of a scaffold other than a suspended scaffold shall be properly and securely fastened to safe anchorage points and to the scaffold ledgers or other

main supporting members, and shall be so positioned as to ensure stability of the scaffold, be approximately vertical and be kept taut.

(4) Every scaffold suspended by means of ropes or chains shall be secured to prevent undue horizontal movement while it is used as a working platform.

Cantilever, jib, figure and bracket scaffolds, etc.

14.—(1) No cantilever or jib scaffold shall be used unless it is adequately supported, fixed and anchored on the opposite side of the support, has outriggers of adequate length and cross-section and is where necessary sufficiently and properly strutted or braced to ensure rigidity and stability.

(2) No working platform resting on bearers let into a wall at one end and without other support shall be used unless the bearers are of adequate strength, pass through the wall and are securely fastened on the other side.

(3) No figure or bracket scaffold supported or held by dogs, spikes, or similar fixings liable to pull out of the stonework or brickwork in which they are gripped or fixed shall be used.

Scaffolds supported by building

15. No part of a building shall be used as support for part of a scaffold unless it is of sound material and sufficiently stable and of sufficient strength to afford safe support. Overhanging eaves gutters shall not be used as such supports unless they have been specially designed as walkways and are of adequate strength.

Suspended scaffolds raised or lowered by means of winches

16. Suspended scaffolds raised or lowered by means of winches shall not be used unless —

(*a*) outriggers are —

(i) of adequate length and strength and properly installed and supported ;

(ii) installed horizontally ;

(iii) properly spaced in relation to the putlogs or deck irons ;

(iv) securely fixed to the building by anchor bolts or other equivalent means, or where such fixing is not reasonably practicable, adequately and securely anchored at the inner ends ;

(v) provided with adequate stops at their outer ends ; and

(*b*) the points of suspension are an adequate horizontal distance from the building face ; and

(*c*) the suspension ropes are —

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

(ii) securely attached to the outriggers or other supports and to the winch drums ;

(iii) of such length that at the lowest position of the platform there are at least two turns of rope on each winch drum ; and

(*d*) the platform is —

(i) not less than 25 inches wide ;

(ii) so arranged or secured that, at each working position, the edge of the platform (whether of the normal platform or of an extension thereof towards the building face as the case may be) is as close as practicable to the building face, but so that, where workmen sit at the edge of the platform to work, the edge may be not more than 12 inches from such face.

Other suspended scaffolds

17. Suspended scaffolds other than scaffolds raised or lowered by means of winches shall not be used unless —

(*a*) outriggers are —

(i) of adequate length and strength and properly installed and supported ;

(ii) firmly anchored at the inner ends ;

(iii) securely fastened to any ballast or counterweight ; and

(*b*) the points of suspension are an adequate horizontal distance from the building face ; and

(*c*) the platform is —

(i) not less than 17 inches wide ;

(ii) suspended by ropes or chains which are spaced not more than 10 feet 6 inches apart, are maintained in tension and are properly and securely fastened ; and

(iii) suspended so as to prevent tipping or tilting of the platform ; and

(*d*) the suspension ropes or chains are of good construction, sound material, adequate strength, and free from patent defect ; and

(*e*) there are devices provided and used where necessary to keep the platform at a sufficient distance from the wall when persons have to work in a sitting position ;

Provided that paragraph (*c*) (ii) of this Regulation shall not apply in the case of a scaffold which is securely suspended from fixed anchorages and has a platform more than 25 inches wide supported on metal bearers properly and securely connected to raising and lowering tackle (being wire rope or chain tackle such as automatically sustains the load).

Skips, buckets, baskets, boatswain's chairs, etc.

18.—(1) A skip, bucket, basket, boatswain's chair or similar equipment shall not be used for the purposes of a suspended scaffold except in special circumstances where the work is of such short duration as to make the use of a suspended scaffold unreasonable or where the use of a suspended scaffold is not reasonably practicable and shall only be so used under the supervision of a responsible person.

(2) Such equipment shall not be used for the purposes of a suspended scaffold unless —

(*a*) the equipment including the suspension ropes or chains and their means of support are of good construction, sound material, adequate strength and free from patent defect and the ropes or chains are securely attached ; and

(*b*) suitable measures are taken to prevent spinning or tipping and to prevent any occupant from falling therefrom.

(3) No skip, bucket or basket shall be used for the purposes of a suspended scaffold unless it is —

(*a*) at least 2 feet 6 inches deep ; and

(*b*) either constructed wholly of suitable metal or carried by two strong bands of suitable metal which are properly fastened and continued round the sides and bottom.

Trestle scaffolds

19.—(1) No trestle scaffold shall be used —

(*a*) if constructed with more than three tiers ; or

(*b*) if it has a working platform more than 15 feet above the ground or floor or other surface upon which the scaffold is erected.

(2) No trestle scaffold shall be erected on a scaffold platform unless —

(*a*) the width of the platform is such as to leave sufficient clear space for the transport of materials ; and

(*b*) the trestles or uprights are firmly attached to the platform and adequately braced to prevent displacement.

(3) No trestle scaffold shall be erected on a suspended scaffold.

Inspection of scaffolds

20.—(1) Subject to the provisions of this Regulation no scaffold shall be used unless —

(*a*) it has been inspected by a competent person within the immediately preceding seven days ; and

(*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 of the results of any such inspection in the prescribed form and including the prescribed particulars and signed by the person making the inspection has been entered into or attached to the prescribed register :

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

(2) Paragraph (1) hereof shall not require a scaffold to be inspected by reason only that it has been added to, altered, or partly dismantled.

(3) In the case of a site where the employer for whom the inspection was carried out has reasonable grounds for believing that the operations will be completed in a period of less than six weeks, the provision in this Regulation requiring that a report shall have been made and signed shall be deemed to have been satisfied if the person in charge of the operations carried on by that employer at such site has himself carried out the inspection and is a person competent so to do and if, within one week of the date of the inspection, he informs his employer in writing that the scaffold was inspected by him and that he found it in good order, or observed certain defects as the case may be, and the date of such inspection and the results thereof together with the name of the person making the inspection are entered in the prescribed register.

Scaffolds used by workmen of more than one employer

21. Where a scaffold or part of a scaffold is 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.

Working platforms (including working stages)

22. Every working platform from which a person is liable to fall more than 6 feet 6 inches shall be —

(*a*) closely boarded, planked, or plated ;
(*b*) at least 25 inches wide if the platform is used as a footing only and not for the deposit of any material ;
(*c*) at least 34 inches wide if the platform is used for the deposit of material ;
(*d*) at least 42 inches wide if the platform is used for the support of any higher platform ;

(*e*) at least 51 inches wide if the platform is one upon which stone is dressed or roughly shaped ;

(*f*) at least 59 inches wide if the platform is used for the support of any higher platform and is one upon which stone is dressed or roughly shaped :

Provided that —

(i) requirement (*a*) of this Regulation shall not apply to a platform consisting of open metalwork having interstices none of which exceeds 6 square inches in area, if there is no risk of persons below such platform being struck by tools or other objects falling through the platform ;

(ii) requirement (*a*) of this Regulation shall not apply to a platform which is part of the permanent fixed equipment of a building and the boards, planks or plates of which are so secured as to prevent their moving and so placed that the space between adjacent boards, planks or plates does not exceed 1 inch, if there is no risk of persons below such platform being struck by tools or other objects falling through the platform ;

(iii) requirements (*b*) to (*f*) of this Regulation shall not apply to a working platform which is at least 17 inches wide, and is on the outside of any sloping roof ;

(iv) requirements (*b*) and (*c*) of this Regulation shall not apply in the case of the platform of a suspended scaffold, or in the case of a platform not less than 17 inches wide being the platform of a ladder scaffold or of a trestle scaffold or being a platform under a roof which is supported by or suspended from roof members or the roof and which is used only by painters for the purpose of painting work in the vicinity of the roof, where in any such case the work is of such a light nature and the material required for the work is such that a platform less than 25 or 34 inches wide as the case may be can be used with safety, and the platform is not used for the support of any higher platform ;

(v) requirements (*b*) and (*c*) of this Regulation shall not apply in the case of a temporary platform not less than 17 inches wide passing between two adjacent glazing bars of a sloping roof if the space between those bars does not admit of the platform being at least 25 inches wide and if the platform is used only for work in the vicinity of those bars ;

(vi) requirement (*d*) of this Regulation shall not apply to the platform supporting the second tier of a trestle scaffold.

