



NSW DEPARTMENT OF
PRIMARY INDUSTRIES

SAFETY BULLETIN

Electrical fuse safety

BACKGROUND

A number of incidents have occurred where fuses have failed, resulting in arc blast damage to electrical enclosures in a motor control centre. The latest incident involved a fuse-type 500NH3G-690 OEZ fuse. Arc blast is a known source of serious injury or death.

Fuses are used in electrical circuits to disconnect faulty circuits (short circuits) to prevent injury to people and equipment damage. They are designed to contain the arc energy within the fuse when used within their rating. They are widely used in the mining and other industries.

On 27 June 2006 an electrical fuse link supplier used the Australian Product Recalls system to recall fuses - some part numbers included NHG3-630 to NH63-315 (see www.recalls.gov.au). Since that date a second electrical fuse link supplier has been required to recall fuse links identified as 'Bussman OEZ Czech catalogue 630NH3G-690' fuse links. The failure mode of the catalogue 630NH3G-690 fuse links was "under certain overload conditions the integrity of the fuse ceramic body and metal end caps can rupture ..." (see accompanying photographs below).

RECOMMENDATIONS

All mines should review all fuses they have in service and all spare fuses at the site. If the above fuses are in use, the mine must contact the fuse supplier for advice, assess the risks and take immediate action to control the risks. Where these fuses are in use, it may be necessary to prevent access to the associated switchgear locations while ever the switchgear is energised, until suitable replacement fuses are installed.

Known suppliers of the above fuses are:

- Alstom Industrial Products Limited (fax 1300 550 187)
- Cooper Electrical Australia Pty Limited (fax 02 9725 5318)

Other suppliers may supply this type of fuse under an alternative name.



Failure 1: 630 amp 690v fuses
Cat. Bussman Czech 630 NH3G-690



Failure 2: 630 amp 690v fuses
Cat. Bussman Czech 630 NH3G-690



Failure 3: 500 amp 690v fuses
Cat. Bussman OEZ Czeck 500 NH3G-690

NOTE: Please ensure all relevant people in your organisation receive a copy of this Safety Bulletin, and are informed of its content and recommendations. This Safety Bulletin should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's notice board.

Signed

A handwritten signature in black ink, appearing to read 'Rob Regan'.

Rob Regan
DIRECTOR, MINE SAFETY OPERATIONS BRANCH
NSW DEPARTMENT OF PRIMARY INDUSTRIES

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