1970. No. 138 **[C]**

COAL AND OTHER MINES

Safety-Lamps and Lighting

REGULATIONS, DATED 1ST JUNE 1970, MADE BY THE MINISTRY OF COMMERCE UNDER SECTIONS 13(2), 61(2), 63, 120 AND 158(1) OF THE MINES ACT (NORTHERN IRELAND) 1969.

WHEREAS in pursuance of Part I of Schedule 2 to the Mines Act (Northern Ireland) 1969(a) the Ministry of Commerce has published notice of its intention to make the following regulations and has not received any objection to the draft thereof in respect to which it is required to refer the draft regulations for inquiry and report:

NOW, THEREFORE, the Ministry of Commerce in exercise of the powers conferred on it by sections 13(2), 61(2), 63, 120 and 158(1) of the Mines Act (Northern Ireland) 1969 and of all other powers enabling it in that behalf, hereby makes the following regulations:—

PART I

GENERAL

Citation

1. These regulations may be cited as the Coal and Other Mines (Safety-Lamps and Lighting) Regulations (Northern Ireland) 1970.

Application

2. These regulations shall apply to every mine of coal, stratified ironstone, shale or fireclay, and in these regulations, unless otherwise expressly provided, "mine" means such a mine.

Interpretation

3.—(1) In these regulations the following expressions have the meanings hereby respectively assigned to them, that is to say—

"the Act" means the Mines Act (Northern Ireland) 1969;

"deputy" has the meaning assigned thereto in the Coal and Other Mines (Managers and Officials) Regulations (Northern Ireland) 1970(b);

"detector" has the meaning assigned thereto in regulation 5;

"mine" has the meaning assigned thereto in regulation 2;

"the Ministry" means the Ministry of Commerce;

"shot firer" means a person appointed to be a shot firer by the manager of the mine;

"working face" does not include a place in a road at which the work consists of ripping or work of repair.

(a) 1969. c. 6 (N.I.). (b) S.R. & O. (N.I.) 1970, No. 128.

(2) Without prejudice to section 151 of the Act, for purposes of these regulations anything for the time being certified or approved under the corresponding provision of the Mines and Quarries Act 1954(c) or regulations made thereunder shall be deemed to be certified or approved by the Ministry, unless the Ministry by notice published in the *Belfast Gazette* and otherwise brought to the notice of persons concerned in such manner as the Ministry thinks fit, directs that it shall not be so deemed.

(3) Expressions to which meanings are assigned by the Act or by these regulations shall (unless the contrary intention appears) have the same meanings in any document issued under the provisions of these regulations.

Exemptions

4. If an inspector is satisfied that the application of any provision in regulation 7, 8, 9, 20, 24 or 26 of these regulations is inappropriate in relation to any mine or part thereof, the Ministry may by notice served on the manager of that mine exempt it or a part thereof from the application of that provision.

PART II

PROVISION AND MAINTENANCE OF SAFETY-LAMPS AND FIREDAMP DETECTORS

Arrangements for examination of safety-lamps and firedamp detectors before and after use

5.—(1) It shall be the duty of the manager of every mine in which or in part of which the use of lamps or lights, other than permitted lights, is unlawful to appoint competent persons and to make and ensure the efficient carrying out of arrangements to secure the examination of safety-lamps and appliances (whether or not safety-lamps) for detecting the presence of inflammable gas (hereinafter referred to as "detectors") in accordance with the provisions of this regulation.

(2) The manager shall make and ensure the efficient carrying out of arrangements to secure that no safety-lamp or detector is taken for use below ground in such a mine unless—

(*a*) since last in use it has been thoroughly examined above ground by a competent person appointed by him and has been found by that person to be in safe working order; and

(*b*) it is securely locked.

Such arrangements shall provide for the keeping of a record of the person by whom any safety-lamp or detector is so taken on any occasion.

(3) The manager shall make and ensure the efficient carrying out of arrangements to secure the examination by a competent person appointed by him of every safety-lamp or detector upon its return to the lamp room after use. If the competent person upon such an examination finds any lamp or detector to be damaged he shall forthwith record the nature of the damage in a book provided for that purpose by the owner of the mine.