Boards and planks in working platforms, gangways and runs

23.—(1) Every board or plank forming part of a working platform or used as a toe-board shall be —

(*a*) of a thickness which is such as to afford adequate security having regard to the distance between the putlogs or standards ; and

(*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.

(2) No board or plank which forms part of a working platform, gangway or run shall project beyond its end 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.

(3) Suitable measures such as the provision of adequate bevelled pieces shall be taken 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.

(4) Every board or plank which forms part of a working platform shall —

(*a*) rest securely and evenly on its supports, and

(*b*) rest on at least three 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 sagging.

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

Guard-rails and toe-boards at working places

24.—(1) Subject to paragraphs (3), (4) and (5) of this Regulation, 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 be provided with a suitable guard-rail or guard-rails of adequate strength, to a height of at least 3 feet above the platform or place and above any raised standing place on the platform, and with toe-boards up to a sufficient height being in no case less than 8 inches and so placed as to prevent so far as possible the fall of persons, materials and tools from such platform or place.

(2) The guard-rails and toe-boards used on a working platform or working place shall be placed on the inside of the uprights, and the space between any toe-board and the lowest guard-rail above it shall not exceed 27 inches.

(3) Guard-rails and toe-boards required by paragraphs (1) and (2) of this Regulation may be removed or remain unerected for the time and to the extent necessary for the access of persons or the movement of materials.

(4) On the side of a suspended scaffold facing the wall —

(*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 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.

(5) (*a*) The requirements of paragraphs (1) and (2) of this Regulation regarding toe-boards shall not apply to the platform of a ladder scaffold or of a trestle scaffold or where and in so far as the provision of a toe-board is impracticable on account of the nature or special circumstances of the work.

(*b*) The requirements of paragraphs (1) and (2) of this Regulation regarding guard-rails shall not apply to the platform of a ladder scaffold if a secure handhold is provided for the full length of such platform or to the platform of a trestle scaffold when the platform is supported on folding trestles or step ladders.

(*c*) The requirements of paragraphs (1) and (2) of this Regulation shall not apply to a platform provided with suitable guard-rails which is on the outside of a sloping roof.

(*d*) The requirements of paragraphs (1) and (2) of this Regulation shall not apply to a temporary platform which is used only by erectors of structural steelwork or ironwork for the purposes of bolting-up, riveting or welding work of such short duration as to make the provision of a platform with guard-rails and toe-boards unreasonable if (i) the platform is at least 34 inches wide and (ii) there is adequate handhold and (iii) the platform is not used for the deposit of tools or materials otherwise than in boxes or receptacles suitable to prevent the fall of the tools or materials from the platform.

(*e*) The requirements of paragraphs (1) and (2) of this Regulation shall not apply to a temporary platform passing between two adjacent glazing bars of a sloping roof if those bars or the roof framework afford secure handhold for the full length of the platform, and the requirements of paragraphs (1) and (2) regarding toe-boards shall not apply as respects such platform where and in so far as the provision of a toe-board is impracticable on account of the nature or circumstances of the work.

(*f*) The requirements of paragraphs (1) and (2) of this Regulation shall not apply to a platform under a roof which is supported by or suspended from roof members or the roof and which is used only by painters for the purpose of painting work in the immediate vicinity of the roof, being work of such short duration as to make the provision of a platform with guard-rails and toe-boards 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.

Working platform at building face and clearance of passage ways

25.—(1) Where work at the face of a building is done from a working platform the space between the face of the building and the working platform shall be as small as practicable so, however, that where workmen sit at the edge of the platform to work the space shall not exceed 12 inches.

(2) A clear passage way at least 17 inches wide shall be left between one side of any working platform and any fixed obstruction or deposited material.

Construction and use of gangways and runs

26.—(1) Every gangway or run from any part of which a person is liable to fall a distance of more than 6 feet 6 inches shall —

(*a*) be closely boarded, planked or plated ;

(*b*) be at least 17 inches wide :

Provided that the requirement in paragraph (1) (*a*) shall not apply—

(i) to a gangway or run consisting of open metalwork having interstices none of which exceeds 6 square inches in area, if there is no risk of persons below such gangway or run being struck by tools or other objects falling through the gangway or run, or

(ii) to a gangway or run which is part of the permanent fixed equipment of a building and the boards, plates or planks of which are so secured as to prevent their moving and so placed that the space between adjacent boards, planks or plates does not exceed 1 inch, if there is no risk of persons below such gangway or run being struck by tools or other objects falling through the gangway or run.

(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.

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

(4) No gangway or run shall be used the slope of which exceeds 1 vertical to $1\frac{1}{2}$ horizontal.

(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, toe-boards, hand-rails, etc., for gangways, runs and stairs

27.—(1) Stairs shall be provided throughout their length with hand-rails or other efficient means to prevent the fall of persons except for the time and to the extent necessary for the access of persons or the movement of materials. If necessary to prevent danger to any person the hand-rails shall be continued beyond the ends of the stairs.

(2) All gangways, runs and stairs from which a person is liable to fall a distance of more than 6 feet 6 inches shall be provided with —

(*a*) suitable guard-rails of adequate strength to a height of at least 3 feet above the gangway, run or stair ;

(*b*) except in the case of stairs, toe-boards up to a sufficient height being in no case less than 8 inches and so placed as to prevent so far as possible the fall of persons, materials and tools. The space between any such toe-board and the lowest guard-rail above it shall not exceed 27 inches :

Provided that paragraph (2) of this Regulation shall not apply to a temporary gangway which is used only by erectors of structural steel-work or ironwork for the purposes of bolting-up, riveting or welding work of such short duration as to make the provision of a gangway with guard-rails and toe-boards unreasonable.

Platforms, gangways, etc., to be unobstructed and to afford safe foothold

28.—(1) Every platform, gangway, run or stair shall be kept free from any unnecessary obstruction, material or rubbish and from any projecting nails.

(2) 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 defect.

Ladders and step-ladders

29.—(1) Every ladder and step-ladder shall be of good construction, sound material and adequate strength for the purpose for which it is used.

(2) Where a ladder is used as a means of communication or as a working place the ladder shall rise, or adequate handhold shall be provided, 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 working on the ladder as the case may be or if that is impracticable to the greatest practicable height :

Provided that paragraph (2) of this Regulation shall not apply to a crawling ladder.

(3) Ladders or step-ladders shall not stand on loose bricks or other loose packing, but shall have a level and firm footing.

(4) Every ladder shall so far as practicable be securely fixed so that it can move neither from its top nor from its bottom points of rest.

If it cannot be so securely fixed it shall where practicable be securely fixed at the base or if such fixing at the base is impracticable a person shall be stationed at the base of the ladder to prevent slipping.

