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HMS Albion and HMS Bulwark

Working in partnership with Houlder Ltd, Street CraneXpress Ltd supplied the lifting equipment as part of a “capability enhancement project” for two of the Royal Navy’s aircraft carriers, HMS Bulwark and HMS Albion.

The contract with the MoD consisted of the replacement of two ship-sets of gantry cranes and the supply of a bespoke anti-collision system, all for use in handling weapons, explosives and ammunition to and from landing craft/hovercraft in the vessels’ well docks (an area within the stern of the ship which lowers into the water to allow the landing craft to enter).

Houlder are the UK’s independent marine design and engineering specialist, and as main contractors on this project choose Street CraneXpress to provide the new lifting equipment thanks to a strong relationship built out of a string of previous successful projects together.

In a move to keep costs down, the ‘new’ cranes have utilised a number of extensively refurbished gantry cranes from the aircraft carrier HMS Ark Royal. Street CraneXpress’s expertise in refurbishing and modifying cranes made this approach possible.

The two 4.5Tonne SWL cranes meet the stringent requirements of the MoD Tri-Services JSP 467 standard for the safe handling of weapons, ammunition and explosives and are believed to be the first of their type to do so.

As the Landing Platform Docks (LPDs) are ‘docked down’ for landing craft operations, the crane tilts with the ship. To accommodate this movement, the existing gantry beams are built at an angle of 1° to the horizontal, providing constant headroom and allowing for safe operation of the crane. The new gantry cranes have been designed to travel smoothly around this bend.





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The cranes' design incorporates anti-tip brackets and a mechanical storm anchor interlocked with the crane movements so as to lock the cranes in position during adverse weather conditions.

Rack and pinion systems across both the long travel and cross travel directions prevent unwanted movement when the motion of the sea alters the orientation of the ship. In addition, sliding and pivoting bearings were used to accommodate any misalignment of the existing gantries and to allow travel across the change in angle.

Secondary brakes were incorporated on all motions to ensure optimum safety at all times. The crane hoists are fitted with load cells that accurately record the weight being lifted and prevent the lifting of excessive loads, and over speed brakes were supplied on the hoist as requested by the MoD.

The system incorporates manually operated recovery winches in both travel directions to enable the crane to be returned to a safe position in the event of power loss or breakdown.

Due to the location and environment of the cranes, access for maintenance is restricted, therefore new access walkways and crawl-ways have been fitted to allow the cranes to be safely accessed at any point within the well dock.

Finally, the entire crane system has been painted in a special protective coating to protect it against the harsh marine environment and prolong service life. Parts that couldn't be painted, such as the wheels, were manufactured in stainless steel.

