

3D LASER SCANNER

The 3D Laser Scanner with dedicated software is a cost-effective way to non-destructively test external corrosion and mechanical damage to pipelines, while also improving data quality, inspection speed, accuracy and repeatability.

The Field-Pack, with its wireless touch screen tablet, brings real-time data visualization to the field. Compliant with existing code, the 3D laser scanner records the damaged surfaces with a contactless, dynamic referencing system.

PROCESS

1. Setup

Clean, sandblasted pipeline surfaces yield the best results for calibrating the unit and scanning. The 3D positioning system also compensates for vibrations in field environments by using 6mm diameter reflective targets.

2. Data Collection

Once the corroded area is determined, the scanner begins the acquisition by moving manually along the pipe and the final 3D file is saved in STL format.

3. Reporting

Before launching the calculation, a technician enters parameters and analysis criteria for the pipeline's 3D scan file. These parameters are useful for burst pressure calculation and applying interaction rules. A final report, auto-generated in Excel format, helps assess and determine the proper remediation technique for the pipe.

BENEFITS

- Outperforms the conventional laser method while solving most of its disadvantages
- Follows code regulation
- 10 times faster inspection speed than the pit gauge technique
- Dynamically links pipe and space referential to compensate for movements and ensure synchronized results
- Perfectly scaled and representative of real geometry
- Makes external defect visualization easy
- Analysis software handles large quantities of data to generate comprehensive results in minutes
- Designed to ensure repeatable results with auto-generated report within +/- 50 microns accuracy