Provided that this paragraph shall not apply to a ladder which is not more than 10 feet in length and which is not used as a means of communication, if the ladder is securely placed so as to prevent it from slipping or falling.

(5) Every ladder shall be —

(*a*) secured where necessary to prevent undue swaying or sagging ;

(*b*) equally and properly supported on each upright.

(6) Every ladder or run of ladders rising a vertical distance of over 30 feet shall if practicable be provided with an intermediate landing place or 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 for a distance of more than 6 feet 6 inches, shall, except in so far as that is not reasonably practicable, be provided with sufficient and suitable guard-rails to a height of at least 3 feet above the landing place. Where a ladder passes through an opening in the floor of a landing place, the opening shall be as small as is reasonably practicable.

(7) No ladder shall be used which has —

(*a*) a missing or defective rung ; or

(*b*) any rung which depends for its support solely on nails, spikes, or other similar fixing.

(8) No wooden ladder shall be used unless it is constructed with —

(*a*) uprights of adequate strength made of straight-grained wood free from defects and having the grain of the wood running lengthwise ; and

(*b*) rungs made of straight-grained wood free from defects and mortised or securely notched into the uprights ; and

(*c*) reinforcing metal ties if the tenons are not secured by wedges.

Opening in roofs, floors and walls ; open joisting

30.—(1) Subject to paragraphs (5) and (6) of this Regulation every accessible opening in a roof or in the floor of a building, working platform, gangway, or run, through which any person is liable to fall a distance of more than 6 feet 6 inches, shall be provided with —

(*a*) a suitable guard-rail or guard-rails of adequate strength to a height of at least 3 feet above the edge of such opening, together with toe-boards up to a sufficient height, being in no case less than 8 inches, and so placed as to prevent so far as possible the fall of persons, materials, and tools through the opening ; or

(*b*) a covering so constructed as to prevent the fall of persons, materials and tools through the opening :

Provided that in the case of an opening of a pit in the floor of a factory which is not ordinarily fenced, the requirements of this paragraph shall not apply by reason only that repair or maintenance work to which these Regulations apply is being done by persons normally engaged on such repair or maintenance work in the factory.

(2) Subject to paragraphs (5) and (6) of this Regulation, where there is any accessible opening in a wall through which a person is liable to fall a distance of more than 6 feet 6 inches from any floor, platform, or working place less than 2 feet 3 inches below the bottom of the opening, the opening shall be provided with —

(*a*) a suitable guard-rail or guard-rails of adequate strength to a height of at least 3 feet above the floor, platform, or working place ; and

(*b*) a toe-board or toe-boards not less than 8 inches high where necessary to prevent the fall of persons, materials, and tools, through the opening.

(3) Subject to paragraphs (5) and (6) of this Regulation, when work is done on or immediately above open joisting through which a person is liable to fall a distance of more than 6 feet 6 inches, the joisting shall be securely covered over by temporary boards or other covering where and to the extent necessary to afford safe access to or foothold for the work, or other effective measures shall be taken to prevent persons from falling.

(4) In the case of an opening to which the foregoing requirements of this Regulation do not apply by reason that a person is not liable to fall through the opening to a distance of 6 feet 6 inches but from the edge of which tools or other articles or materials are liable to fall so as to endanger persons employed, suitable precautions by way of the erection of toe-boards, secure covering or otherwise shall be taken to prevent tools, articles and materials so falling.

(5) Guard-rails, toe-boards, and coverings required by paragraphs (1), (2), (3) or (4) of this Regulation may be removed or remain unerected —

(*a*) where and when this is or becomes necessary in order to proceed with any permanent filling in, covering, or enclosure of the opening or open joisting ; or

(*b*) for the time and to the extent necessary for the access of persons or the movement of materials.

(6) Without prejudice to Regulation 24, paragraphs (1), (2), (3) and (4) of this Regulation shall not apply to an opening created in the course of demolition operations to which Part V of these Regulations applies, or to an opening created in the course of any other demolition operation, if in the course of such last mentioned demolition operation it is not left unattended, or unprotected by a suitable guard-rail or by a suitable cover where and when persons employed are liable to pass near or across the opening.

Roof work

31.—(1) Where work is done on the sloping surface of a roof and, taking into account the pitch, the nature of the surface, and the state of the weather, a person employed is likely to slip down or off the roof, then unless he has adequate handhold or foothold or is not liable to fall a distance of more than 6 feet 6 inches from the edge of the roof, suitable precautions shall be taken to prevent his so falling.

(2) Extensive work on the sloping surface of any roof which has a pitch of over 34 degrees and from or down any part of which a person is liable to fall a verticle distance of more than 6 feet 6 inches, shall be done only by workmen who are suitable for such work, and when such work is done —

(*a*) there shall be provided sufficient and suitable crawling ladders or crawling boards which shall be secured as soon as practicable ; and

(*b*) there shall be provided where practicable a suitable working platform, securely supported, and not less than 17 inches wide ;

(*c*) when a person is employed on a roof where he is liable to slip down the slope and fall off the edge of the roof covering to a distance of more than 6 feet 6 inches, there shall be a parapet wall or railings of adequate strength or other protective arrangements to prevent him from so falling ;

(*d*) in the case of any part of the work for which it is impracticable to comply with sub-paragraphs (*a*) and (*c*) of this paragraph, a suitable safety belt of suitable and sound materials and in good condition, with a rope of adequate length and strength enabling the wearer to attach himself to a fixed and suitable structure, shall be supplied to each workman who elects to use it and where the wearer cannot so attach himself a second person shall attach or hold the rope in a secure manner.

(3) Where work is being done on or near roofs or ceilings covered with fragile materials through which a person is liable to fall a distance of more than 10 feet —

(*a*) where workmen have to pass over or work above such fragile materials, suitable and sufficient ladders, duck ladders or crawling boards, which shall be securely supported, shall be provided and used ;

(*b*) prominent notices stating that the coverings are fragile shall be affixed at the approaches thereto :

Provided that sub-paragraph (*b*) shall not apply as respects glass coverings.

(4) Where persons are employed in a position below the edge of a sloping roof and where they are in a position of being endangered by work done on the roof, suitable precautions shall be taken to prevent tools or materials falling from such roofs or from the edge thereof so as to endanger such persons employed.

Scaffolds not to be overloaded

32. Scaffolds shall not be over-loaded and materials shall not be kept upon them unless needed for work within a reasonable time.

Avoidance of shock on scaffolds

33. When any material is transferred on or to a scaffold it shall be moved or deposited without imposing any violent shock.

Part III.— Raising and Lowering

A. Lifting Appliances

Construction, maintenance and inspection

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

(*a*) be of good mechanical construction, sound material, adequate strength and substance 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 other competent person. A report of the results of every such inspection in the prescribed form and including the prescribed particulars and signed by the person making the inspection shall be entered in or attached to the prescribed register forthwith.

(2) In the case of a site where the employer for whom the inspection was carried out has reasonable grounds for believing that the operations will be completed in a period of less than six weeks, the provision in this Regulation requiring that a report shall be made and

signed, in so far as it relates to lifting appliances not worked by mechanical power and all plant or gear used for anchoring or fixing such appliances, shall be deemed to have been satisfied if the person in charge of the operations carried on by that employer at such site has himself carried out the inspection and is a person competent so to do and if, within one week of the date of the inspection, he informs his employer in writing that the lifting appliance and plant or gear were inspected by him and that he found them in good order, or observed certain defects as the case may be, and the date of such inspection and the results thereof together with the name of the person making the inspection are entered in the prescribed register.

