

RELOCATING, RAISING AND RETROFITTING OF CRANES TO REALISE EFFICIENCY FOR PORTS WORLDWIDE

“GRT LIFTING FRAMES ARE DESIGNED TO BE LIFTED AND SET INTO PLACE ON THE SILL BEAMS... [REDUCING] OVERALL TIMEFRAME AND THE COSTS OF A MULTI-CRANE RAISING PROJECT.”





Tommy Felch and Andrew Johnson,
Founders, Global Rigging & Transport

In early 2014, Global Rigging & Transport (GRT) made a commitment to their business and to the shipping industry by designing, fabricating and utilising their first Ship to Shore (STS) Crane Lifting Frame. The frame was designed to raise the upper assemblies of Panamax STS container cranes, weighing as much as 1800-tons to an increased height of 10.7 metres.

Since then GRT has expanded their services to include the design, fabrication and utilisation of a larger lifting frame to raise Super Post-Panamax STS cranes, weighing up to 2200 tons to an increased height of 11 metres.

GRT lifting frames are designed to be set up on the sill beams, both waterside and landside. This way, the loads from raising the crane are transmitted through the sill beams, to the travelling systems and into the gantry rails. Thereby eliminating the need for additional load spreading material.

Unlike others utilising a similar system, the GRT lifting frames are also designed to be lifted and set into place on the sill beams, using the STS crane that is being raised – this design feature is hugely significant because it reduces the overall time frame and the overall costs of a multi-crane raising project.

As with all GRT equipment, the lift frames are designed so that all components fit inside standard shipping containers for easy shipment worldwide.

In 2018 GRT was contracted to raise eight cranes at Manzanillo International Terminal (MIT) in Panama. The Panama Canal



ABOVE

Offloading of a PACECO ship to shore crane utilising custom designed transporter system to stay within allowable loads on inner dock.

“NO PROJECT IS TOO BIG FOR GRT AND THEY HAVE A PROVEN TRACK RECORD.”

recently expanded, enabling bigger, taller and wider ships to pass through it. MIT and ports worldwide have had to adapt to the expansion by modifying their cranes, so they can accommodate the larger ships and remain competitive - otherwise these ships will go elsewhere. In response to this demand, GRT has opened an office in Panama, where they are better able to modify and upgrade the cranes for the ports.

GRT currently has offices in Virginia (USA), British Columbia (Canada), San Antonio (Chile) and Panama City (Panama).

Not only do GRT raise cranes, they also have the capability to take on a single crane or multi-crane project, which may require them to dismantle, relocate, reassemble and raise a crane. By having one company that is able to provide all of these services and to manage the project from start to



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finish, GRT significantly reduces the administrative and third-party costs to a port and saves them not only time, but efficiency in the project from a relocated centralised project management team. An example of this is at the aforementioned MIT project, where GRT not only raised eight cranes, but also relocated, modified and reinstated them.

- GRT is currently in the process of dismantling three STS container cranes in San Juan, Puerto Rico.
- Transporting/relocating two STS container cranes from Tampa, FL to San Juan, Puerto Rico.
- And partially disassembling/ lowering three STS container

ABOVE

Image from recent MIT move that shows the lifting frame

cranes, which will then be relocated from Baltimore, MD to Tampa, FL, where they will replace the three older cranes being sent to San Juan, Puerto Rico. Once delivered to Tampa, FL the three cranes will be reassembled and put into service alongside two new STS container cranes thereby completing a well orchestrated series of projects.

GRT has also developed a Containerised Transport Truss System (CTTS) for the transport of cranes without the need for disassembly. The system consists of two separate trusses, each truss is made up of 15 main components

and designed to be shipped inside standard containers for easy mobilization and demobilization, enabling them to be moved around the world.

The primary function of the truss system is to reduce the time required for relocating cranes within shipping terminals. Each truss can be fully erected in a remote area, away from terminal traffic. Once completely erect, the truss is then transported on its own wheels and installed under the crane to be moved, thereby limiting downtime and disruption to normal port activities.

GRT also provides a crane demolition service and in 2018 they demolished a heavily corroded

180-foot tall STS container crane in San Juan, Puerto Rico. GRT were able to offer a quick demolition of the crane by toppling it using a controlled method, as opposed to taking it apart piece by piece. The advantage of a rapid demolition meant that GRT could work within the port's schedule and offer minimal disruption to the working cranes, allowing the port to run as smoothly as possible. Following the demolition, GRT were then able to cut and remove the crane for salvage, negotiate the best possible price for scrap with their partners, and maximise the return for the port.

No project is too big for GRT and they have a proven track record of providing a comprehensive service in transportation, relocation, assembly/reassembly, modification and raising of a crane or of multiple cranes, including salvage and demolition. To be able to offer this comprehensive service is unique and sets GRT apart as a company, because they are able to take on significant projects from start to finish, with the inclusion of multiple stakeholders and save the ports a considerable amount of time and money. The end result being minimal disruption to port services and the all important supply chain.



ABOVE
Multi stage image of crane raising

ABOUT THE AUTHOR:

With over 50 years combined experience in the rigging and transport industry Andrew Johnson and Tommy Felch bring a wealth of heavy lift knowledge with an engineering eye to major port projects. They founded Global Rigging & Transport in 2000 to tackle complex operations management for multiple clients across industries.

ABOUT THE ORGANISATION:

Global Rigging & Transport (GRT) is a recognised worldwide leader in crane services, heavy lifting and engineered transport. GRT combines over 50 years of marine and heavy lift transport experience to provide safe, cost effective, heavy lift and transport solutions to a global market. GRT supplies a complete turnkey service with the utmost in professionalism and customer service. With offices in Virginia Beach (US), Vancouver (Canada), San Antonio (Chile) and Panama City (Panama), increasing our capacity and ability to meet the needs of our global clients quickly and efficiently.

LEFT
The lifting frame deployed with custom design and fabricated pieces ready for installation