(4) Without prejudice to the generality of paragraph (2), the examination thereunder of every flame safety-lamp with a self-contained re-lighting contrivance shall include the taking apart of the lamp, thorough cleaning of all parts and the testing of the re-lighting contrivance. After reassembly the re-lighting contrivance shall not be operated unnecessarily.

(c) 2 & 3 El. 2. c. 70.

6.—(1) The manager of every safety-lamp mine shall make and ensure the efficient carrying out of arrangements to secure that every safety-lamp being taken below ground by a person employed at the mine (other than an official of the mine) is examined by a deputy or other competent person appointed by the manager before or as soon as practicable after it is taken into the mine to ascertain that it is in safe working order and properly locked.

(2) The manager of every mine in which there is a safety-lamp part shall make and ensure the efficient carrying out of arrangements to secure the like examination of every safety-lamp being taken into a safety-lamp part of the mine at a place appointed by him for the purposes of this paragraph.

Bulbs for electric safety-lamps

7. It shall be the duty of the manager of every mine to ensure that every bulb used in an electric safety-lamp of a type for the time being approved by the Ministry for general use by workmen is a bulb—

(*a*) of a type approved by the Ministry and marked in a manner specified by the Ministry in or in relation to that approval;

(*b*) where the safety-lamp is of a type the approval for which contains provisions relating to the characteristics of any bulb to be used therein, in conformity with those provisions.

Cap lamps for persons employed in haulage

8. Any safety-lamp provided for personal use by a person ordinarily employed in haulage operations shall be an electric cap lamp, and there shall be provided therewith a proper fitting for carrying that lamp.

Maintenance of lighting performance

9. It shall be the duty of the manager of every mine to make and ensure the efficient carrying out of arrangements to secure the maintenance of the lighting performance of safety-lamps used in the mine, being lamps of a type the approval for which specifies the lighting performance thereof, and in particular so that if an inspector selects from lamps of such types returned to the lamp room after use on any shift and not upon examination in pursuance of paragraph (3) of regulation 5 found to be damaged a sample comprising not less than fifty lamps or one-half of the number of lamps returned after that shift (whichever is the less) and after external cleansing determines the mean spherical candle-power of any cap lamps and the maximum horizontal candle-power of other lamps in that sample it shall in the case of at least half of those lamps be not less than sixty per cent. of the performance specified in the relevant approval, or, if another percentage (not exceeding seventy-five per cent.) is specified in an order made by the Ministry, that other percentage thereof.

General duties of persons with safety-lamps

10. Every person to whom a locked safety-lamp is issued for use in a mine shall before taking it below ground examine it externally and assure himself that it is locked and in safe working order and shall also examine it from time to time while in the mine to assure himself that it remains in safe working order.

11. No person shall unlock or open any safety-lamp or detector below ground in a safety-lamp mine or safety-lamp part of a mine or have in his possession below ground in any such mine or part of a mine any contrivance for unlocking or opening any safety-lamp or detector.

12. No person shall place a safety-lamp or detector on its bottom in a mine unless it is necessary to do so for the safe performance of any work in which that person is engaged or unless he is authorised to do so by the manager, and no person working in a mine with a pick, hammer or other such tool shall swing it within two feet of a safety-lamp or detector (other than a cap lamp which he is wearing).

13. If any safety-lamp is damaged in a mine the person using it shall forthwith carefully extinguish the light.

14. Every person to whom a safety-lamp or detector is issued for use in a mine shall on the completion of his shift return it to the lamp room.

PART III

RE-LIGHTING SAFETY-LAMPS UNDERGROUND

15. The provisions of this Part of these regulations shall apply to safety-lamp mines and safety-lamp parts of mines.

16.—(1) No person, except a competent person appointed by the manager for the purpose at a place appointed by the manager as a lamp station, shall re-light below ground any flame safety-lamp other than a lamp with a self-contained re-lighting contrivance.

(2) No contrivance for re-lighting a flame safety-lamp (other than a contrivance contained in a lamp) shall be kept below ground otherwise than at such a lamp station, and no person shall have any such contrivance in his possession below ground, other than a contrivance at such a lamp station.

(3) Any such contrivance for re-lighting a flame safety-lamp shall be so constructed, maintained and used as to prevent the emission of flame or a spark.

17.—(1) The manager shall not appoint as a lamp station any place in a road which as regards any working face is a return airway, or any place in any part of the mine in which inflammable gas although not normally present is likely to occur in a quantity sufficient to indicate danger.

