

# New Maintenance Standards: Pressure Regulators and Flashback Arrestors



# Introduction

Pressure regulators and flashback arrestors assist in the safe use of compressed gases. They are vital items of safety enhancement.

Pressure regulators reduce high cylinder pressures to safer levels while flashback arrestors stop reverse flow and flashbacks - enabling safe use of compressed gases like oxygen and acetylene on ships.

Fires due to incorrect use of the gases and the equipment must be avoided at all costs. Fires or explosions onboard tankers are especially dangerous as flammable cargoes can destroy an entire vessel. Welding and cutting works in, on, or near cargo tanks are known to have caused fires.

To improve tanker safety, the Oil Companies International Marine Forum (OCIMF) launched the Ship Inspection Report Program (SIRE) in 1993, providing vetting standards for vessels carrying flammable cargoes.

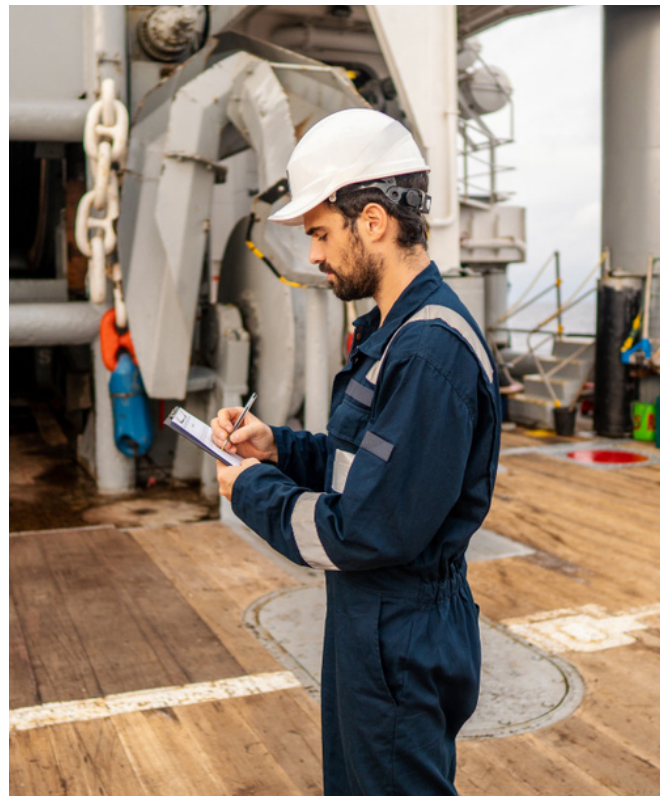
## New SIRE update - what does the change mean for tankers?

In September 2018, OCIMF issued a new SIRE version (7), which states that pressure regulators should be inspected annually and replaced or refurbished every five years. This follows the recommendation of the British Compressed Gases Association's Code of Practice CP7 guideline, although manufacturers' advice should also be considered.

Pressure regulators are designed to be used with specific welding gases, but all other equipment should still be examined before use. For additional safety, installing flashback (flame) arrestors on both the cylinders and workstation is recommended by various national safety authorities, particularly where long lengths of piping between the cylinders and the blowtorch are involved.

Incorrect maintenance or use of welding equipment may cause flashbacks and prolonged storage will have an impact on the internal components resulting in degradation and leading to leakage. Like pressure regulators, flashback arrestors should also be replaced every five years.

Although the OCIMF requirements only apply to tankers and related types, ship owners and operators of other vessel types should also follow procedures to ensure that their regulators and flashback arrestors are always fully functional and free of leaks.



Replace pressure regulators and flashback arrestors **every five years** after the manufacturing date to prevent degradation and leakage.

With safety and compliance in mind, ship owners should always select equipment from reputable suppliers.

# Factors to consider when selecting regulators and flashback arrestors



## Label

Regulator has the manufacturers/ suppliers name clearly visible and it is manufactured according to the industry standards.

## Manufacturing Date

Proof of manufacturing date on the regulator and flashback arrestor.

## ISO Standards

Manufactured to be compliant with the ISO standards such as ISO 2503, ISO 7291 and ISO 5175.



## Manual & Guidelines

Instruction manual, maintenance procedures and written guidelines.



## Training Materials

Training materials and updates on regulation change.



## Product Compatibility

Regulators are compatible with the specific welding gas. Select pressure regulators according to their compatibility with the welding gas.

# Wilhelmsen Ships Service – Trusted and reputable supplier of pressure regulators and flashback arrestors

With safety and compliance in mind, ship owners should always select equipment from reputable suppliers.

At Wilhelmsen Ships Service, our range of Unitor™ regulators and flashback arrestors are fully compliant with all regulatory and international requirements.

## Unitor™ AC and OX Pressure Regulators

Type R-510 series are manufactured as per ISO 2503 standard and verified by a Notified Body for use on cylinders. Type 520 and 530 regulators are manufactured as per ISO 7291 standard. The devices regulate the pressure from the cylinders to the distribution piping and from the distribution piping to the twin-hose. The regulator provides a constant gas flow at the right pressure, removing the need for flame adjustment while safety valve ensures that the pressure never goes beyond a certain threshold. The regulators can be connected to all standard hose dimensions and the manufacturing date is visible on the back side of the devices.

## Unitor™ AC and OX Flash Back Arrestors

S-55, W-66 and FR-20 series are manufactured as per EN 730 and ISO 5175 standard and verified by BAM. Featuring cut-off valves that respond to flames and high temperatures, the arrestors stop flames in their path thus preventing dangerous situations where flame fronts are reaching the rubber twin hoses or even the cylinders.

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for a closer look

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