

3D Laser Scanner

Portable Metrology Grade Scanning

Oceaneering offers an innovative approach to the analysis of surface defects and a range of applications where accurate 3D scanned models are needed. With advances in laser scanning technology, it is now possible to produce accurate 3D models for use in a range of applications.



FEATURES

Portable Metrology Grade Laser

Versatile Applications

Complete Pipeline Inspection Reporting

3D Laser Scanner

Pipecheck – Pipeline Integrity Tool

Oceaneering engineers collect and analyze data using the latest Creaform HandySCAN 3D lasers and Pipecheck software programs. Pipecheck's pipeline corrosion software module offers fast and reliable data processing that generates instant on-site results. Data is analyzed and a complete, detailed report is generated with increased accuracy and repeatability compared to combining traditional measurement methods such as pit gauge, ultrasonic (UT) measurements, or single-line lasers.

3D data can be combined with ILI and UT-CM data to provide a comprehensive approach to pipeline integrity.

Unit and scanner

- » Lightweight and small (weighs 1.87 lb / 0.85 kg)
- » Can reach confined areas
- » Rope access deployable
- » Up to ± 30 micron 3D point accuracy
- » Volumetric accuracy: Up to 0.02 mm +0.06 mm/m

Surface preparation and operating environment

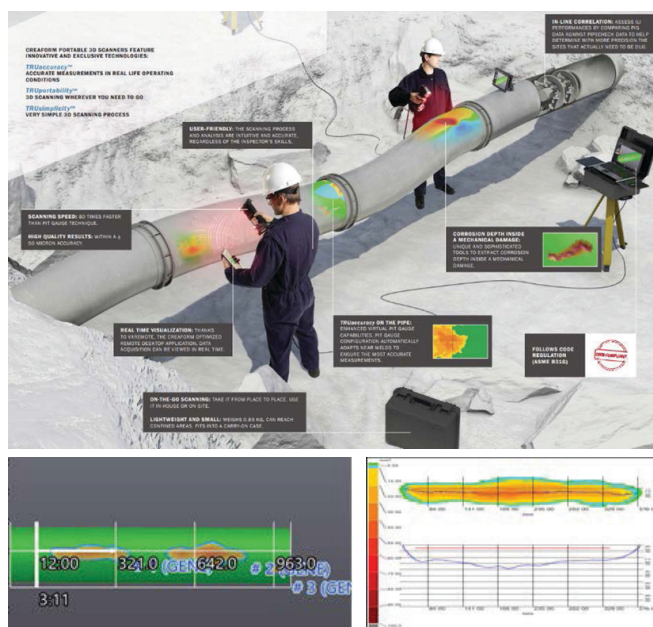
- » Clean and dry surface offers best results
- » Heavy/loose scale needs to be removed before inspection to achieve accurate pit depth

Additional Features

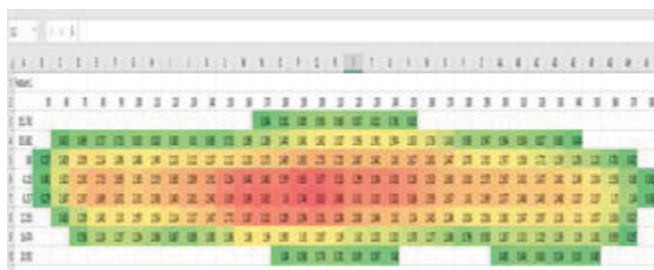
- » A dynamic link between the pipe and scanner preserves accuracy and resolution in any field vibrating environment
- » Enhanced virtual pit gauge capabilities. Pit gauge configuration automatically adapted near welds to ensure the most accurate measurement
- » Can be applied to cylindrical item (vessels, pipes, etc.)
- » Inspection timeline greatly reduced compared to traditional methods
- » On-site reporting with results generated within a few minutes
- » Range of reporting outputs for various FFS levels, including exporting of the 3D model for FEA applications

Considerations

- » Poor surface preparation will affect the accuracy of data



3D image showing external Corrosion River bottom profile



2D image showing excel output of worst case readings in 10x10 grid