Support, anchoring, fixing and erecting

35.—(1) Every lifting appliance shall be adequately and securely supported and every part of a stage, framework or other structure and every mast, beam, pole or other article of plant supporting any part of a lifting appliance shall be of good construction, sound material and adequate strength having regard to the nature of the lifting appliance, its lifting and reaching capacity, and the circumstances of its use.

(2) Every part of the framework of every crab or winch, including the bearers, shall be of metal, provided that in the case of a crab or winch not driven by mechanical power this requirement shall not as respects bearers come into force until twelve months after the commencement of these Regulations.

(3) The anchoring or fixing arrangements of every lifting appliance shall be adequate and secure.

(4) Every temporary attachment or connection of a rope, chain or other plant or gear 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. On every stage, gantry or other place where a lifting appliance having a travelling or slewing motion is used, 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.

Platforms for crane drivers and signallers

37. Every platform for the person or persons driving or operating a crane, or for any signaller, shall be —

(*a*) of sufficient area for the persons employed thereon ;

(*b*) close planked or plated ;

(*c*) provided with safe means of access ;

and Regulation 24 (which relates to guard-rails and toe-boards) shall apply to such platform as if it were a working platform.

Cabins for drivers

38.—(1) The driver of every power-driven lifting appliance shall be provided with a suitable cabin which shall so far as is consistent with the safe use of the appliance

(*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 or maintenance.

(2) Where reasonably practicable the cabin shall, before such lifting appliance is put into general use, be completely erected, or other adequate provision shall be made for the protection of the driver from the weather.

(3) Where reasonably practicable the cabin shall when in use during cold weather be adequately heated by suitable means.

(4) Paragraphs (1), (2) and (3) of this Regulation shall not apply in cases where the driver is indoors or otherwise adequately protected from the weather, or to a hoist other than a hoist operated only from one position alongside the winch, or to lifting appliances mounted on wheels and having a maximum safe working load of one ton or less or to any machine incorporating a lifting appliance where the primary purpose of that machine is not that of a lifting appliance.

Drums and pulleys

39. Every drum or pulley round which the chain or wire rope of any lifting appliance is carried shall be of suitable diameter and 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, controls, 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.

(2) On every lifting appliance every lever, handle or wheel provided for controlling the operation of any part of the appliance shall, where practicable, be provided with a suitable locking device to prevent accidental movement or displacement of the lever, handle or wheel unless it is so placed or constructed as to prevent such accidental

movement or displacement or unless the appliance is so constructed that such accidental movement or displacement will not affect the appliance in a manner liable to cause danger. This requirement shall not apply until the expiration of six months from the date of commencement of these Regulations.

(3) Every lever, handle or wheel 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 requirement shall not apply to rotating handles for raising or lowering the load in the case of a winch or non-derricking jib crane 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 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 secured at at least two points so as to support the load with safety and so as to prevent the pole or beam from moving into contact with any part of a scaffold; and

(*c*) is not supported on a part of a scaffold which also serves as a ledger or putlog; and

(*d*) if secured only to a scaffold, is secured to at least two standards or extension poles of that scaffold.

Stability of mobile lifting appliances

43. No mobile lifting appliance shall be used on a soft or uneven surface or on a slope in circumstances in which the stability of the appliance is likely to be affected unless adequate precautions are taken to ensure its stability.

Stability of fixed cranes and guards for travelling jib cranes on rails

44.—(1) No fixed crane shall be used unless it is securely anchored or adequately weighted by suitable ballast properly placed on the crane structure so as to ensure stability.

(2) 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 readily be seen.

(3) Every travelling jib crane on rails shall be provided with guards to remove any loose material from the track.

Rails for travelling cranes

45. All rails on which a travelling crane moves shall —

(*a*) be of adequate section and have an even running surface ;
(*b*) be jointed by fish plates or double chairs ;
(*c*) be securely fastened to sleepers or bearers ;
(*d*) be properly laid ;
(*e*) be maintained in good condition ;
(*f*) be provided with stops or buffers at the ends of the track :

Provided that requirements (*b*) and (*c*) of this Regulation shall not apply to an overhead crane on bridge rails or to 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.

Cranes with derricking jibs

46. On every crane having a derricking jib there shall be provided and maintained an effective interlocking arrangement of sound construction between the derricking clutch and the pawl sustaining the derricking drum, except where —

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

User of cranes

47. A crane shall not be used —

(*a*) otherwise than for direct raising or lowering of a load unless the stability of the crane is not thereby endangered ;
(*b*) in the case of a crane with a derricking jib, to move a load at a radius exceeding the maximum radius specified in the certificate required by Regulation 52 or, where no such certificate is yet required, the maximum radius marked on the crane in accordance with paragraph (3) of Regulation 53.

User of cranes with timber structural member prohibited

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

Erection of cranes under supervision

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

Competent persons to operate lifting appliances or give signals

50.—(1) A lifting appliance shall not be operated except by a person trained and competent to operate that appliance except that it shall be

permissible for such appliance to be operated by a person who is under the direct supervision of a qualified person for the purpose of training.

(2) No person under 18 years of age shall be employed to operate any lifting appliance driven by mechanical power or to give signals to the operator of any such appliance.

(3) Subject to paragraph (4) of this Regulation, 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 places where such view is not necessary for safe working, there shall be appointed and suitably stationed one competent person to give necessary signals to the operator, but if one signaller is insufficient for the purpose such additional competent signallers as may be necessary shall be appointed and suitably stationed :

Provided that where and in so far as it is impracticable to comply with the foregoing requirements of paragraph (3) of this Regulation effective measures shall be taken to enable the driver or operator of the lifting appliance to ascertain the position of the load, or point of attachment for a load, when it is in the vicinity of a loading or unloading point or of any other place at which danger is reasonably to be anticipated.

(4) The provisions of paragraph (3) of this Regulation shall not apply —

(*a*) in the case of a hoist or of an aerial cableway ;

(*b*) in a case other than that of a hoist as respects places where the appliance can raise or lower the load (or point of attachment for a load) vertically only, without any horizontal or slewing motion, if for safe working the driver or operator of the appliance needs information related to the movement, stopping or position of the load, or point of attachment for a load, when it is at or in the immediate vicinity of certain points only, and effective arrangements are made by means of a signalling system, position indicators or otherwise, for providing the driver or operator with any such information necessary for safe working.

(5) There shall be efficient signalling arrangements between the driver or operator and persons employed at a loading or unloading point of an aerial cableway.

Signals

51.—(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.

(2) Devices or apparatus used for giving sound, colour or light signals for the purposes aforesaid shall be efficiently and properly maintained, and signal wires shall be adequately protected from accidental interference.

Testing and examination of lifting appliances

52.—(1) (*a*) No crane, crab or winch shall be used unless it has been tested and thoroughly examined by a competent person within the previous four years and no pulley block, gin wheel or sheer legs shall be used in the raising or lowering of any load weighing one ton or more unless it has been tested and thoroughly examined by a competent person ;

(*b*) No crane, crab or winch shall be used after any substantial alteration or repair 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 examined by a competent person ;

(*c*) 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 :

Provided that sub-paragraph (*a*) shall not apply within a period of two years after the date of commencement of these Regulations, except in the case of Scotch Derrick, Guy Derrick, Tower Derrick and Travelling Jib cranes.

Provided also that paragraph (1) of this Regulation shall not apply to a hoist.

(2) No crane, crab, winch, pulley block or gin wheel shall be used unless there has been obtained in such form as may be prescribed a certificate of any test and examination required by sub-paragraphs (*a*) or (*b*) of paragraph (1) of this Regulation signed by the person making or responsible for the carrying out of the test and examination and specifying the safe working load or safe working loads and in the case of a crane with a derricking jib the safe working loads at various radii of the jib including the maximum radius at which the jib may be worked.

