



LEGISLATION UPDATE

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EXPLANATORY NOTES TO ASSIST IN INTERPRETING COAL MINE HEALTH AND SAFETY REGULATION 2006

Provision of electrical protection on all electric circuits

Clause 19 **Electrical engineering management plan**

(1) The electrical engineering management plan for a coal operation must make provision for the following:

...

(h) the provision of electrical protection on all electric circuits, including the following:

- (i) the construction of electrical protection devices to an appropriate standard,
- (ii) the interruption of the supply of electricity to mobile or portable electrical apparatus when the continuity of the connection to earth is compromised,
- (iii) the prevention of the connection of electrical power to explosion-protected mobile or portable electrical apparatus in the event of an earth fault on a flexible cable supplying the apparatus,

...

(k) the interruption of the supply of electricity in any of the following circumstances:

...

(iv) in the event of an electrical fault,

Clarifying points:

1. The intent of this clause is to require electrical protection to automatically detect and clear as quickly as possible any electrical fault that may be a source of:

- electric shock at dangerous voltage levels,
- fire ignition,
- explosion initiation, or
- arc blast.

In general this requires earth leakage, overcurrent, instantaneous short circuit and overload protection systems as a minimum. In addition the requirements of Clause 19 (h) parts (i), (ii) and (iii) must be complied with.

2. Clause 19 (h) part (i) is not intended to apply to outgoing circuit from a welding machine. (Note: provisions of *AS 1674.2 Safety in welding and allied processes – Electrical* should be applied to reduce possibility of electric shock)
3. Clause 19 (h) part (ii) is not intended to apply to 240 volt (or less) single-phase hand-held tools that are used in a clean and dry environment.

Note: Additional electrical protection may also be necessary to prevent unplanned movement of plant.

Guidance Notes, presentations and other support documentation are available on the NSW DPI website at:

www.dpi.nsw.gov.au/minerals/safety/legislation/commencement and specific guidance is available in Technical Reference EES-005 *Electrical Protection and Earthing*.

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