Pipe Ovality

Offshore pipes are built to withstand harsh conditions, but exposure to anchor drag, seismic activity, currents, corrosion, expansion, and contraction eventually take a toll.

When pipes become dented or buckled, their ovality becomes compromised, which inhibits fluid flow and causes revenue loss from reduced operational efficiency.

Repair with Precision

Once pipe damage has been located, closer inspection of the specific area of damage needs to be conducted. Using underwater laser scanning, highly detailed 3D models of pipe interiors and exteriors can be generated. These 3D models provide the information needed to accurately understand the implications of the damage and effectively develop a plan for repairs so that operational efficiency and safety can be restored.

Buckled Pipe Inspection

One of Nautic Middle East’s vertical conductor pipes (60cm in diameter) buckled. The company wanted to measure the length of pipe above the buckle and wished to obtain a 3D model of the damaged area.

A pipe crawler made regular stops on its way down the pipe while the ULS-100 completed 360 degree scans to generate 3D models of the pipe. Using the 3D models generated by the ULS-100, Nautic Middle East was able to determine the precise position of the bend in the pipe and was able to obtain accurate measurements of the damaged area so that an effective repair plan could be developed and implemented.

Visit 2GRobotics.com to view 3D point cloud animations.