

SAFETY ALERT



OXY-ACETYLENE CUTTING INCIDENTS

INCIDENT

During the past few months there has been an increasing number of incidents involving the use of oxy-acetylene equipment, resulting in serious injury and damage to equipment.

CIRCUMSTANCES

A number of incidents have occurred when operators using oxy-acetylene equipment sustained serious burns from defective equipment. At one mine defective oxy-acetylene equipment being used underground allowed acetylene gas to leak into a semi-enclosed space on the body of a machine. When a lit oxy-acetylene torch was brought into contact with the machine body the acetylene gas ignited and an explosion occurred.

INVESTIGATION

Department of Mineral Resources officers investigated all these incidences to look for common elements. Most incidents involved the use of contractors operating defective equipment. Some incidents involved contractors using bad work practices, by:

- Not adequately protecting the equipment from the hot metal dross or sparks. This resulted in the acetylene hose catching fire.
- Not inspecting the equipment for defects, which could render the equipment unsafe to use. This resulted in the operator receiving burns to his arms and chest.
- Not inspecting the equipment for gas leaks. This resulted in the operator receiving burns to his hands.
- Using the cutting gases to clean down the work area by blowing away dust and/or dirt etc. This resulted in an explosion of acetylene gas with no injury.
- Not ventilating semi-enclosed spaces where combustible gases could build up.
- The use of incorrect safety apparel, for example nylon glove inserts, nylon vests etc.
- Not isolating gas cylinders and depressurising hoses when the equipment is not in use.

RECOMMENDATION(S)

1. Review your Contractor Management Plan to include, but not be limited to, an onsite operator assessment for the task to be performed, the equipment to be used and the equipment inspections required.
2. Review your inspection system for oxy-acetylene or oxy-propane equipment to include but not to be limited to a regular inspection by a recognised service provider. (Refer AS4839)
3. Create a register of the inspected cutting and welding equipment for auditing and traceability purposes.
4. Identify inspected equipment with a durable tag or tags to indicate the equipment has had an equipment fit for purpose inspection. For example the tagging system for electrical equipment or the tagging system for fire extinguishers.

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5. Raise the awareness levels of operators. This should include but not be limited to, bad work practices (that is, using the cutting gases to clean down the work area, basic hazard identification for the work task) through the aid of tool box talks and operator training and retraining.
6. Suggested reference material: MDG 25, MGD 25 Technical Reference, AS1674.1, AS4839 and other relevant Australian Standards.

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

R Regan
ASSISTANT DIRECTOR SAFETY OPERATIONS