Using Drydock Facilities for Marine Ship Repair

All maritime vessels need repair, and even those in working order must receive regular maintenance to meet international safety standards. But not all repairs can be made while a ship is in the water. Repairs are often required on parts of a ship that are usually submerged, such as fixing a propeller or painting the hull, making these areas difficult or impossible to access when the ship is at sea. A drydock is a facility that emerges ships from the water so that these hard-to-reach ship parts can be accessed. Drydocks can also be used for ship construction. Per SOLAS requirements, merchant vessels must have hull surveys completed in a dry dock twice every 5 years and passenger ships require even more frequent safety inspections.

Accurately Reading Tank Levels Using Ultrasonic Level Measurement

Pulsar Measurement recently supplied ultrasonic level measurement equipment to a marine ship repair company that works on large vessels. Their drydock is a floating dock that is 700 feet in length and has 18 massive ballast tanks, nine on each side. When a ship arrives for repair the ballast tanks are filled with seawater and the entire dock is submerged so the ship can enter. Once the ship is safe and properly positioned on the dry dock the water is then pumped from the ballast tanks, so both the dry dock and ship rise out of the water. Pulsar Measurement equipped the facility with 18 dB15 ultrasonic transducers, one for each ballast tank, and 9 sets of UltraTWIN controllers for each pair of tanks. Accurate readings on the seawater levels in each tank is critical. If any tank has more or less water than the others the dock can have "deflections" which can warp or bend the dock. Inaccurate readings in more serious situations can cause a ship to tilt to one side, or even fall, damaging both the ship and the dry dock and causing even more expensive repairs. This new equipment from Pulsar Measurement will allow the drydock to operate safely.

Custom flanges were also manufactured for mounting the ultrasonic level transducers

Updating Outdated Technology

These Pulsar Measurement systems replaced some previously used mercury tubes, which are now considered to be dangerous and contain hazardous material. Before the updates, if any of the mercury tubes were broken, they would contaminate the local waterways resulting in hazardous material cleanup costs and heavy EPA fines. Pulsar Measurement's ultrasonic technology will help this facility to operate to the proper standards, saving them money in the long term.

To find out more about our full range of ultrasonic level measurement solutions, visit the Pulsar Measurement website.

Our Industrial Rep That Worked on ths Application:

Quinn Associates
www.quinnassociates.com

More Information

UltraTWIN differential level dual channel measurement:
https://pulsarmeasurement.com/en/ultratwin

Partner Locator: https://pulsarmeasurement.com/en/partnerlocator

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