(2) It shall be the duty of the manager to secure that at or near every lamp station there is kept posted a notice indicating its position in such characters and in such a place as to be easily seen.

18.—(1) No person other than an inspector, a manager, an under-manager, a deputy, a shot firer, a person carrying out an inspection under Part V of the Act or a person as to whom the manager is satisfied that he is capable of using a re-lighting contrivance safely and who is authorised by the manager in writing so to do, shall take any flame safety-lamp with a self-contained re-lighting contrivance into any mine or part of a mine to which this Part of these regulations applies.

(2) A person having a flame safety-lamp with a self-contained re-lighting contrivance shall at all times while he is below ground retain the key for operating the contrivance in his possession.

19.—(1) No person shall re-light any flame safety-lamp below ground (either at a lamp station or by means of a self-contained re-lighting contrivance) unless he has examined it and found it to be undamaged. Any person who has so re-lighted a safety-lamp shall forthwith again examine it and unless he finds it to be securely locked and in safe working order shall not allow it to be used or to remain lighted.

(2) A person having a flame safety-lamp with a self-contained re-lighting contrivance shall not attempt to re-light it at any place at which there is reason to suspect the presence of inflammable gas.

PART IV

GENERAL LIGHTING AND PERMITTED LIGHTS

Places at which general lighting is to be provided

20.—(1) It shall be the duty of the manager of every mine to secure the provision and maintenance of suitable and sufficient lighting at the following places below ground at all times when any persons are working thereat or walking therethrough going to or from their working places at the beginning or end of a shift, that is to say—

(*a*) such entrances to each shaft or outlet and such sidings provided in relation thereto as are regularly used;

(*b*) the top and bottom of every incline on which vehicles are moved by gravity operated rope haulage apparatus other than apparatus which is advanced with the working of a face;

(*c*) every siding, landing, passbye, junction and off-take, every place at which vehicles are regularly coupled or uncoupled or regularly attached to or detached from a haulage rope and every place at which vehicles are regularly filled mechanically;

(*d*) every room or place made to house and containing any engine or motor.

(2) Lighting provided in pursuance of this regulation shall be so arranged as to minimise glare or eyestrain.

(3) Nothing in the preceding provisions of this regulation shall require the provision of lighting at any place ventilated by air none of which has ventilated a working face and within one hundred and fifty feet of a working face, or at any other place within nine hundred feet of a working face being in either case a place accessible from the face in question:

Provided that the Ministry may serve on the manager of a mine a notice requiring him to secure the provision and maintenance of suitable and sufficient lighting at any place specified in the notice at which such lighting would be required but for the preceding provisions of this paragraph and which is not within thirty feet of such a working face.

(4) Nothing in the preceding provisions of this regulation shall require the provision of lighting in a mine at which not more than ten persons are employed below ground and the Ministry, if an inspector so recommends, may by notice served on the manager exempt any mine at which not more than thirty persons are employed below ground from those requirements.

21.—(1) Subject to the following provisions of this regulation and to the provisions of the Coal and Other Mines (Electricity) Regulations (Northern Ireland) 1970(**d**), electric lights supplied with electricity from a source of electric power external to the lighting unit are hereby authorised to be used at the following places in mines in which the use of lamps or lights, other than permitted lights, is unlawful (either throughout or in any part) that is to say—

(*a*) in any length of road ventilated by air none of which has ventilated a working face except within one hundred and fifty feet of a working face accessible from that length of road;

(*b*) in any length of any other road except within nine hundred feet of a working face accessible from that length of road;

(*c*) where electric power is used at a working face, in any length of road which is an intake airway as regards that face except within thirty feet of a face and in any other length of road used in connection with that face except within three hundred feet of that face;

(*d*) if authorised by a notice served by the Ministry on the manager, in any length of road described in the notice except within thirty feet of a working face;

and accordingly such electric lights so used are permitted lights in those mines.

(2) Where electric lights are installed at any place by virtue of sub-paragraph (*c*) of the last preceding paragraph, the manager shall forthwith give notice thereof to the Ministry.

