



(Photograph courtesy of the Royal Navy)

Naval Vessels

Albion Class LPD Ships

The Challenge

The Albion Class, Landing Platform Dock Ships (LPD's) primary function is to embark, transport, and deploy and recover (by air and sea) troops and their equipment, vehicles and miscellaneous cargo, forming part of an Amphibious Assault Force.

Tyco Fire & Integrated Solutions were commissioned by BAE systems to install a Fire Detection and Alarm system and a Rapid Response Spray System (RRSS) on board HMS Bullwark and HMS Albion. These systems were designed to integrate with our highly efficient T890 analogue addressable networked fire detection and alarm system.

The Fire detection and alarm system comprised of a T890 analogue addressable control panel, with a hot standby controller in HQ2.

Other recent projects include:

- Astute Class Submarines
- Type 45 Destroyers
- Type 23 Frigates
- Royal Fleet Auxiliary Bay Class LSDA vessels Cardigan Bay, Largs Bay, Lyme Bay and Mounts Bay
- Fast Patrol Boats for the Italian Navy
- Frigates for the Malaysian Navy
- Frigates for the Brunei Navy
- Patrol vessels for the Indian Navy
- Patrol vessels for the Trinidadian Navy

For further information contact your local Tyco Fire & Integrated Solutions office on: tfis.marketing.uk@tycoint.com
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(Photograph courtesy of the Royal Navy)

Naval Vessels

Type 23 Duke Class Frigates

The Challenge

Originally designed for the principal task of anti-submarine warfare, the type 23 frigate is the mainstay of the modern surface fleet that have evolved into powerful and versatile multi purpose ships with the capability to operate anywhere in the world. The effectiveness of these ships is enhanced by their stealth design, which reduces their radar signature significantly.

In addition to the war fighting roles described above, the ship is trained to conduct a wide range of other tasks. These include embargo operations using boarding teams inserted from the ship's boats or helicopter, disaster relief work and surveillance operations.

Despite intense competition, Tyco Fire & Integrated Solutions were awarded the contract to replace the Nuclear Biological Chemical Defence Incident Surveillance System (NBCDISS) on board the Royal Navy's Type 23 Frigates. Rising to the challenge, the design and project management teams worked to a demanding schedule to complete a total of 10 ships.

The NBCDISS system comprises

- Fire Detection
- Flood Detection
- Halon Release System
- Hot Standby Controller
- Door and Hatch Monitoring
- Rapid Reaction Spray System
- Metron Activated Spray System
- MIMIC displays in the SCC and Chartroom

Other recent projects include:

- Astute Class Submarines
- Type 45 Destroyers
- LPD ships HMS Bullwark and HMS Albion
- Royal Fleet Auxiliary Bay Class LSDA vessels Cardigan Bay, Largs Bay, Lyme Bay and Mounts Bay
- Fast Patrol Boats for the Italian Navy
- Frigates for the Malaysian Navy
- Frigates for the Brunei Navy
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Naval Vessels

RFA Bay Class Landing Ships

The Challenge

The Royal Fleet Auxiliary Service (RFA) is a civilian manned fleet, owned by the Ministry of Defence. Its main task is to supply warships of the Royal Navy at sea with fuel, food; stores and ammunition which they need to remain operational while away from base.

It also provides aviation support for the Royal Navy, together with amphibious support and secure sea transport for Army units and their equipment.

Tyco Fire & Integrated Solutions were commissioned by BAE systems to install a Fire Detection and Alarm System (FDAS), a local application watermist system and a Rapid Response Spray System (RRSS) on board the RFA Bay Class Ships Cardigan Bay, Largs Bay, Lyme Bay and Mounts Bay. These systems were designed to integrate with our highly efficient T2000 digital addressable networked fire detection and alarm system.

The Fire Detection & Alarm system comprised of three T2000 digital addressable control systems per ship networked together detecting Fire and Smoke with nearly 800 points monitored. This system in turn interfaced with the ships Platform Management System (PMS) via a CCU2 MODbus interface system.

The ships generator rooms were protected by a local applications watermist system and controlled by a T891 control panel. Although the Rapid Reaction Spray System also interfaced with the PMS system, each Magazine was protected independently by the RRSS by a T1000 digital addressable control systems. The system was also designed so that each magazine can also be remotely drenched.

Other recent projects include:

- HMS Astute Class Submarines
- HMS Type 45 Destroyers
- HMS Type 23 Frigates
- LPD ships HMS Bullwark and HMS Albion
- Fast Patrol Boats for the Italian Navy
- Frigates for the Malaysian Navy
- Frigates for the Brunei Navy
- Patrol vessels for the Indian Navy
- Patrol vessels for the Trinidadian Navy

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Thanks to the powerful software of the T2000, each point of detection can be given a "tailor-made" response text message to help rapidly locate the source of a potential fire in its earliest stages to help the fire-fighting crew to prevent a small fire developing into a large life threatening one.

Software configuration can be carried out on site, with the minimum disruption and more importantly, without the avoidance of system down time. Correct execution of the software is ensured by micro-processors that perform watchdog functions to meet the stringent maximum system requirements of our BAE Defence Systems clients.



(Photograph courtesy of BAE systems)

Naval Vessels

Type 45 D Class Destroyers

The Challenge

The world's most advanced warship, HMS Daring, was recently put through her stage one sea trials by BAE Systems engineers and Royal Navy personnel. HMS Daring is one of the first new Type D Class Anti Air Warfare Destroyers and she has received glowing reports after performing above all expectations.

The high standard of the ship's overall design is such that not a single one of her almost 800 compartments exceeds the habitability standards for vibration when operating at full power. Such an achievement would be unlikely on a luxury yacht and is a unique achievement for such a large, complex and powerful warship.

Tyco Fire & Integrated Solutions were commissioned by BAE systems to install a Fire Smoke Flood Detection system (FSFD) and a Rapid Response Spray (RRSS) system on type 45 destroyers. These systems were designed to integrate with our highly efficient T2000 digital addressable networked fire detection and alarm system.

The FSFD system comprised of six T2000 digital addressable control systems networked together detecting Fire Smoke Flood Detection with over 800 points monitored. This system in turn interfaced with the Destroyers Fully Integrated Communication System (FICS) and Platform Management System (PMS) via the industry standard MODbus protocol

communications system. Although the Rapid Reaction Spray System also interfaced with the PMS system, each Magazine was protected independently by the RRSS by eleven T2000 digital addressable control systems. The system was also designed so that each magazine can also be remotely drenched.

Other recent projects include:

- Astute Class Submarines
- Type 23 Frigates
- LPD ships HMS Bullwark and HMS Albion
- Royal Fleet Auxiliary Bay Class LSDA vessels Cardigan Bay, Largs Bay, Lyme Bay and Mounts Bay
- Fast Patrol Boats for the Italian Navy
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