Articulating A-Frame to Save Time and Improve Safety

To make A-frame adjusting and equipment-change faster, easier and safer, MacArtney (Denmark) has designed and developed a new A-frame system. This new system makes it possible to access the top of the A-frame from the deck of the ship. This clever hydraulic design, using just 2 rams, articulates the A-frame a full 149Â°, from the 20Â° angle for launching equipment over the side or the rear of the vessel to 11Â° over the deck of the vessel. It has a safe working load of 89 kN throughout the entire process.

Equipment, for example a full ROV launch system, can be installed on the A-frame on deck by operators working at deck level and readied for launch. With all operators clear of the frame, the A-frame can be lifted up, past 90° and then onwards over the side or the rear of the vessel and lowered down to 20° for launch into the water. For retrieval, the process is reversed and the A-frame raised past the 90° point and lowered to 11° over the vessel deck, which makes a 149 degree range of movement. From here, operators can conveniently remove and replace equipment and make any necessary adjustments to the A-frame without having to be hoisted up the frame. Lowering the A-frame to 11° from the deck also makes any service and maintenance work easier and faster to perform.

Traditionally, A-frames installed along the side or at the rear of vessels are used for launching a wide range of equipment and often for several tasks during a voyage. Dismounting equipment, adjusting the A-frame for a new task and mounting new equipment can be a time consuming and often complex task. Equipment can be large and heavy and the A-frame often needs adjusting for different equipment, requiring a technician being raised up to the top bar of the A-frame. Operators often have to be hoisted up in a chair or a harness up to 3 to 4 metres to reach the top, making adjustments time-consuming - and because of the potential hazards in working at height on a moving vessel, such work involves a number of safety precaution procedures.

MacArtney's Articulating A-frame is designed with a safe working load of 89 kN and safety factor (Psi) of 2.5. Luffing is at 48.5 kN with docking head and 89 kN without docking head. It has a luffing range of 11 degrees inboard to 20 degrees outboard.