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Rotork assists BAE Systems in upgrades to Portsmouth Royal Naval Base

Rotork has worked with BAE Systems to upgrade a series of A-range actuators to IQ3 actuators at Her Majesty's Naval Base Portsmouth (HMNB Portsmouth).

HMNB Portsmouth is one of three naval bases in the UK that is run by the Royal Navy. Around two thirds of the Royal Navy's surface ships are based there. It hosts the strategic logistic and support facilities that ensure constant availability for operational requirements, such as ship maintenance, repair and upgrades. The docks at HMNB Portsmouth allow for these activities to be

safely carried out. Electric actuators operate penstocks that allow movement of the ships from the sea to the transitional locks and dry docks.

A series of A-range actuators had reached the end of their operational life after many years of service in a challenging environment and required replacement. BAE Systems were keen to retain all the benefits of electric actuators, so IQ3 actuators were chosen. These had to be specially adapted by Rotork to overcome problems around confined spaces and difficult access. IQ3 actuators and IS gearboxes were mechanically adapted with a solution which meant that both actuator and gearbox could be manually operated without entering the confined space. Special hand auto levers and through drive mechanisms for the actuator and gearbox were designed to offer a solution to limit the need for confined space access.

By upgrading to IQ3 actuators, BAE Systems were able to use the Rotork Remote Hand Station (RHS). The existing local control panels provided limited information and feedback but by exchanging these for RHS units live positional feedback and diagnostics are available, as well as the ability to reconfigure the actuators remotely without having to enter the confined spaces that they are situated in.

Actuators within the IQ range are watertight, offering ingress protection to IP66/68 at 20m for 10 days. They have an advanced dual stacked display with configurable data logger functionality, while a simple and robust absolute position sensor provides high reliability and accuracy. The Remote Hand Stations supplied allow duplicate operation, configuration and commissioning up to 100m from the actuator, while still offering the full functionality of the IQ actuator. The display and controls interface are replicated for ease of use.

Rotork have an existing service agreement in place and were perfectly suited for this project, with a proven record of reliability with BAE Systems. BAE were keen to retain the advantages of working with the Rotork Site Services team, continuing with planned service support which guaranteed reliability and availability while maximising product life.

Simon Taylor from BAE Systems said: “This transit lock and dry dock facility is vitally important to the defence output of the Royal Navy of the United Kingdom. Rotork’s equipment is pivotal to the reinstatement of this facility. We have been really impressed by the teams that have been on site; the

engineers have been brilliant throughout the challenge we set, overcoming issues and even drilling in the rain to get the job done.”

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