(3) A report of the results of any examination required by paragraph (1) of this Regulation in such form and including such particulars as may be prescribed and signed by the person making or responsible for the carrying out of the examination shall within 14 days be entered in or attached to the prescribed register ; provided that this requirement shall not apply to an examination of which a certificate has been obtained in accordance with paragraph (2) of this Regulation.

Marking of safe working loads

53.—(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 or derrick pole or mast used in the raising or lowering of any load weighing one ton or more.

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

(3) Every crane fitted with a derricking jib shall —

(*a*) have plainly marked upon it the safe working loads at various radii of the jib and the maximum radius at which the jib may be worked ;

(*b*) be fitted with an accurate indicator, clearly visible to the driver, showing the radius of the jib at any time and the safe working load corresponding to that radius.

Indication of safe working load of jib cranes

54. Subject as hereinafter in this Regulation provided, no jib crane having either a fixed or a derricking jib shall be used unless it is fitted with an approved type of automatic indicator which —

(*a*) indicates clearly to the driver or person operating the crane when the load being carried approaches the safe working load of the crane for the radius of the jib at which the load is being carried ;

(*b*) gives an efficient sound signal when the load being carried is in excess of the safe working load of the crane at that radius :

Provided that if a table showing the safe working loads at various radii of the jib is kept attached to the crane the foregoing requirements shall not apply to —

(i) any Guy Derrick crane, being a crane of which the mast is held upright solely by means of ropes with the necessary fittings and tightening screws ;

(ii) any hand crane which is being used solely for erecting or dismantling another crane ;

(iii) any crane having a maximum safe working load of one ton or less:

Provided also that in the case of a crane having a maximum safe working load of not more than 30 hundredweight the foregoing requirements shall not apply until the expiration of one year from the date of the commencement of these Regulations.

Load not to exceed safe working load

55. A crane, crab, winch, pulley block, gin wheel, sheer legs, or derrick pole or mast or any part of such appliance shall not be loaded beyond the safe working load ; provided that for the purpose of making tests of any such appliance the safe working load may be exceeded by such amount as a competent person appointed to carry out the tests may authorise.

Precautions on raising or lowering loads

56.—(1) Where there is lifted on a lifting appliance 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.

(2) Where more than one lifting appliance is required to lift or lower one load —

(*a*) the machinery, plant and other appliances 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 ;

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

Scotch, Guy or Tower Derrick cranes

57.—(1) The requirements of paragraphs (2) to (9) of this Regulation shall, except as otherwise specified, apply to all Scotch Derrick, Guy Derrick or Tower Derrick cranes and to such cranes only.

(2) (*a*) No crane manufactured after the 30th September, 1931, shall be used unless it conforms to the standards of strength, stability and safety specified in the British Standard Specification No. 327 of 1930 for Derrick Cranes as amended by any amendments thereof made and published by the British Standards Institution not later than six months prior to the manufacture of the crane, or specified in an alternative specification approved for the purposes of these Regulations, and a certificate that it so conforms has been obtained from the makers of the crane.

(*b*) No crane manufactured before the 1st October, 1931, shall be used unless it has been brought up to or brought as near as is reasonably practicable to the standards of strength, stability and safety specified in British Standard Specification No. 327 of 1930 for Derrick Cranes, and there has since been obtained in the prescribed form a certificate from a competent person that he has tested and examined the crane and specifying the safe working load or safe working loads.

(*c*) No crane which, after 30th September, 1931, is or has been converted from a hand crane to a power crane shall be used unless, since such conversion, it has been brought up to or brought as near as is reasonably practicable to the standards of strength, stability and safety specified in British Standard Specification No. 327 of 1930 for power driven Derrick Cranes or specified in an alternative specification approved for the purposes of these Regulations and there has since such conversion been obtained in the prescribed form a

certificate from a competent person that he has tested and examined the crane and specifying the safe working load or safe working loads.

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

(4) Every crane shall after each erection on a building site and before use be tested *in situ* for anchorage, by a competent person, by the imposition on each anchorage or the maximum uplift or pull exerted either —

(*a*) by a load of 25 per cent. above the maximum load to be lifted by the crane as erected ; or

(*b*) by a less load arranged to exert an equivalent pull on the anchorage.

The prescribed particulars of such tests and their results shall forthwith be entered in or attached to the prescribed register.

(5) If the person making tests under paragraph (4) of this Regulation considers that the maximum load which may safely be lifted by that crane as anchored is less than the safe working load of the crane as defined in Regulation 3 he shall specify that maximum among the said particulars and a loading diagram appropriate to the crane anchorage and indicating a modified safe working load or loads shall be affixed in a position where it can readily be seem by the crane driver. Such modified safe working load or loads shall be deemed for the purpose of these Regulations to be the safe working load or loads of the crane as anchored.

(6) The jib of a Scotch Derrick crane shall not be erected between the back stays of the crane.

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

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

(9) 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.

B. Chains, Ropes and Lifting Gear

Construction, testing, examination and safe working loads of chains, ropes and lifting gear

58.—(1) No chain, rope or lifting gear shall be used in raising or lowering or as a means of suspension unless —

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

(*b*) it has been tested and examined by a competent person and there has been obtained in such form as may be prescribed 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 :

Provided that sub-paragraph (*b*) of this paragraph shall not apply

(i) to a fibre rope or fibre rope sling ; or

(ii) to a wire rope used before the date of commencement of these Regulations.

Provided further that a rope or rope sling need not be marked with the safe working load if its safe working load is entered in the register kept in pursuance of Regulation 64 and the rope or sling is so marked as to enable its safe working load to be ascertained from the register or if, in the case of a rope or rope sling to which sub-paragraph (*b*) of this paragraph does not apply, its safe working load can be ascertained from a table of safe working loads posted in a prominent position on the site of the operations ; and in the case of a rope or rope sling which is not required to have been tested and which is not marked with the safe working load, the safe working load entered in the register or shown by the table, as the case may be, shall be deemed for the purpose of these Regulations to be the safe working load of the rope or rope sling.

(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.

(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 authorise.

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

59. No chain, ring, link, hook, shackle, swivel or eyebolt 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 examined by a competent person and there has been obtained in the prescribed form a certificate of such test and examination signed by him or by the person responsible for the carrying out of the test and examination and specifying the safe working load.

Hooks

60. 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 displacement.

Slings

61.—(1) Every chain sling or rope sling used for raising or lowering on a lifting 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.

(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 sling, etc.

62. 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, so as to cause danger.

Knotted chains, etc.

63.—(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 under direct tension.

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

Examination of chains, ropes and lifting gear

64. 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, so however that chains, ropes and lifting gear not in regular use need only be so examined when necessary. A register shall be kept showing the prescribed particulars with respect to each such examination.

Annealing of chains and lifting gear

65. A chain or lifting gear other than a rope sling or lifting gear of a class or description specified in the First Schedule to these Regulations, or exempted by certificate of the Chief 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 approved form of heat treatment under the supervision of a competent person within the previous fourteen months or, in the case

of chains or slings of 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 approved heat treatment only when necessary ; and

(*b*) the prescribed particulars of annealing or approved heat treatment have been entered in or attached to the prescribed register.

C. Special Provisions as to Hoists

Safety of hoistways, platforms and cages

66.—(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 extend to a height of at least six feet six 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 in no case shall be less than three feet. 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 employers under these Regulations, it shall be the duty of every person, immediately after using any 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.

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

(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.

