NSW GOVERNMENT

NSW Resources Regulator

# SAFETY ALERT

**DATE: 17 June 2022**

# Worker burnt during hot work

This safety alert provides safety advice for the NSW mining industry.

## Issue

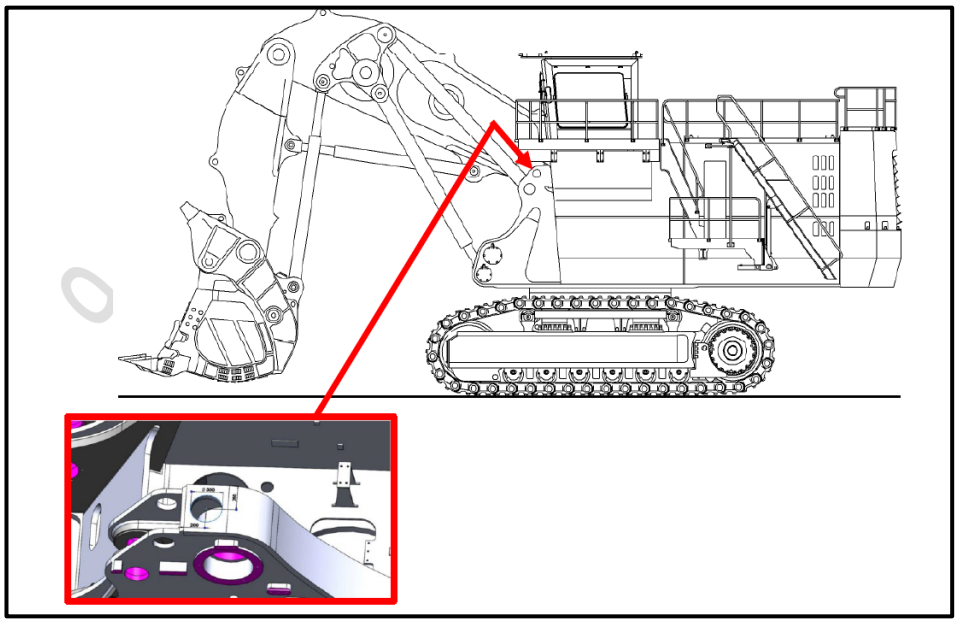
A boilermaker suffered burns to the right-hand side of their face as a consequence of the ignition of an unidentified flammable substance.

## Circumstances

On Tuesday 7 June 2022, a boilermaker was preparing to replace a 30 mm diameter plug in the top of the LHS boom pivot pin housing/boss on a Caterpillar 6050 face shovel.

While striking an arc on a test piece adjacent to the access hole cut into the superstructure void, a flammable substance ignited, burning the boilermaker's face.

*Figure 1: Hot work location*



# Investigation

The NSW Resources Regulator has conducted a site assessment to obtain information about the event. An initial assessment has identified that the superstructure void, that the repair was being conducted in, had not been adequately ventilated or purged to remove ignition sources throughout the repair.

Work leading up to the incident included LPG/oxy cutting, air arc gouging, surface cleaning using degreaser, contact cleaner aerosols, preheating with LPG gas heater, and rotary burr grinding in the superstructure void.

In preparation for welding the plug, the boilermaker was undertaking a test weld on a metal plate outside of the superstructure when the flame event happened.

*Figure 2: Superstructure void and test piece adjacent to access hole.*

# Recommendations

Mine operators should:

- Carry out a risk assessment regarding hot work activities undertaken onsite in/into voids and confined spaces. The risk assessment should take into consideration:
  - contaminated atmospheres and surfaces
  - the generation of combustible gases through gas cutting heating or welding
  - changing internal atmosphere through application of cleaning fluids (degreasers)
  - ventilation and gas monitoring requirements

- the use of inert gas to purge spaces

- Implement controls from the risk assessment.

A task-based risk assessment or JHA should be conducted prior to the commencement of any hot work activities in/into voids or confined spaces.

**NOTE:** Please ensure all relevant people in your organisation receive a copy of this safety alert and are informed of its content and recommendations. This safety alert should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's common area, such as your notice board where appropriate.

Visit our website to:

- find more safety alerts and bulletins
- use our searchable safety database

# Other relevant resources

- NSW Government code of practice welding processes
- NSW Government code of practice confined spaces
- Resources Regulator – Technical reference guide – Hot Work (Cutting and Welding)
- SA15-01 Fire ignites after worker drills into a sealed void
- SA03-08 Explosive conditions: Pre-heating on confined space prior to welding



| DOCUMENT CONTROL | |
|---|---|
| **CM9 reference** | RDOC22/103181 |
| **Mine safety reference** | SA22-01 |
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