

FIRE EXTINGUISHER MAINTENANCE

Scenario / Background
Incidents have occurred when the operator 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 CO ² charge was activated to pressurise the fire extinguisher, the unit ruptured at the corroded base, exploded and struck the person causing fatal head injuries.
Pre-activity considerations
Any crew working on the maintenance of fire extinguishers must: <ul style="list-style-type: none">- Be competent- Have the appropriate equipment (see below)- Ideally have completed an approved extinguisher maintenance course within the past 5 years- Work in a safe space with fresh air, easy access and a clear means of escape- Have notified a senior officer of their intentions and anticipated duration of work- Be familiar with the location of all extinguishers on board
Equipment
Aside from the extinguisher to be worked on, the following equipment is likely to be required: <ul style="list-style-type: none">- Scales- Adjustable spanner- Air supply and appropriate attachment for charging- Spare charging cartridges- Replacement fresh content (Aqueous Film Forming Foam (AFFF), Dry Powder etc)
Brief
<ul style="list-style-type: none">- Identify the difference between a gas cartridge and stored pressure extinguishers.- Discuss what to look for during a monthly inspection and how to minimise the corrosion of the fire extinguishers. <p>This should include:</p> <ul style="list-style-type: none">▪ Keeping clean.▪ Checking hose attachment is secure and not blocked.▪ Looking for accidental discharge.▪ Checking stored pressure gauge (if fitted).▪ Checking the safety pin is installed and secure.▪ Know how to safely pressurise a gas cartridge fire extinguisher.▪ Discuss how to safely decommission a gas cartridge fire extinguisher.

Note: This card and briefing sheet is intended for guidance only and in no way passes liability to any member of CHIRP or the Superyacht Training Group for its content and the procedures within.

Questions to confirm learning

- What are the main differences between a gas cartridge and stored pressure fire extinguishers?
- What should the person carrying out the monthly check of the onboard fire extinguishers be looking for?
- What is the sequence for pressurising a gas cartridge fire extinguisher?
- Describe how to safely decommission a gas cartridge fire extinguisher?

What if's / Emergency considerations

- Is the fire extinguisher securely located and unobstructed?
- Is the medic on board aware of the potential for dealing with a casualty after an extinguisher accidental activation or explosion?

Post activity debrief points

- Has the maintenance log been updated?
- Has the maintenance been recorded on the side of the extinguisher?
- Has the extinguisher been correctly recharged and returned to its correct stowage?
- Have all tools been correctly re-stowed?
- Has the work area been cleared?
- Have any expired pressure cartridges been taken off the vessel or prepared for disposal?