(4) Except in the case of a hoist used for carrying persons the requirements of paragraphs (2) and (3) of this Regulation shall not apply until one year or, where the height of travel of the cage or platform does not exceed thirty feet, two years after the commencement of these Regulations.

Operation of hoists

67.—(1) The construction and the installation arrangements of every hoist shall at any one time be such that it can be operated only from the cage or only from one other position and a hoist shall not be operated from the cage unless the requirements of Regulation 69 are complied with.

(2) If the person operating a hoist has not a clear and unrestricted view of the 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 to be given to him from each landing place at which the hoist is used and to enable him to stop the platform or cage at the appropriate level.

(3) When a hoist is not operated from the cage there shall be a readily legible notice on the platform or cage stating that the carriage of persons is prohibited.

Winches

68. 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.

Hoists carrying persons

69.—(1) No hoist shall be used for carrying persons unless it is provided with a cage, which is —

(*a*) 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*) fitted on each side from which access is provided to a landing place with a gate with efficient inter-locking 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.

(2) Every gate in the hoistway enclosure of a hoist used for carrying persons shall, if, or so far as, reasonably practicable, be fitted with efficient interlocking or other devices to secure 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.

(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.

(4) Every hoist in which any person is being carried shall be operated from the cage of the hoist only.

Safe working load of hoists

70. The safe working load shall be plainly marked on every hoist platform or cage and no load greater than that load shall be carried, provided 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 authorise. 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.

Test and examination of hoists

71. No hoist shall be used —

(*a*) unless, in the case of a hoist manufactured or substantially altered or substantially repaired after the date of commencement of these Regulations, 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 such form as may be prescribed, 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 one time ;

(*b*) unless, 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 such form and including such particulars as may be prescribed, and signed by the person making or responsible for the carrying out of the test and examination, has been entered in or attached to the prescribed register ; and

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

A report of the results of any examination required by paragraph (*c*) of this Regulation in such form and including such particulars as may be prescribed and signed by the person making or responsible for the examination shall within 14 days be entered in or attached to the prescribed register.

Hoists forming part of permanent equipment of a building

72.—(1) Regulations 34, 39 and 66 to 71 inclusive shall not apply to a passenger or goods hoist forming part of the permanent equipment of a building but no such hoist shall be used for the purposes of any operations to which these Regulations apply unless the following conditions are complied with —

(*a*) the hoist shall not be so used for carrying persons unless a maximum number of persons to be carried at any one time has been specified by the maker or by an insurer of the hoist or by a competent firm of lift engineers carrying out periodic examinations of the hoist, and a greater number is not being carried ;

(*b*) the hoist shall not be so used for carrying materials, tools or other articles, other than light articles readily carried by a person who is riding in the hoist, unless a safe working load for the hoist has been specified by the maker or an insurer or firm as aforesaid and that safe working load is not being exceeded ;

(*c*) on any occasion when the hoist has been used for raising or lowering for the purposes of such operations the hoistway gate at a landing place shall not be left open except where it is immediately necessary for it to be open to afford access to the hoist for some other purpose.

(2) In the case of a hoist manufactured before the date of commencement of these Regulations, if it is not reasonably practicable to comply fully with any requirement of Regulations 66 (2), 66 (3), 68, 69 (1), 69 (2) or 69 (3), 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.

D. General

Carrying of persons by crane

73. No person shall be raised, lowered or carried by a crane except on the driver's platform or as permitted by Regulation 18.

Secureness of loads

74.—(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.

(2) 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.

(3) Every receptacle used for raising or lowering stone, bricks, tiles, slates or other objects 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.

(4) (*a*) Goods or loose materials shall not be placed directly on the 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.

(*b*) No truck or wheelbarrow shall be carried on a hoist platform unless it is efficiently scotched or secured on the platform.

(*c*) 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.

(5) The wheel of a barrow shall not be used as a means of suspension for raising or lowering the barrow unless efficient steps are taken to prevent the axle from slipping out of the bearings.

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

PART IV.— EXCAVATIONS

Safety of excavations

75. An adequate supply of timber of suitable quality or other suitable material shall where necessary be provided and used to prevent, so far as is reasonably practicable and as early as is reasonably practicable in the course of the work, danger to any person employed from a fall or dislodgment of earth, rock or other material forming the side of or adjacent to any excavation or earthwork. Without prejudice to the carrying out of any other examination found necessary to ensure compliance with this Regulation every part of an excavation or earthwork, not being a part to which the proviso (i) 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 supports are adequate and in good condition ; and a report of the results of every such examination shall be entered forthwith in the prescribed register.

Provided that —

(i) this Regulation shall not apply where, having regard to the nature and slope of the side of the excavation or earthwork and other circumstances, no fall or dislodgment 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 ;

(ii) this Regulation shall not apply in relation to a person actually engaged in timbering or other work (including an examination as aforesaid) 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 ;

(iii) the foregoing requirements as to a special weekly examination and report thereon shall not apply until the work has been in progress for a period of at least seven working days (whether continuous or not) ;

(iv) in the case of a site where the employer for whom a special examination as aforesaid was carried out has reasonable grounds for believing that the operations will be completed in a period of less than six weeks, the provision in this Regulation requiring a report of the examination to be entered in the register shall be deemed to have been satisfied if the person in charge of the operations carried on by that employer at such site has himself carried out the examination

and is a person competent so to do and if within one week of the date of the examination he informs his employer in writing of the results of such examination, and the date of such examination and the results thereof together with the name of the person making the examination are entered in the prescribed register.

Excavations likely to reduce security of a structure

76. No excavation or earthwork 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.

77. Every accessible part of an excavation, pit or opening in the ground into or down the side of which a person employed is liable to fall a vertical distance of more than 6 feet 6 inches shall be provided with a suitable barrier to a height of at least 2 feet and as close as is reasonably practicable to the edge :

Provided that the foregoing requirement shall not apply to any part of an excavation, pit or opening while (and to the extent to which) the absence of such barrier is necessary for the access of persons or for the movement of plant or materials or while (and to the extent to which) it has not yet been practicable to erect such barrier since the formation of that part of the excavation, pit or opening.

Safeguarding edges of excavations, etc.

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

(2) No load shall be placed or moved near the edge of any excavation where it is likely to cause a collapse of the side of the excavation and thereby endanger any person.

PART V.— DEMOLITION

Demolition of buildings

79.—(1) This Regulation shall apply to the demolition of any building or substantial part of a building.

(2) The demolition and operations incidental thereto shall be specifically placed under the supervision of a competent person experienced in demolition operations and appointed for the purpose whose name shall be posted up in a prominent position on the site of the operations, so however that where two or more contractors take

part in the operations each such contractor shall appoint a competent person as aforesaid and either the same person shall be jointly appointed by every such contractor or each such 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.

(3) Before demolition is commenced and also during the progress of the work —

(*a*) no electric cable or apparatus which is liable to be a source of danger, other than a cable or apparatus used for the operation, shall remain electrically charged ;

(*b*) all practicable steps shall be taken to prevent danger to persons employed —

(i) from risk of fire or explosion through leakage or accumulation of gas or vapour, and

(ii) from risk of flooding from water mains, sewers or culverts.

(4) No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

(5) The following operations shall be carried out only (i) under the immediate supervision of a competent foreman or chargehand with adequate experience of the particular kind of work, or (ii) by workmen experienced in the kind of work and under the direction of a competent foreman or chargehand as aforesaid :—

(*a*) the actual demolition of the framework of a building or of any floor, wall, roof, staircase or chimney, except where there is no risk of a collapse of any part of a building 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 where there is a special risk of a collapse, whether of that or of any other part of a building, in the course or as a result of the said demolition, so as to endanger any person employed ;

(*c*) the cutting of reinforced concrete, steelwork or ironwork forming part of the structure of a building ;

and before any steelwork or ironwork is cut or released, precautions shall be taken, so far as is practicable, to avoid danger from any sudden twist, spring or collapse.

