1970. No. 139 [C]

COAL AND OTHER MINES

Mechanics and Electricians

REGULATIONS, DATED 1ST JUNE 1970, MADE BY THE MINISTRY OF COMMERCE UNDER SECTIONS 13(2) AND 120 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) and 120 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 (Mechanics and Electricians) Regulations (Northern Ireland) 1970.

Interpretation

2.—(1) In these regulations, unless the context otherwise requires, 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);

"electrical apparatus" includes electric cables and any part of any machinery, apparatus or appliance, being a part designed for the generation, conversion, storage, transmission or utilisation of electricity, but excludes any electric cable, machinery, apparatus or appliance or part thereof which is not used and is not intended to be used as, and does not form and is not intended to form, part of the equipment of a mine;

"electrical engineering staff" has the meaning assigned thereto in regulation 5;

"flexible cable" means an electric cable which is designed to be movable while in use;

"incendive sparking" means, in relation to any electrical apparatus, sparking in such circumstances that inflammable gas present in the air outside the apparatus might be ignited directly or indirectly;

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

"mechanical apparatus" includes any machinery, apparatus or appliance used in connection with the generation, conversion, storage, transmission or utilisation of mechanical energy and ropes, chains, permanent haulage track and rolling stock, but excludes any machinery, apparatus or appliance or part thereof which for the purposes of these regulations is electrical apparatus and anything which is not used and is not intended to be used as, and does not form and is not intended to form, part of the equipment of a mine;

"mechanical energy" means energy derived from steam, water or other fluid, wind, compressed air or gas, electricity, combustion of fuel or any other source;

"mechanical engineering staff" has the meaning assigned thereto in regulation 4;

"mine" has the meaning assigned thereto in regulation 3;

"the Ministry" means the Ministry of Commerce;

"person having supervisory duties" means, in the case of mechanical engineering staff, the mechanical engineer or the mechanic in charge, or a supervisory mechanic and, in the case of electrical engineering staff, the electrical engineer or the electrician in charge, or a supervisory electrician;

"portable apparatus" includes electrical apparatus that is designed to be moved while working;

"prime mover" means an engine or motor which provides mechanical energy;

"supervisory mechanic" has the meaning assigned thereto in regulation 4;

"supervisory electrician" has the meaning assigned thereto in regulation 5.

(2) For the purposes of ascertaining the number of prime movers or electric motors at any mine and of any provision of these regulations requiring systematic examination and testing of any mechanical or electrical apparatus, no account shall be taken of any mechanical or electrical apparatus which is surplus to ordinary requirements and which has not been issued for use or installed as a standby or which, if so issued, has been withdrawn from use for repair or otherwise and has not been re-issued.

(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.

Application

3. Except where the application thereof is further expressly limited, these regulations shall apply to every mine of coal, stratified ironstone, shale or fireclay, and in these regulations "mine" means (except where further expressly limited) such a mine.

PART II

APPOINTMENT OF MECHANICAL ENGINEERING STAFF AND ELECTRICAL ENGINEERING STAFF

Mechanical engineering staff

4.—(1) For every mine there shall be appointed by the manager a competent person to be the mechanical engineer or the mechanic in charge; as many competent persons as may be required to supervise the proper installa-

tion, examination, testing and maintenance of all mechanical apparatus at the mine in accordance with the following provisions (in these regulations referred to as "supervisory mechanics"); and as many competent persons to be craftsmen mechanics as may be required to effect such proper installation, examination, testing and maintenance as aforesaid. In relation to a mine, the mechanical engineer or mechanic in charge, the supervisory mechanics and the craftsmen mechanics are hereinafter referred to as "the mechanical engineering staff".

(2) In the case of any mine at which the total number of prime movers exceeds seventy-five the manager shall ensure that, at any time when the mechanical engineer or mechanic in charge is not on duty, a supervisory mechanic is in charge at the mine whenever any prime mover is being used in the mine for any purpose specified in an instruction in writing given by the manager to the mechanical engineer or mechanic in charge and for the time being in force.

Electrical engineering staff

5.—(1) For every mine at which electricity is used there shall be appointed by the manager a competent person to be the electrical engineer or the electrician in charge; as many competent persons as may be required to supervise the proper installation, examination, testing and maintenance of all electrical apparatus at the mine in accordance with the following provisions (in these regulations referred to as "supervisory electricians"); and as many competent persons to be craftsmen electricians as may be required to effect such proper installation, examination, testing and maintenance as aforesaid. In relation to a mine, the electrical engineer or electrician in charge, the supervisory electricians and the craftsmen electricians are hereinafter referred to as "the electrical engineering staff".

