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LARS Support Mezzanine Deck Structure

Mounted on Dive Support Vessel Operating in North Sea

Sector:	Offshore
Client:	Red 7 Marine & Offshore
Value:	Unknown
Completion:	2015

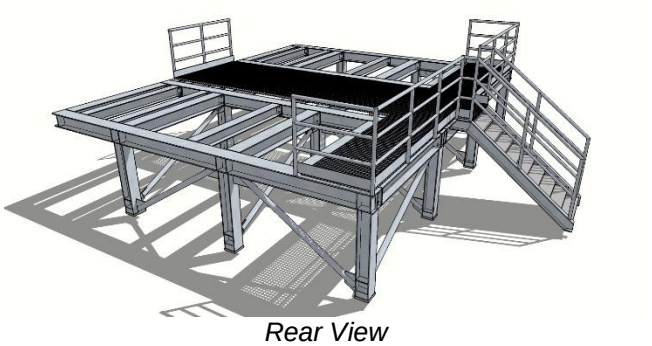
Technicus Consulting was appointed by Red 7 Marine & Offshore (R7MO) to provide structural design and consultancy services for a new mezzanine deck structure to support 2 No. Launch and Recovery System (LARS) units on the deck of the Red7 Tonjer support vessel.

The project involved surveying of the existing deck structure to determine the position of main framing lines, calculation of vessel acceleration forces, and design of a demountable steel mezzanine deck structure capable of supporting vessel motion and LARS operational load in combination.

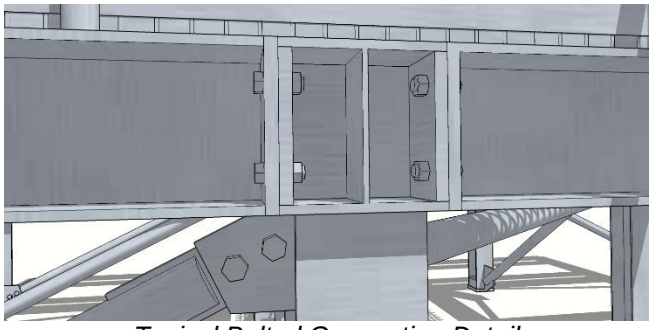
The mezzanine deck was designed to extend above and cantilever over the ships bulwark. This was necessary to ensure the LARS Units had sufficient reach when in operation.

Due to transport and time constraints, the mezzanine was to be constructed as a series of welded main frames with bolt-in cross members and diagonal bracing. This reduced the transport sizes of the main elements and allowed for fast installation on-deck without the need for on-deck welding.

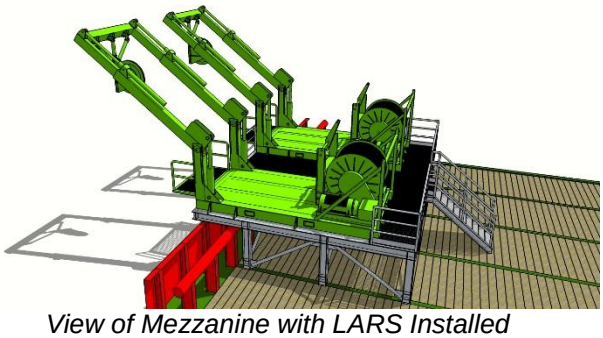
To further expedite the installation process the mezzanine was designed to be secured to the ships deck using proprietary Twist-Lock ISO fixings on each supporting leg. This allowed our client to quickly and easily install and demount the mezzanine deck, which helped with quickly mobilising the vessel for works requiring use of these LARS Units.



Rear View



Typical Bolted Connection Detail



View of Mezzanine with LARS Installed