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BESPOKE BRACKET DESIGN ENSURES SAFE GANTRY MOVE OVER UK RAIL LINE



ALE has used its internal engineering expertise to create a special solution that could move a gantry crane, weighing 290t, over live rail lines in the safest way possible.

ALE was contracted by the Costain Skanska joint venture for moving the gantry crane into position for demolition in North London as part of the new HS2 rail line project. Because of where the crane was located, the client stipulated that the 'state of the crane' could not be altered in any way and that there could be no impact on the train operations.

An alternative methodology was prepared that was different to how gantry cranes like this are typically moved. For this, a bespoke bracket was designed that could lift the crane from the jacking points underneath the bogies. This design would mean that the crane's state was not altered, and that its structure would not be subjected to stresses beyond its design criteria, which may have caused the crane to become unstable during its movement. This was due to two of the crane legs being secured with a pin joint, that had the potential to swing, which the bracket solution resolved.

ALE obtained a rail possession at the quietest day of the year, 25th December 2018, to avoid any risk to active trains. ALE used 36 axle lines of SPT in a 2 x 2 file 18 configuration with the bespoke brackets attached under the bogies to manoeuvre it approximately 40m clear of the rails. It was then placed onto a specially-made mock rail line foundation.

"We faced more challenges than the usual port cranes moves we perform, which are typically rigid and don't have the load bearing pressures capped. Because of the complexities involved in this project, it was hugely rewarding to see all of the detailed planning come together," explained Project Manager David Trigg.

"By working with our in-house engineering experts in the UK, our bespoke new brackets enabled the successful and safe completion."

The move was completed in just 11 minutes. As it was located in a residential area, to avoid disruption the team returned a few weeks later to remove all equipment off site.

ENDS

Issued by the ALE Press Office. For more information or images, please contact Sarah Maia on (+44) 1782 977146 or email s.maia@ale-heavylift.com

Image 1: ALE moving the gantry using SPTs and bespoke brackets.

ABOUT ALE

ALE delivers a highly tailored, end-to-end service covering every aspect of the handling, transportation and installation of heavy, indivisible loads, including lifting, transporting, installing, ballasting, jacking and weighing.

ALE provides strategic heavy-lift services to a wide range of sectors, including civil, oil and gas, energy, nuclear, offshore, renewables, petrochemical, ports, marine, minerals and metals and mining.

ALE has a presence in over 40 countries worldwide. It is fully compliant with international standards of safety and excellence, including Quality standard ISO 9001:2015, Environmental standard ISO 14001:2015, and Health and Safety Standard OHSAS 18001:2007. Further information can be found on the ALE website at www.ale-heavylift.com.