(2) In the case of any mine at which the total number of electric motors exceeds seventy-five the manager shall ensure that at any time when the electrical engineer or electrician in charge is not on duty a supervisory electrician is in charge at the mine whenever any electric motor is being used in the mine for any purpose specified in an instruction in writing given by the manager to the electrical engineer or electrician in charge and for the time being in force.

Supplementary provisions as to supervisory mechanics and electricians

6.—(1) A copy of any instruction given in pursuance of paragraph (2) of either of the two last preceding regulations and for the time being in force shall be kept at the office at the mine or at such other place as may be approved by the Ministry and if the Ministry at any time so requests the manager shall send to it a copy of any such instruction.

(2) If in a case to which paragraph (2) of either of the two last preceding regulations applies an inspector reports to the Ministry that he is of opinion that at any time when the mechanical engineer or mechanic in charge is not on duty a supervisory mechanic, or at any time when the electrical engineer or electrician in charge is not on duty a supervisory electrician, as the case may be, ought to be in charge at the mine whenever a prime mover or electric motor is being used in the mine for a purpose not specified under that paragraph, the Ministry may serve on the manager a notice requiring him to give an instruction accordingly.

(3) The provisions of Part XIII of the Act with respect to references upon notices served by the Ministry shall apply to a notice served under the last preceding paragraph, and the relevant ground of objection to such a notice shall be that it is not necessary for a supervisory mechanic or a supervisory electrician, as the case may be, to be in charge at the mine whenever a prime mover or electric motor is being used in the mine for the purpose specified in the notice in order to secure the proper supervision of mechanical or electrical apparatus thereat.

7. Nothing in regulation 4 or 5 shall prevent a competent person being a member both of the mechanical engineering staff and of the electrical engineering staff, or prevent a person having supervisory duties from himself affecting any work of installation, examination, testing or maintenance of mechanical or electrical apparatus, as the case may be, without supervision by another.

PART III

DUTIES OF MECHANICAL ENGINEERING STAFF, ELECTRICAL ENGINEERING STAFF AND OTHER PERSONS CONCERNED WITH MECHANICAL OR ELECTRICAL APPARATUS

8. It shall be the duty of the mechanical engineer or mechanic in charge in respect of mechanical apparatus, and of the electrical engineer or electrician in charge in respect of electrical apparatus, to ensure that the mechanical engineering staff or the electrical engineering staff, as the case may be, supervise or effect—

(*a*) the installation of all such apparatus at the mine;

(*b*) the examination and testing of all such apparatus before it is put into use after installation, re-installation or repair;

(*c*) the maintenance in safe working condition and in accordance with all requirements imposed by or under the Act of all such apparatus at the mine; and

(*d*) the systematic examination and testing of all such apparatus at the mine in accordance with the scheme therefor for the time being in operation.

Schemes of maintenance

9.—(1) It shall be the duty of the manager of every mine to ensure that there shall be at all times in force a scheme in respect of all mechanical apparatus at the mine other than simple mechanical supports, and, if electricity is used thereat, a scheme in respect of all electrical apparatus thereat, being a scheme providing for the systematic examination and testing of all mechanical apparatus or electrical apparatus, as the case may be, at the mine to ensure proper maintenance thereof.

(2) Any such scheme shall specify the intervals (which may be different for different apparatus and parts of apparatus) within which all mechanical or electrical apparatus, as the case may be, must be examined and tested and the nature of the examination and testing to be carried out on each occasion, and the manner in which the results of every examination and test made pursuant to such a scheme are to be recorded.

(3) The scheme for each mine or copies thereof shall be kept at the office at the mine or at such other place as may be approved by the Ministry.

(4) If an inspector reports to the Ministry that he is of opinion that amendment of a scheme is necessary to ensure the proper maintenance of any mechanical or electrical apparatus at the mine or to secure the keeping of proper records thereof, the Ministry may serve on the manager a notice requiring him to remedy the defect.

(5) The provisions of Part XIII of the Act with respect to references upon notices served by the Ministry shall apply to a notice served under the last preceding paragraph and the relevant ground of objection to such a notice shall be that the scheme already ensures the proper maintenance of all mechanical or electrical apparatus at that mine, or the keeping of proper records thereof, as the case may be.

(6) Every record of any test or examination made pursuant to any such scheme, or a copy of such record, shall, until the expiration of three years after such test or examination, be kept at the office at the mine or at such other place as may be approved by the Ministry and be open to inspection by, or by a person authorised in that behalf in writing by, any person employed at the mine.

