



S A F E T Y B U L L E T I N

ACCESS LADDERWAYS

In former days, prior to the advent of trackless mining, ladderways were often the only means of vertical access or movement for personnel and materials within the operating areas of underground mines. As a consequence, great effort and much skill and experience were devoted at well-managed mines to ensuring that ladderways were properly sited, equipped, installed and maintained to ensure that they could be efficiently, effectively and safely used for these purposes. In many operations across Australia, the ladderways were "works of art".

In many underground mines, ladderways still form a primary means of access to some working areas and/or to emergency escape routes.

The inspectorate is concerned that the high standards which were the norm in the past have deteriorated to the extent that, in more than a few cases, the use of ladderway access can constitute a major hazard for workers in the industry.

Among the problems commonly encountered by the inspectorate are:

- Ladders are not appropriately inclined and installed so as to enable easy and comfortable use of all parts of the ladderway.
- Ladders inadequately fixed within the rise.
- Long lengths of ladders without intermediate bearers or supports, causing the ladderway to sway while in use.
- Long lengths of ladders without intermediate landings or rest points.
- Inadequate entry and exit points for ladderways, requiring unacceptable "gymnastic" ability on the part of the user.
- Inadequate or unsuitable design and/or manufacture of the ladders themselves.
- Lack of regular, diligent inspection, scaling and maintenance of ladderways.
- Inappropriate routing and fixing or support of service pipes and cables in ladderways.

and most commonly -

- Lack of any properly considered, designed and installed means of safely transporting commonly used equipment and materials through the ladderway.

With reference to this last point, it is simply not acceptable for miners to be expected to carry heavy or awkward loads by hand while negotiating a ladderway. The "*three points of contact*" rule was developed for very good reasons and cannot be flouted without introducing an unacceptable element of risk. Where material or equipment must be transported via a ladderway, appropriate means must be provided and its use must be enforced.

The employer's general duty under s.9 of the Mines Safety and Inspection Act 1994 to (so far as is practicable) *provide and maintain a working environment in which its employees are not exposed to hazards* is drawn to the attention of all employers and managers in the mining industry, as is the more specific duty to *provide and maintain appropriate systems* of work.

As an example of the consequences which may flow from inadequate installation, maintenance and systems of use of ladderways, (besides the sanctions available under the Act following a criminal conviction), employers and managers might care to review the following recent case from the District Court of Western Australia:

A miner was directed by his employer to carry out drilling work. No means of transporting the drilling machine were provided. In order to get to his work site and commence work, he had to climb a ladder carrying a drill (weighing 17kg) in one hand while holding on to the ladder with the other. As he climbed from rung to rung, he transferred this hand to a new position with each step. When he had climbed to a height of about nine metres, he missed a rung and fell to the bottom of the ladder. He suffered compound fractures of the lower leg and ankle. He subsequently sued his employer for negligence and was able to show during the court hearing that a number of safer ways of lifting equipment to such a work site were used in other mines.

The court held that the employer had been negligent and should have known that employees carried equipment up ladders; that the risks of climbing in the dark with only one free hand were obvious; that there was an added hazard involved in carrying a piece of heavy cumbersome equipment; and that there was no evidence that the employer had applied its mind to the provision (let alone the enforcement) of a safe system of work.

The court awarded the miner damages of \$402, 851.

Few employers would wish to find themselves in such a position, but many may do so unless they provide and maintain systems of work which meet the required standard in association with the use of ladderways in their mines.

This is not the first occasion on which the inspectorate has found it necessary to draw the attention of the industry to inadequate or unsuitable practices with respect to ladderways. Employers and managers are referred to ***Safety Bulletin No. 3 - Vertical Opening Safety Practice***, dated 23 April 1990 and to ***MineSafe Volume 6, No. 1***, dated March 1995 (pp. 1-2).

J M Torlach
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