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

(7) 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 of any adjoining building 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 this Regulation if appropriate precautions are taken to ensure his safety as far as circumstances permit.

Part VI.— Health and Welfare

First aid, ambulances and ambulance rooms

80.—(1) With a view to making adequate provision for the prompt first-aid treatment of all injuries likely to be sustained by persons employed during the course of operations to which these Regulations apply, the following requirements shall be observed.

(2) (*a*) In the case of a site where more than 10 persons are employed in operations to which these Regulations apply, a sufficient number of suitable first-aid boxes or cases shall be available at or in the immediate vicinity of the site in a readily accessible position or positions while work is going on ;

(*b*) in the case of a site where more than 100 persons are employed in operations to which these Regulations apply, there shall be provided and available at or in the immediate vicinity of the site a properly constructed ambulance with a suitable stretcher or stretchers :

Provided that sub-paragraph (*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 available.

(3) Every first-aid box or case provided for the purpose of this Regulation shall :

(*a*) contain at least such equipment and materials as may be prescribed ;

(*b*) be distinctively marked " FIRST AID " ;

(*c*) be placed under the charge of a responsible person who in the case of a site where more than 25 persons are employed shall be capable of giving first-aid treatment, who while in charge of the box or case shall be readily available when the box or case is liable to be needed, and whose name shall be plainly indicated in a prominent place near the box or case.

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

(5) In the following cases, namely —

(*a*) in the case of a site where more than 500 persons are intended to be or have been employed at any one time in operations

to which these Regulations apply and the number so employed is for the time being more than 250, and

(*b*) in the case of a site at which more than 250 persons are intended to be or have been so employed and which is more than 10 miles from a hospital and at which the number so employed is for the time being more than 100.

there shall be provided and maintained in good order and in a clean condition a properly constructed ambulance room with equipment at least up to such standard as may be prescribed. The room shall be used only for purposes of treatment and rest and shall be in 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.

(6) For the purposes of Regulation 80, numbers employed shall be reckoned according to the largest number at work at any one time.

Shelters, accommodation for clothing, and facilities for meals

81.—(1) Subject to the provisions of paragraphs (2) and (3) of this Regulation there shall be provided at or in the immediate vicinity of every site where persons are employed in operations to which these Regulations apply, for the use of persons so employed and conveniently accessible to them —

(*a*) adequate and suitable accommodation for taking shelter during interruptions of work owing to bad weather ;

(*b*) adequate and suitable accommodation for depositing in a dry place clothing not worn during working hours, other than special protective clothing used on occasion for work, coupled with such arrangements as are reasonably practicable for drying such clothing if wet ;

(*c*) adequate and suitable accommodation for the deposit of special protective clothing used for work and kept, when not in use, at or in the immediate vicinity of the site, coupled with such arrangements as are reasonably practicable for drying such clothing if it becomes wet ;

(*d*) 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 adjacent facilities for washing the hands ;

(*e*) an adequate supply of wholesome drinking water at a convenient point or points and clearly marked " Drinking Water " or patently intended to be used as such.

(2) For the purposes of paragraph (1) of this Regulation :—

(*a*) accommodation shall be deemed to have been provided for the use of persons employed if specific and effective arrangements have been made for those persons to have access to and use of that accommodation ;

(*b*) in considering whether adequate accommodation of any kind is being provided at any time and place regard shall be had to the number of persons who appear to be desirous of using such accommodation at that time and place ;

(*c*) in considering whether accommodation is conveniently accessible account may be taken of any transport provided at appropriate times for persons employed ;

(*d*) the accommodation and facilities mentioned in sub-paragraph (*d*) of paragraph (1) of this Regulation shall be required to be provided only at or in the immediate vicinity of every site where more than 10 persons are employed in operations to which these Regulations apply ;

(*e*) in considering whether the accommodation and facilities required under sub-paragraph (*d*) of paragraph (1) of this Regulation to be provided in relation to any site are adquate and suitable regard shall be had to the extent to which it is practicable to provide such accommodation and facilities at or in the immediate vicinity of that site.

(3) Accommodation required under sub-paragraph (*d*) of paragraph (1) of this Regulation shall, where the Chief Inspector by written certificate so directs, include facilities for warming food, and, where the Chief Inspector certifies in writing that he is satisfied that the facilities, if any, for obtaining meals at or in the vicinity of the site are in the circumstances of the case inadequate, that amongst the persons employed on the site there exists or is to be anticipated a substantial demand for a canteen where appropriate meals can be purchased and that a canteen should be provided, shall include a suitable canteen where such meals can be purchased by such persons. Any certificate issued by the Chief Inspector hereunder may at any time at his discretion be revoked or varied.

(4) If any separate building or structure is provided for the purposes of sub-paragraph (*b*) or (*d*) of paragraph (1) of this Regulation it shall not be used for the deposit or storage of building materials or plant if such deposit or storage unreasonably interferes with its use for the purpose for which it is provided.

Inhalation of dust and fumes to be prevented

82. 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.

Lead compounds and other poisonous substances

83.—(1) Where any persons are employed in a process in which a lead compound or other poisonous substance is used there shall be

provided for the use of the persons liable to come into contact with such compound or substance adequate and suitable facilities for washing which shall include nail brushes, soap and towels.

(2) For the purposes of this Regulation "lead compound" means any material containing lead which, when treated in the manner prescribed by rules made under Section 7 of the Lead Paint (Protection against Poisoning) Act (Northern Ireland), 1927, yields to an aqueous solution of hydrochloric acid a quantity of soluble lead compound exceeding, when calculated as lead monoxide, five per cent. of the dry weight of the portion taken for analysis.

17 & 18 Geo. 5. c.7.

Protection of the eyes

84. Where there is carried on any process specified in the Second Schedule to these Regulations, suitable goggles or effective screens shall be provided to protect the eyes of persons employed in the process.

PART VII.— MISCELLANEOUS

Fencing of machinery

85. 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 position or of such construction as to be as safe to every person employed or working on the site of the operations as it would be if it were securely fenced.

Prime movers and other machines

86.—(1) Every prime mover and other machine intended to be driven by mechanical power (being a prime mover or machine used or intended to be used in operations to which these Regulations apply) shall, unless constructed before the date of commencement of these Regulations, 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 :—

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 the foregoing requirements shall not apply to a pulley, coupling or other part of a prime mover or machine intended for connecting to the prime mover or machine means of transmitting motion —

(*a*) from the prime mover, or
(*b*) from or to the machine

as the case may be ; save that the requirements shall apply to any pulley, coupling or other part as aforesaid intended for connecting

means of transmitting motion from a prime mover to a machine where the prime mover and machine are constructed as a combined unit appliance.

(2) Paragraph (1) of this Regulation shall not be deemed to relieve any contractor or employer of workmen or other person of his responsibilities under Regulation 85.

Mechanically propelled vehicles and trailers

87. Mechanically propelled vehicles and mechanically drawn trailer-vehicles owned, hired and operated under the control of or used by a contractor or employer undertaking operations to which these Regulations apply and used for conveying workmen, goods or materials for the purpose of such operations shall, when being moved at a site where such operations 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 and not be used in an improper manner ;

(*b*) be driven or operated only by a trained and competent person over 18 years of age, except that it shall be permissible for the vehicle to be driven or operated by a person over 18 years of age who is under the direct supervision of a qualified person for the purpose of training ;

(*c*) not be used to carry a load greater than a load specified as a safe load in a certificate or other document which shall have been obtained from the makers or from a competent person and clearly marked on the vehicle ;

(*d*) not be loaded so as to interfere with the safe driving or operation of the vehicle.