(3) Electricity at a voltage exceeding two hundred and fifty shall not be applied to any such lights and if the system is polyphase the neutral point shall be connected to earth or if it is not polyphase the mid-voltage point shall be connected to earth:

Provided that the provisions of this paragraph shall not apply to any system of electric lighting by direct current installed in a seam in a mine before the commencement of the Act.

(4) It shall be the duty of the manager to ensure that appropriate precautions are taken to prevent damage to any such electric lighting system from shot firing and that every lamp fitting is so constructed as to prevent the lamp from accidental damage.

(5) In any part of a mine in which inflammable gas, although not normally present, is likely to occur in a quantity sufficient to indicate danger, no electrical apparatus, other than apparatus of a type approved by the Ministry, shall be used as part of such a system in any length of road within nine hundred feet of a working face accessible from that road.

22.—(1) Subject to the following provisions of this regulation and to the provisions of the Coal and Other Mines (Electricity) Regulations (Northern Ireland) 1970, an electric lighting unit operated by a generator enclosed in the unit and driven by compressed air, being a unit of a type approved by the Ministry, is hereby authorised to be used in mines in which the use of lamps or lights, other than permitted lights, is unlawful (either throughout or in any part), and accordingly such a unit is a permitted light in those mines.

(2) No person shall below ground in any such mine turn on the air pressure in such a unit unless the unit is fully assembled and closed, or open any such unit unless the air pressure has been turned off.

(**d**) S.R. & O. (N.I.) 1970, No. 130.

(3) No person shall attempt to use below ground in such a mine any such unit any part of which is defective.

(4) No person other than a person appointed in writing by the manager so to do shall dismantle, repair, alter or adjust any such unit below ground in such a mine.

(5) It shall be the duty of the manager to ensure that at intervals not exceeding three months every such unit is cleaned, thoroughly overhauled and tested in a workshop appointed by the manager for that purpose. The person by whom such a test is made shall forthwith make a full and accurate report thereon in a book provided for that purpose by the owner of the mine.

23.—(1) Electric lights which are fittings of or accessories to any machinery or electrical apparatus (including signalling apparatus) and which are of a type approved by the Ministry are hereby authorised to be used in mines in which the use of lamps or lights, other than permitted lights, is unlawful (either throughout or in any part), and accordingly such lights are permitted lights in those mines.

(2) It shall be the duty of the manager to ensure that any such lights are maintained and tested in the manner (if any) specified in the relevant approval.

PART V

MISCELLANEOUS PROVISIONS

Lamps at places with general lighting

24. There shall be provided for every person who works at a place below ground in any mine, being a place at which there is general lighting, a portable lamp for use in emergency and every such person shall have that lamp with him whenever he is at such a place.

25. There shall be provided at every place below ground lighted by electric lights the failure of which would be likely to cause danger a safety-lamp or other proper light which shall be kept alight at all such times.

Places which are to be whitened

26. The manager of every mine shall make and ensure the efficient carrying out of arrangements to secure that the roof and sides of the following places below ground in that mine are kept whitened, that is to say—

(*a*) such entrances to every shaft or outlet and such sidings provided in relation thereto as are regularly used;

(*b*) the top and bottom of every incline on which vehicles are moved by gravity operated rope haulage apparatus, other than apparatus which is advanced with the working of a face;

(*c*) every siding, landing, passbye, junction and off-take, every place at which vehicles are regularly coupled or uncoupled or regularly attached to or detached from a haulage rope and every place at which vehicles are regularly filled mechanically except in so far as any such place is within three hundred feet of a working face in connection with which that place is used;

(*d*) every room or place made to house and containing any engine, motor, electrical transformer or switchgear:

Provided that the Ministry, if an inspector so recommends, may by notice served on the manager exempt any place from the requirements of this regulation.

Sealed with the Official Seal of the Ministry of Commerce for Northern Ireland this 1st day of June 1970 in the presence of

(L.S.)

J. H. Armstrong,
Assistant Secretary.

EXPLANATORY NOTE

(This note is not part of the regulations but is intended to indicate their general purport.)

These regulations deal with the provision, maintenance and use of safety-lamps and firedamp detectors and with the re-lighting of safety-lamps below ground in mines of coal, stratified ironstone, shale and fireclay. They also make provision for general lighting at such mines and specify types of lights which shall be regarded as permitted lights in places where safety requires the type of lighting used to be subject to control.