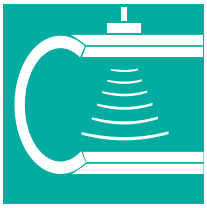
Truscope™ Full Body UT Inspection

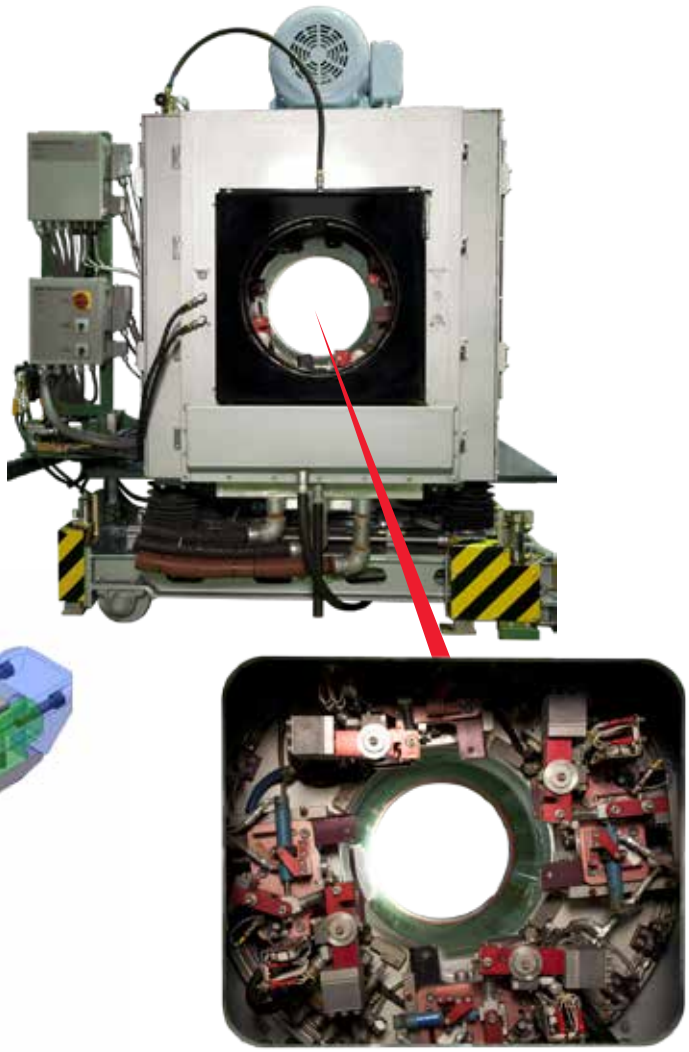
System Overview

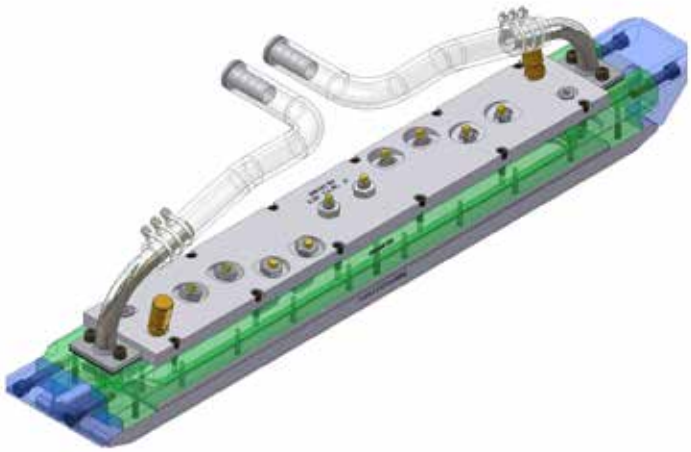


The Tuboscope™ Truscope™ is the latest generation full body rotary ultrasonic (UT) inspection system, designed to inspect tubulars from 2 ⅜ inches (60 mm) to 16 inches (406 mm) in diameter, and with a linear conveyor speed of up to 200 FPM (1 m/s). Inspection capabilities include wall thickness measurement and lamination detection, longitudinal flaw detection, transverse flaw detection, and oblique angle flaw detection.

System Specifications

Line Speed	Up to 200 FPM (1 m/s)
Maximum Pipe Temperature	180˚F (82˚C)
Number of shoes	4
Shoe Control Mode	PLC Actuated
Shoe Up/Down Control	Hydraulic Actuation
Number of inspecting channels	40
Signal Process	
Automated Calibration	Yes
Manual Adjustment	Yes
System Diagnostic	Yes
Operation Diagnostic	Yes
Maintenance Diagnostic	Yes
Alarms	Audible and Visual
Output Signal Sorting	Yes
Database Architecture	**MS-SQL**





UT Array

Truscope Inspection Unit

System Operations:

With up to forty (40) channels, non-multiplexed UT inspection capability within four (4) UT arrays, the Truscope fulfills the most demanding requirements for inspection quality, flexibility and productivity. UT signals are amplified, digitized and filtered; and then transmitted to processor electronics within the Truscope's rotating assembly and from there, via Ethernet slip rings to Tuboscope's sever-based instrumentation/computer cabinet.

Each of the four (4) UT arrays consists of a transducer top plate, an elastic membrane, a fluid-filled reservoir, and a curved wear plate.

The transducer top plate can accommodate up to ten (10) UT transducers.

Each UT array is coupled to the pipe surface with water spray which:

- Negates the need to cap pipe ends
- Negates the risk of air bubble interference
- Prevents the collection of debris on the transducer surfaces

System Features:

The combination of the Tuboscope's Truscope Rotary UT inspection unit with the Server-Based Digital Instrumentation System offers the pipe and tube producer or processor:

- ID/OD flaw detection and discrimination
- Wall thickness measurement and lamination detection
- On-board digital gain/filtration control
- Capability for data storage and traceability
- Ability for process control and final inspection, with interface to a host (mill) computer

Tuboscope | NOV Wellbore Technologies
2835 Holmes Road
Houston, Texas 77051, USA
Phone 346 223 6100
inspection@nov.com
nov.com/tuboscope