

1974 No. 1853

**MINES AND QUARRIES**
**The Coal and Other Mines (Electricity) (Second Amendment)  
Regulations 1974**

<i>Made - - - -</i>	<i>7th November 1974</i>
<i>Laid before Parliament</i>	<i>18th November 1974</i>
<i>Coming into Operation</i>	<i>1st January 1975</i>

Whereas in pursuance of Part II of Schedule 2 to the Mines and Quarries Act 1954(a) the Secretary of State has published notice of his intention to make the following regulations and has not received any objection to the draft thereof in respect to which he is required to refer the draft regulations for inquiry and report:

Now, therefore, the Secretary of State in exercise of the powers conferred by sections 68(1), 141 and 143(1)(a) of the Mines and Quarries Act 1954 now vested in him(b) and by section 50(1) of the Health and Safety at Work etc. Act 1974 (c) and of all other powers in that behalf enabling him, and after consultation with the Health and Safety Commission and such other bodies as appeared to him to be appropriate, hereby makes the following regulations:—

1. These regulations may be cited as the Coal and Other Mines (Electricity) (Second Amendment) Regulations 1974 and shall come into operation on 1st January 1975.

2. The Interpretation Act 1889(d) shall apply to the interpretation of these regulations as it applies to the interpretation of an Act of Parliament.

3. The Coal and Other Mines (Electricity) Regulations 1956(e), as amended(f), shall have effect as varied by these regulations.

4. In paragraphs (1) and (2) of regulation 6, for the words “any apparatus for detecting or measuring inflammable gas including ancillary apparatus operated by such apparatus”, there shall be substituted the words “any apparatus installed or used for the purpose of, or in connection with, the detection or measurement of inflammable gas”.

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(a) 1954 c. 70.

(b) S.I. 1969/1498, 1970/1537, (1969 III, p. 4797; 1970 III, p. 5293).

(c) 1974 c. 37.

(d) 1889 c. 63.

(e) S.I. 1956/1766 (1956 I, p. 1314).

(f) S.I. 1967/1083 (1967 II, p. 3220).

5. For regulation 7 there shall be substituted the following regulation—

“7.—(1) Electricity at a voltage exceeding 1200 shall not be applied to—

- (a) any portable apparatus; or
- (b) any electric motor rated at less than 15 kilowatts.

(2) Electricity at a voltage exceeding 650 shall not be applied to the rotating parts of any apparatus other than an electric motor provided with a guard or cover designed and constructed to—

- (a) prevent any person accidentally coming into contact with the rotating parts of the motor; and
- (b) ensure that when it is removed or opened to permit access to the rotating parts the supply of electricity is automatically cut off or reduced to a voltage not exceeding 650.

(3) Electricity at a voltage exceeding 125 direct current or 73 to earth alternating current shall not be applied to any hand-held tool.

(4) Electricity at a voltage exceeding 125 direct current or 25 to earth alternating current shall not be applied to any portable hand lamp.”

6. For the proviso in regulation 12(2), there shall be substituted the following proviso—

“Provided that—

(a) in the case of a system with a polyphase supply of electricity the neutral point thereof may be connected to earth at one place at the surface of the mine or, where the system is supplied with electricity from a transformer provided with means to ensure that in the event of danger arising from a breakdown of insulation between the primary and secondary windings the supply of electricity is automatically cut off from the primary winding, one or more neutral points of the system may be connected to earth at one place at the surface of the mine;

(b) in the case of a system with single phase or direct current supply of electricity, other than a system in which one pole of the supply of electricity is connected to earth, the mid-voltage point may be connected to earth at one place at the surface of the mine; and

(c) in the case of a system with a single phase supply of electricity supplied from the secondary winding of a transformer, other than a system in which the mid-voltage point is connected to earth, being a system used solely for the supply of electricity for any one or more of the following—

- (i) the electrical control (which may include the means for automatic, remote and local control) of switchgear;
- (ii) the electrical interlock of switchgear controls; and
- (iii) indicating instruments and other accessories of switchgear including any fixed lights associated therewith,

one pole of that secondary winding may be connected at one place to earth at the surface of the mine.”

