

SAFETY FLASH

FATALITY – EXPLOSIVE FAILURE OF CORRODED FIRE EXTINGUISHER

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RED ☒ GREEN ☐

DESCRIPTION

A person was killed when there was a catastrophic explosive failure of a corroded fire extinguisher. The incident occurred when the person was discharging a corroded handheld cartridge-type, dry chemical powder fire extinguisher which had been condemned during an annual third-party inspection.

When the internal CO2 cylinder was activated (225psi/17 bar) to energise the fire extinguisher, the unit ruptured at the corroded base, exploded and struck the person causing critical and fatal head injuries.



WHAT WERE THE CAUSES? WHAT WENT WRONG?

A condemned fire extinguisher was discharged. Those discharging the extinguisher did not appreciate the danger involved and did not adequately plan the job.

The base of the extinguisher was badly corroded. Although condemned during a third-party inspection and moved to an isolated storage area, a decision was made to discharge the extinguisher to 'make it safe' before transporting it to shore.

ACTION TAKEN AND LESSONS LEARNED

The following points were made by the company involved:

☐ Minimise Corrosion

- ☐ Regular monthly inspection of fire extinguishers, particularly if exposed to the elements;
- ☐ Mount fire extinguishers off the deck/floor in manufacturer-approved mounting devices that reduce the chance of moisture from being trapped under the fire extinguisher base.

☐ Third-party inspections and condemnations

- ☐ Ensure that fire extinguisher disposal is managed and conducted by qualified third party personnel as per the manufacturer's specifications, or any local regulatory requirements;
- ☐ Condemned fire extinguishers should not be discharged by crew.

☐ Fire extinguishers using a cartridge to charge the main fire extinguisher cylinder should be handled with care

- ☐ The fire extinguisher should be placed on the deck at arm's length from the body;
- ☐ Point the top of the extinguisher away from the body while holding the handle and hose in one hand;
- ☐ Trigger the CO2 charging cylinder with the other hand;
- ☐ Do not energise these types of fire extinguishers near the body.
- ☐ Consideration may be given to using stored pressure type extinguishers rather than the CO2 cartridge type.