

# NAFLIC

*National Association For Leisure Industry Certification*

## **Standards & Related Documents Sub-Committee**

### **TECHNICAL BULLETIN - MAY 1997**

#### **147. Bare Conductors and Terminals inside Enclosures**

Attention is drawn to the wording of Regulation 7 of the Electricity at Work Regulations 1989. This is headed "Insulation, protection and placing of conductors" and says :-

"All conductors in a system which may give rise to danger shall either -

- (a) be suitably covered with insulating material and as necessary protected so as to prevent, so far as is reasonably practicable, danger; or
- (b) have such precautions taken in respect of them (including, where appropriate, their being suitably placed) as will prevent, so far as is reasonably practicable, danger."

It is foreseeable that access may be gained to any electrical enclosure on an amusement device by persons (e.g. operators / attendants) who do not have the required level of competence. This may be in order to reset breakers or make necessary adjustments during operation, for which an operator may not always need to employ the services of an electrician.

In many electrical enclosures on amusement rides the positioning of components is such that it may not be possible to comply with (b) in Regulation 7, and suitable protection as in (a) must be provided. Designers of such enclosures should be aware of their responsibilities in this respect. We are aware that in the last year this has been an issue in a prosecution and, in a separate instance, a serious accident.

Suitable measures may include components that have fingerproof terminals (IP2X), conductors and busbars that are individually sleeved or insulated, or by the placing of insulating barriers or shields (perspex, polycarbonate, etc.). It should be noted that if a barrier is used to protect a group or number of items it should be designed in such a way that switchgear can be operated without its removal.

Committee Members :- Dr Garry Fawcett (Chairman), Mr Richard Barnes, Mr Bob Nicholls, Mr Doug Dadswell, Mr Peter Smith and representatives of Plant Safety Ltd, and Banwell & Associates Ltd

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