7. After regulation 12(3), the following paragraph shall be added—

- “(4)(a) Every electrical system in which more than one neutral point is connected to earth at the surface of the mine or in which electricity at a voltage exceeding 650 but not exceeding 1200 is used, shall be so designed and constructed that any leakage current to earth cannot exceed 2 amperes;
- (b) every electrical system to which the preceding sub-paragraph does not apply, being a system with a polyphase supply of electricity, whereby electricity is supplied at a voltage exceeding 250 but not exceeding 650 to any electrical apparatus installed in a part of a mine below ground in which inflammable gas although not normally present is likely to occur in a quantity sufficient to indicate danger, shall be so designed and constructed that any leakage current to earth cannot exceed 16 amperes; and
- (c) every circuit forming part of an electrical system to which sub-paragraph (a) or (b) of this paragraph applies shall be provided with means to ensure that, in the event of any leakage current to earth from the circuit exceeding 0.67 amperes, or, 5 amperes, respectively, the supply of electricity to that circuit is automatically cut off.”

8. In regulation 13—

- (a) the proviso to paragraph (1) shall be omitted;
- (b) for paragraph (5), there shall be substituted the following paragraph—  
“(5) Any thing below ground in a mine that these regulations require to be connected to earth and when connected to earth any neutral point, mid-voltage point or pole of any electrical system below ground in a mine shall all be connected at one and the same place to the earthing system of the mine and both that place and that earthing system shall be at the surface of the mine.”;
- (c) after paragraph (5), the following paragraph shall be added—  
“(6) Nothing in this regulation shall apply to—
- (a) any lampholder which is efficiently protected by a covering made of fire resisting material which is either insulated or earthed;
- (b) any hand-held tool which is double insulated to a standard which complies with a specification approved for the purpose of this regulation by the Secretary of State;
- (c) any portable apparatus in any circuit in which the voltage does not exceed 50 direct current or 30 to earth alternating current; or
- (d) any apparatus in any circuit in which the voltage does not exceed 250 direct current or 125 alternating current, other than portable apparatus.”

9. For regulation 21A, there shall be substituted the following regulation—

“21A. No electrical apparatus, other than apparatus of a type approved for the purpose by the Secretary of State, shall be installed or used below ground in any part of a mine for the purpose of, or in connection with, the detection or measurement of inflammable gas.”

**10. In regulation 26(1)—**

- (a) before the definition of “electrical apparatus”, there shall be inserted the following definition—  
“ ‘leakage current to earth’ does not include a current caused by the capacitive charging of a conductor;” and
- (b) before the definition of ‘incendive sparking’, there shall be inserted the following definition—  
“ ‘hand-held tool’ means any tool designed to be carried in the hands by one person while in use other than electric welding apparatus.”.

*Alexander Eadie,*  
Parliamentary Under Secretary of State  
Department of Energy.

7th November 1974.

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**EXPLANATORY NOTE**

*(This Note is not part of the Regulations.)*

These Regulations further amend the Coal and Other Mines (Electricity) Regulations 1956 and provide for—

- (a) an increase of the maximum voltage which may be applied to portable apparatus and electric motors of less than 15kW, and for a restriction of the maximum voltage which may be applied to hand-held tools and portable hand lamps; (Regulation 5);
- (b) the earthing at the surface of a mine of one or more neutral points of a polyphase system fed from transformer secondary windings where the primary windings are automatically cut off from the electricity supply on the breakdown of the insulation between the transformer primary and secondary windings; (Regulation 6);
- (c) the earthing of one pole of a system fed from a transformer single phase secondary winding and used solely for the supply of switchgear electrical control gear, electrical interlock, instruments and lights; (Regulation 6);
- (d) the restriction of earth leakage currents by design and construction; (Regulation 7);
- (e) the earthing of electrical systems all at one place and the exemption from earthing of double insulated hand-held tools and extra-low voltage portable apparatus; (Regulation 8); and,
- (f) the modification of the descriptions of apparatus relating to the detection or measurement of inflammable gas; (Regulation 4 and 9).



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