(7) In this regulation "simple mechanical supports" means hydraulic props or friction props for the support of the roof or side of any place in the mine not being supports which are advanced and set to the roof by mechanical energy, and "prop" includes chock.

10.—(1) Persons, other than the mechanical engineering staff and the electrical engineering staff, may be instructed in writing by the manager of the mine to carry out such duties relating to—

(*a*) the installation, examination, testing or maintenance of mechanical or electrical apparatus; or

(*b*) the operation of any machinery or electrical apparatus;

as may be specified in the instruction being duties for which they are competent.

(2) No person shall be instructed under paragraph (1)(*a*) of this regulation to carry out any duty for which technical knowledge and experience are necessary to avoid danger except under such degree of supervision by one of the mechanical engineering staff or electrical engineering staff, being a person having supervisory duties, as may be appropriate having regard to the nature of the work and the knowledge and experience of the person concerned.

(3) No person shall commence or do any work upon any conductor, or in proximity to an exposed conductor, being in either case a conductor in a circuit in which the voltage exceeds twenty-five, unless one of the electrical engineering staff has ensured that the conductor has been made dead and has taken any necessary steps by earthing or otherwise to ensure that it will remain dead whilst the work in question is being carried out:

Provided that the provisions of this paragraph shall not apply to—

(*a*) the cleaning of a commutator or slip-rings, if the electrical engineer or electrician in charge has taken any necessary steps to ensure that the voltage between no two brushes of the apparatus being cleaned will exceed six hundred and fifty whilst the cleaning is in progress;

(*b*) work on, or in proximity to, telephone and signalling apparatus or a conductor in or connected to apparatus which is such that, by reason of the inherent nature of the apparatus, it is impracticable for the conductor to be made dead whilst the work in question is being carried out;

(*c*) the use of any electrical instrument, other than a test lamp, for testing a circuit on the surface of the mine where the test is being made in a workshop or on a circuit which forms part of an electric winding apparatus;

(*d*) the use of any electrical instrument for testing insulation resistance or conductance;

(*e*) the removal or insertion of lamps in a lighting circuit.

(4) No person shall remove or insert a lamp in a lighting circuit unless the lamp-holder has been made dead—

(*a*) by one of the electrical engineering staff; or

(*b*) if the lamp-holder is neither at a place within nine hundred feet of a working face accessible from that place, nor at a place hazardous by reason of the presence or possibility of inflammable gas, by one of the electrical engineering staff or by a person instructed under paragraph (1) of this regulation whose duties include the making dead of electric lighting circuits in the mine.

11.—(1) No person whose duties include the operation of any portable electrical apparatus supplied with electricity by means of a flexible trailing cable shall at any time either leave that apparatus while it is working or leave the working place (except for the purpose of cutting off the supply of electricity to the cable) without ensuring that the cable has been made dead, unless his instructions expressly authorise him to do so.

(2) A person whose duties include the operation during his shift of any electrical apparatus supplied with electricity by means of a flexible trailing cable shall ensure, before using that cable during that shift, that so much of it as is accessible is examined, and subsequently ensure that any further parts which become accessible are examined and shall not use any cable which is thus found to be damaged or defective.

12.—(1) Without prejudice to the generality of section 80 of the Act a member of the mechanical engineering staff, in respect of mechanical apparatus, a member of the electrical engineering staff, in respect of electrical apparatus, or a person instructed under regulation 10 shall stop forthwith the use of any such apparatus which it appears to him in the course of his duties may be in a dangerous condition by reason of some mechanical or electrical defect or abnormality, and cut off the supply of mechanical energy thereto or make dead the circuit or part of a circuit in which it is connected, as the case may be, and take any other necessary action to avoid danger. Unless in the case of a person instructed under regulation 10 his duties include the repair of the defect and he has repaired it, that apparatus shall not be used again at the mine until one of the mechanical engineering staff or the electrical engineering staff, as the case may require, is satisfied that it is safe to do so.

(2) Without prejudice to the generality thereof the provisions of the last preceding paragraph shall apply in any case in which incendive sparking occurs in any electrical apparatus below ground in any part of a mine in which inflammable gas, although not normally present, is likely to occur in quantities sufficient to indicate danger.

(3) Without prejudice to the generality of section 80 of the Act a member of the mechanical engineering staff, in respect of mechanical apparatus, a member of the electrical engineering staff, in respect of electrical apparatus, or a person instructed under regulation 10 shall report forthwith to an official of the mine anything which it appears to him in the course of his duties may affect the safe use of any such apparatus, and which it is not part of his duties to prevent or remedy.

