

PRESS RELEASE HAW07

Hoist & Winch designs and manufactures outdoor-specification tandem-lifting hoist for Environment Agency

Hoist & Winch Ltd recently supplied a special tandem-lifting hoist system as part of improvements to Environment Agency flood defence assets at Taplow Weir on the Jubilee Relief Channel, an 11.6 km asset that reduces flood risk to 3,200 properties by diverting water from the River Thames when flows are high. The tandem hoist units lift 7 m long galvanised steel stop logs each weighing 2000 kg. These stop logs provide a temporary barrier to the Jubilee Relief Channel so that workers can perform maintenance on the hydraulically controlled sluice gates.

Working for a large water industry engineering contractor, Hoist & Winch designed the remote-controlled tandem-lifting system to bespoke Environment Agency requirements. In terms of operating concept, the tandem lifting hoist system raises and lowers the stop logs in a level position so they locate correctly in the guide rails without any misalignment. At the heart of the system is a pair of Yale CPV 2500 kg swl (safe working load) single-fall, electric-powered chain hoists mounted in motor trolleys to provide fast and slow speed operation.

A Danfoss/Ikusi wireless remote control handset offers individual control of either hoist raise/lower motion for initial levelling of the load hooks prior to lifting operations. The wireless remote also provides dual tandem hoist control for the precise level positioning of the stop-log load during lifting and lowering.

In the event of power loss or activation of a raise/lower limit switch, special software ensures that the system fails safe and the load does not lift unevenly. As a point of note, mechanical linking of the hoist units ensures correct load-hook separation at all times, while both hoist units also feature audible and visual operating alarms.

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From an electrical perspective, Hoist & Winch Ltd provided rugged, heavy-duty plug and socket connectors for ease of maintenance and installation. In addition, the company utilised a fully enclosed (outdoor specification) power-feed system to provide safe maximum hoist-hook coverage across the entire gantry. PVC covers provided added protection for the IP55 hoist enclosure and electrical control panels from outdoor weather conditions.

The criticality of the project and close proximity to water demanded closely monitored working practices, with very stringent planning of all activities and the provision of additional PPE, including life-preserver jackets. Site work was also subject to CDM regulations and required all site engineers to hold a valid CCNSG Safety Passport/CSCS competency certification.

Installation took place over a five-day period and involved a barge-mounted hydraulic crane. Testing of the complete system took place using a dynamic test load of 2.5t + 2.5t + 125% proof load. Additional repeated function tests involved the dynamic test load and actual stop-log load to prove system functionality and satisfy Environment Agency requirements. On completion, Hoist & Winch Ltd issued a LOLER Thorough Examination report and provided operator training for site personnel.

“The project to install the special tandem-lifting hoist system supports the Environment Agency’s annual maintenance programme, which is essential to ensure its flood defence assets remain in good working order,” says Andy Allen, Director of Hoist & Winch Ltd. *“This type of tandem-lifting system would prove ideal for many other applications, such as lifting steel blast doors used in explosive/hazardous environments or handling valuable or delicate long loads in the manufacturing sector. Essentially any task that demands very precise and failsafe level lifting.”*

Visit www.hoistandwinch.co.uk for further information and to view recent case studies.

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The tandem hoist units lift 7 m long galvanised steel stop logs each weighing 2000 kg.

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Tandem hoist rear view lifting stop log with spreader beam.

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Tandem hoist installation - Telehandler & TEE Frame combination.

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Tandem hoist control board with radio receivers.

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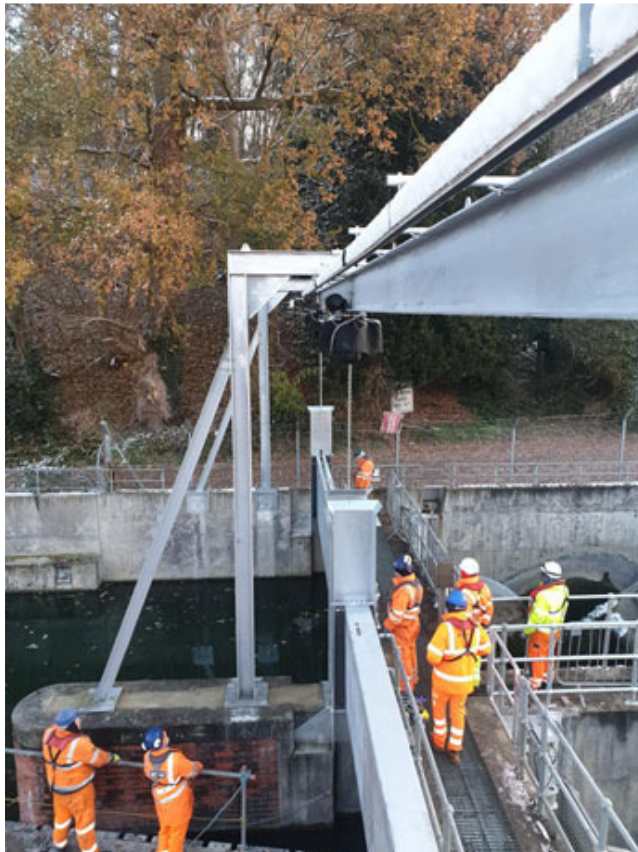
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Tandem hoist rear view with test load.

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The tandem hoist side view lifting stop log with spreader beam.

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