Explosives

88. Explosives shall not be handled or used except by or under the control of competent persons with adequate knowledge of the dangers connected with their use and steps shall be taken to see 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.

Generation of steam, smoke and vapour

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

Protection from falling material

90.—(1) Any place on the site of the operations at which any person is habitually employed shall be covered in such manner as to protect any person who is working in that place from being struck by any falling material or article.

(2) Scaffold materials, tools and 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 shall be properly lowered ; in any place where proper lowering is not practicable and also where any part of a structure is being demolished or broken off adequate steps shall be taken, where necessary, to protect persons employed from falling or flying debris.

Lighting of working places, etc.

91. 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.

Projecting nails and loose material

92.—(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.

(2) Loose materials where not required for use shall not be placed or left so as to impede the passage of persons upon platforms, gangways, floors or other places on the site used for such passage, but shall be removed, stacked or stored so as to leave such places free from obstruction. 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.

Construction of temporary structures

93. Any temporary structure erected for the purpose of operations to which these Regulations apply not being a scaffold or a structure to which Regulation 35 applies, shall be of good construction, sound material and adequate strength and stability, having regard to the purpose for which it is used.

Avoidance of danger from collapse of structure

94.—(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 structure during any temporary state of weakness or instability of the structure or part before the structure is completed.

(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 part of an existing building or of a building 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 the fall of any part thereof.

Prevention of drowning

95. Where on or adjacent to the site of any operations 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 ready for use and steps shall be taken to arrange for the prompt rescue of any such person in danger of drowning. Where appropriate and reasonably practicable, secure fencing not less than 3 feet in height shall be erected near the water to prevent such fall.

Wet paint on iron or steel work

96. No ironwork or steelwork on which there is wet paint, other than paint for the purpose of jointing, shall be moved or manipulated on the site of the operations :

Provided that this Regulation shall not apply to moving or manipulation in connection with the painting of ironwork or steelwork on the site.

Safety nets, sheets and belts

97. If the special nature or circumstances of any part of the work 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 safety nets or safety sheets or there shall be available safety belts or other contrivances which will so far as practicable enable such persons who elect to use them to carry out the work without risk of serious injury.

Appointment of experienced person to supervise safe conduct of work

98. Every contractor and employer of workmen who undertakes operations to which these Regulations apply and who normally employs more than 50 persons in such operations at any one time, shall specifically appoint in writing one or more persons experienced in such operations and suitably qualified for the purpose (whose name or names shall be entered on the copy or abstract of these Regulations required to be posted up in accordance with Sections 121, 111 or 112 of the principal Act) to be specially charged with the duties of advising the contractor or employer as to the observance of the safety requirements of these Regulations, and as to other safety matters, of exercising a general supervision of the observance of these Regulations and of promoting the safe conduct of the work generally.

This Regulation shall not be construed as preventing two or more contractors or employers from jointly appointing the same person or persons to perform some or all of the aforesaid duties for those contractors or employers, whether for a particular site or for a group of sites.

The duties assigned to a person appointed under this Regulation by the employer or employers appointing him, including any duties other than those mentioned in this Regulation, shall not be such as to prevent him from discharging with reasonable efficiency the duties assigned to him for the purposes of this Regulation.

Registers, certificates, etc.

99.—(1) The registers for reports and particulars required by Regulations 20, 34, 57 (4) and (5), 71 (*b*) and 75 shall be kept on the site of the operations for which the register is being used and when there are no such operations shall be kept at an office of the employer for whom the inspection, test or examination as the case may be was carried out :

Provided that in the case of a site where the employer has reasonable grounds for believing that the operations will be completed in a period of less than six weeks, the employer may keep the registers of reports required by Regulations 20, 34 and 75 at his office.

(2) All other registers prescribed and every other certificate or document required to have been obtained for the purposes of these Regulations shall be kept either on the site of the relevant operation or at an office of the employer for whom the entry in the register was made or the certificate or document was obtained or of the owner of the appliance or plant to which the certificate relates.

(3) Registers and certificates required by these Regulations shall at all reasonable times be open to inspection by any of the Inspectors appointed under Section 128 of the principal Act, and the person keeping any register or certificate shall send to any such Inspector such extracts therefrom or copies thereof as the Inspector may from time to time require for the purpose of the execution of his duties under the Factories Acts (Northern Ireland), 1938 and 1949.

PART VIII

Prohibited sale or hire of machinery

100. The provisions of subsection (2) of Section 18 of the principal Act, (which prohibits the sale or letting on hire of certain machines which do not comply with the provisions of that Section) shall extend to prime movers or machines which do not comply with the requirements of Regulation 86 of these Regulations.

Sealed with the Official Seal of the Ministry of Labour and National Insurance for Northern Ireland this 19th day of December, 1950, in the presence of

(L.S.) *R. W. Steele,*
Assistant Secretary.

FIRST SCHEDULE

CHAINS AND LIFTING GEAR EXCEPTED UNDER REGULATION 65 (AS TO HEAT TREATMENT)

(1) Chains made of malleable cast-iron.
(2) Plate link chains.
(3) Chains, rings, links, hooks, shackles, swivels and eyebolts made of steel or of any non-ferrous metal.
(4) Pitched chains working on sprocket or pocketed wheels.
(5) Rings, links, hooks, shackles and swivels permanently attached to pitched chains, pulley blocks or weighing machines.
(6) Hooks, eyebolts and swivels having screw-threaded parts or ball-bearings or other case-hardened parts.
(7) Socket shackles secured to wire ropes by white metal capping.
(8) Bordeaux connections.

SECOND SCHEDULE

PROCESSES TO WHICH REGULATION 84 APPLIES

(1) Dry grinding of surfaces of metal, stone, concrete or similar materials by means of a wheel or disc driven by mechanical power.
(2) Cutting, dressing or carving of stone, concrete or similar materials by means of a portable tool driven by mechanical power.
(3) Chipping or scaling of painted or corroded metal surfaces or wire-brushing of such surfaces by mechanical power.
(4) Cutting out or cutting off of cold rivets or bolts from any structure or part thereof.
(5) Welding or cutting of metals by means of an electrical, oxy-acetylene or similar process.

THIRD SCHEDULE

EXTENT OF EXCLUSIONS UNDER REGULATION 2 (3)

Regulation	*Extent of exclusion*	*Exceptions and conditions*
34	Requirement (*c*)	
36	The whole Regulation	
37	Requirement (*b*) and the requirement relating to guard-rails and toe-boards	
38	The whole Regulation	
40	Paragraphs (2) and (3)	
44	Paragraph (3)	
45	Requirement (*f*)	
46	The whole Regulation	
52	The whole Regulation	
53	Paragraph (2) and requirement (*b*) of paragraph (3)	
54	The whole Regulation	
57	Paragraphs (2), (4) and (5)	Save that where the crane is specially erected for use in the operations to which these Regulations apply, the crane shall before such use be tested in accordance with paragraph (4), and a record shall be kept of the particulars of the tests and paragraph (5) shall then apply.
58	Sub-paragraph (*c*) of paragraph (1)	If there are available to any person using the chain, rope or gear means of ascertaining its safe working load.
60	The whole Regulation	
64	The provisions relating to the keeping of a register	
65	Sub-paragraph (*b*)	