13.—(1) Every member of the mechanical engineering staff being a person having supervisory duties and every member of the electrical engineering staff being such a person shall record in books provided by the owner of the mine—

(*a*) any action taken by him or under his supervision in pursuance of regulation 12;

(*b*) a report of any defect revealed by any examination or test of any mechanical or electrical apparatus made pursuant to regulation 8, being an examination or test carried out or supervised by him or reported to him, and of the action taken to remedy such defect;

(*c*) any other information for which provision is made in such a book.

(2) Without prejudice to the generality of regulation 12, every craftsman mechanic and every craftsman electrician, and every person instructed under regulation 10 shall forthwith report any defect revealed by any examination or test carried out by him, in the case of mechanical apparatus to a member of the mechanical engineering staff being a person having supervisory duties, and in the case of electrical apparatus to a member of the electrical engineering staff being such a person.

PART IV

QUALIFICATIONS OF PERSONS HAVING SUPERVISORY DUTIES

Mechanical engineers or mechanics in charge, and electrical engineers or electricians in charge

14.—(1) No person shall be qualified to be appointed or to be the mechanical engineer or mechanic in charge or the electrical engineer or electrician in charge for a mine of coal, shale or fireclay, being a mine at which—

(i) the total number of prime movers is not less than seventy-five; or

(ii) there is for the time being in force a direction given by the Ministry by notice served on the manager of the mine, being a direction given on the ground that the nature of the mechanical apparatus or the electrical apparatus or both, as the case may be, at the mine or the conditions in which that apparatus is used thereat increase the risk of danger, that this paragraph shall apply to the mine unless—

(*a*) he is at least twenty-five years of age, and is the holder, as the case may be, of a mechanical engineer's certificate or electrical engineer's certificate, being a certificate valid with respect to that mine; or

(*b*) he is the holder of a service certificate as defined in regulation 19.

(2) No person shall be qualified to be appointed or to be the mechanical engineer or mechanic in charge or the electrical engineer or electrician in charge for a mine of coal, shale or fireclay to which the preceding paragraph does not apply, unless—

(*a*) he is at least twenty-three years of age and is the holder, as the case may be, of a mechanical engineer's certificate or electrical engineer's certificate or a mechanic's certificate class I or electrician's certificate class I, being in any case a certificate valid with respect to that mine; or

(*b*) he is the holder of a service certificate as defined in regulation 19; or

(*c*) he is holding such office at the time of coming into operation of this regulation.

(3) No person shall be qualified to be appointed or to be the mechanical engineer or mechanic in charge or the electrical engineer or electrician in charge for a mine of stratified ironstone unless—

(*a*) he is at least twenty-three years of age, and is the holder, as the case may be, of—

(i) a mechanical engineer's certificate or electrical engineer's certificate being a certificate valid with respect to all mines or any class of mine; or

(ii) a mechanic's certificate class I or electrician's certificate class I, being a certificate valid with respect to mines of coal, shale or fireclay; or

(*b*) he is qualified in accordance with paragraph (1)(*b*) of this regulation to hold a corresponding appointment at a mine of coal, shale or fireclay; or

(*c*) he is otherwise qualified in Great Britain to hold a corresponding appointment at a mine of coal, shale or fireclay; or

(*d*) he is the holder of a service certificate as defined in regulation 19.

Supervisory mechanics and supervisory electricians

15.—(1) No person shall be qualified to be appointed or to be a supervisory mechanic for a mine of coal, shale or fireclay unless—

(*a*) he is the holder of a mechanical engineer's certificate or a mechanic's certificate, being a certificate valid with respect to that mine; or

(*b*) he is the holder of—

(i) a service certificate as defined in regulation 19; and

(ii) a certificate as to his knowledge of the elementary principles of mechanical engineering granted by the Ministry on the recommendation of the Mining Qualifications Board constituted under section 148 of the Mines and Quarries Act 1954(**c**) or granted by the Ministry without reference to the said Board where the Ministry is satisfied that he is the holder of such a certificate granted under the said Act or regulations made thereunder or any enactment or regulations made thereunder repealed by that Act; or

(*c*) he is holding such office at the time of coming into operation of this regulation.

