



## MARINE

### Meeting fire protection challenges in the marine industry

#### Challenge

Protecting; Machinery spaces, engine rooms, pump rooms and electrical switch gear.

#### Solution

SAPPHIRE 25 or 42 bar systems.

#### Application

Protecting human life and critical operational infrastructure in cramped conditions with SAPPHIRE systems.

Ensuring effective fire protection for marine vessels at sea presents some substantial challenges. The space and weight restrictions, combined with the critical electronic infrastructure on board the ship require a robust and reliable solution that overcomes these obstacles. Previously, many vessels used Halon or CO<sub>2</sub> - based fire suppression systems. Both are now recognised as having their own flaws especially when used in a marine environment. Halon based systems have been banned since the 1990's having been recognised as contributing to global warming and their harmful impact on the ozone layer, and CO<sub>2</sub> is only suitable for environments not inhabited by humans, making both system unsuitable in a marine environment.

In a Marine environment, fires can develop rapidly and threaten the safety of the vessel and personnel very quickly so an agent that is safe for people, suppresses a fire rapidly and will ensure that damage is minimized means the time to return to a stable condition can be reduced. An innovative, clean agent solution to protecting the marine industry is the SAPPHIRE system. Using 3M™ Novec™ 1230 Fire Protection Fluid, the system is an environmentally friendly clean agent fire protection solution, with zero ozone depletion (ODP) and negligible global warming potential (GWP).

This clear, odourless fluid vaporises upon discharge and absorbs heat to suppress the fire rapidly. This results in less damage to critical equipment, facilitating a much shorter recovery time, and therefore reduced downtime. Safe for use in occupied areas, the SAPPHIRE systems protects occupants, ensures continuity of operations and delivers effective asset protection for marine vessels.

The SAPPHIRE 42 bar system offers greater flexibility in layout as the containers can be placed further from the hazard area. This provides the opportunity to save space and weight and the possibility of more remote storage container locations, thanks to selector valves that enable multiple areas to be protected using one bank of containers; both key considerations in the marine industry.

SAPPHIRE systems carry all major Marine Class Society approvals and has Administration acceptances around the world. The systems can be designed to meet the requirements of EN 15004, ISO 14520 and NFPA 2001 and components are approved according to EN 12094 to ensure the highest quality fire suppression system.