(2) No person shall be qualified to be appointed or to be a supervisory electrician for a mine of coal, shale or fireclay unless—

(*a*) he is the holder of an electrical engineer's certificate or an electrician's certificate, being a certificate valid with respect to that mine; or

(*b*) he is the holder of a service certificate as defined in regulation 19; or

(*c*) he is holding such office at the time of coming into operation of this regulation.

Supervisory mechanics and supervisory electricians to be in charge

16. No supervisory mechanic for a mine of coal, shale or fireclay or supervisory electrician for a mine of coal, shale or fireclay shall be qualified to be in charge at such a mine, being a mine at which—

(*i*) the total number of prime movers is not less than seventy-five; or

---

(**c**) 2 & 3 Eliz. 2. c. 70.

(ii) there is for the time being in force a direction given by the Ministry by notice served on the manager of the mine, being a direction given on the ground that the nature of the mechanical apparatus or the electrical apparatus or both, as the case may be, at the mine or the conditions in which the apparatus is used thereat increase the risk of danger, that this paragraph shall apply to the mine

when the mechanical engineer or mechanic in charge, or the electrical engineer or electrician in charge, as the case may be, is not on duty unless—

(*a*) he is at least twenty-three years of age and is the holder of such a certificate as is described in sub-paragraphs (*a*) and (*b*) of regulation 14(2) being a certificate prescribed by those sub-paragraphs as a qualification for appointment as the mechanical engineer or mechanic in charge or the electrical engineer or electrician in charge, as the case may be, for a mine to which that paragraph relates; or

(*b*) he is the holder of a service certificate as defined in regulation 19.

Exceptions and exemptions

17.—(1) Nothing in regulations 14 and 15 shall apply to a person having supervisory duties at a mine—

(*a*) at which the total number of prime movers or electric motors does not exceed ten and in which no prime mover capable of developing more than ten horse-power or, as the case may be, electric motor is used at or within thirty feet of a working face; or

(*b*) at which not more than fourteen persons are employed below ground,

unless there is for the time being in force a direction given by the Ministry by notice served on the manager of the mine, being a direction given on the ground that the nature of the mechanical apparatus or the electrical apparatus or both, as the case may be, at the mine or the conditions in which that apparatus is used thereat increase the risk of danger, that such persons having supervisory duties as may be specified in such notice should be qualified to hold a corresponding appointment in a mine of the same class to which neither sub-paragraph (*a*) nor sub-paragraph (*b*) of this paragraph applies:

Provided however that any person holding any of the offices specified under regulations 14(2), 15(1) or 15(2) at the time of coming into operation of these regulations at a mine to which this regulation applies shall nevertheless be qualified to continue to hold such office after the coming into operation of these regulations notwithstanding that the number of persons so employed subsequently exceeds fourteen.

(2) The Ministry may by notice served on the manager of any mine exempt it from the application of any provision contained in the three last preceding regulations.

18. Without prejudice to the generality of section 88 of the Act, it shall be the duty of the manager of every mine of stratified ironstone to secure that no person who has not been employed in work below ground in any mine to which the Act applies is employed in the mechanical engineering staff or electrical engineering staff in the first-mentioned mine in work below ground unless for at least the first twenty working days of his employment below ground he is throughout every period during which he is so employed accompanied by a deputy, an official of the mine superior to the deputies, or one of the mechanical engineering staff or electrical engineering staff, being a person appointed for the purpose by the manager in pursuance of section 13 of the Act who is competent to give instruction in safe methods of working and travelling below ground in a mine.

19. In this Part of these regulations—

"mechanical engineer's certificate", "mechanic's certificate", "electrical engineer's certificate" and "electrician's certificate" mean certificates so entitled granted by the Ministry on the recommendation of the Mining Qualifications Board constituted under section 148 of the Mines and Quarries Act 1954 or granted by the Ministry without reference to the said Board where the Ministry is satisfied that the candidate therefor is the holder of such a certificate granted under the said Act or regulations made thereunder or any enactment or regulations made thereunder repealed by that Act, which certificate shall be expressed to be valid with respect to all mines or to mines of a specified class or description and, unless the context otherwise requires, "mechanic's certificate" and "electrician's certificate" include such certificates class I or class II;

"service certificate" means a certificate valid under the Mines and Quarries Act 1954 and regulations made thereunder and entitling the holder to be appointed under the said Act and regulations to an equivalent office in Great Britain.

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 apply to mines of coal, stratified ironstone, shale and fireclay and relate to the appointment, duties and qualifications of mechanics and electricians at such mines.

The regulations require establishment of schemes for systematic maintenance and testing of mechanical and electrical apparatus and lay down principles for safe conduct of operations in relation to such apparatus.