

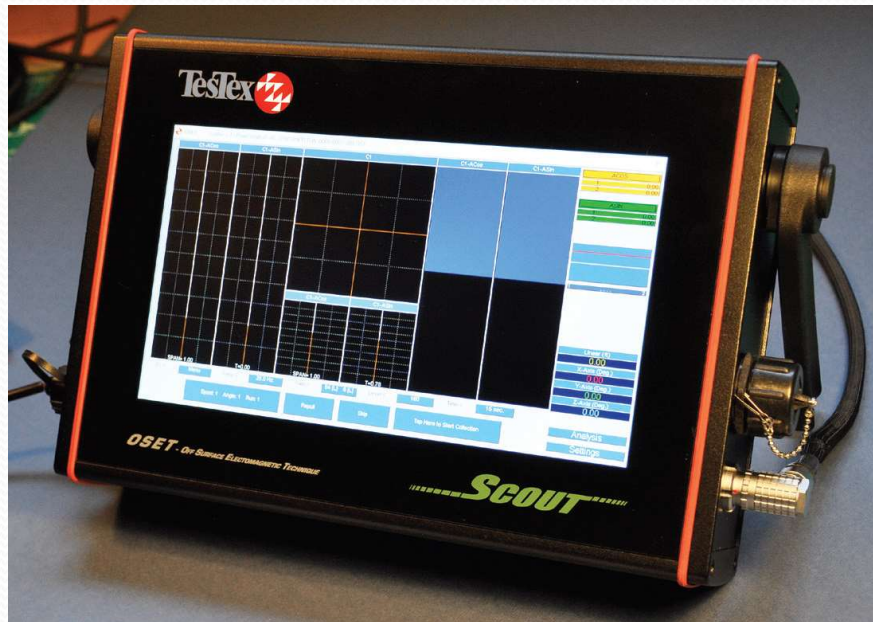


INNOVATIVE PRODUCTS & SERVICES FOR NON-DESTRUCTIVE TESTING





Off Surface Electromagnetic Technique





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TesTex has developed an innovative system for the detection of Corrosion Under Insulation (CUI) using our proprietary Off-Surface-Electromagnetic Technique (OSET).

The “Scout” system allows you to pinpoint the areas that require attention, instead of needlessly stripping insulation or doing random thickness checks.



Off Surface Electromagnetic Technique

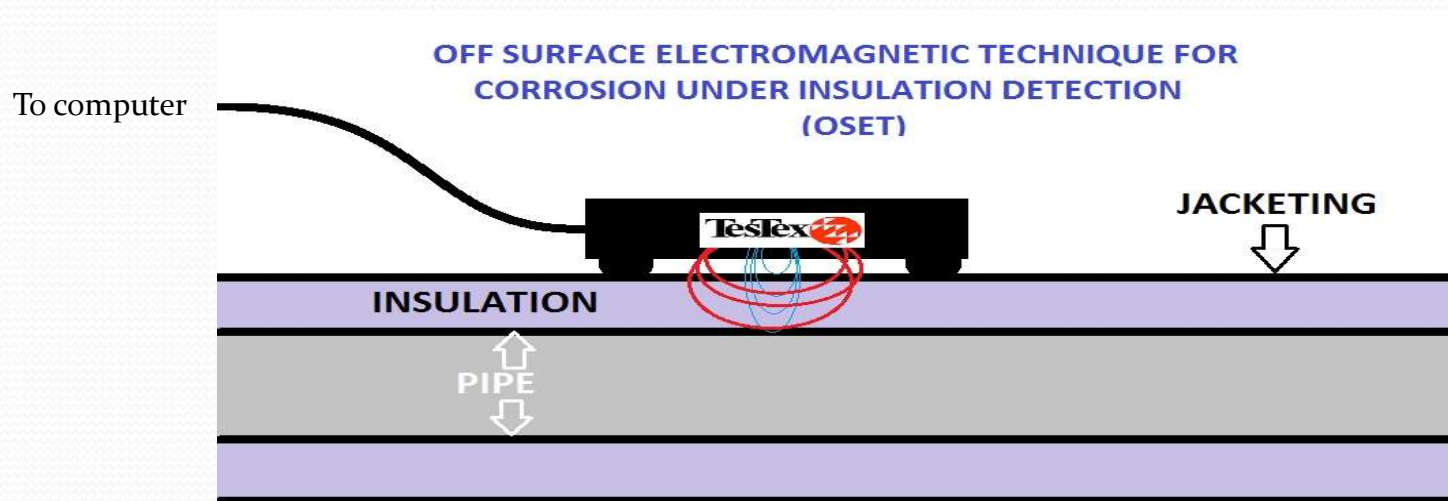
Detection capabilities*

Cladding Material	Wall loss Detection	Insulation thickness Pit Detection	Weld Detection
Stainless	up to 4"	up to 3"	up to 4"
Aluminum	up to 3"	up to 2"	up to 3"

*30% Surface Depth, 1" (25.4mm) Diameter Pit Detection

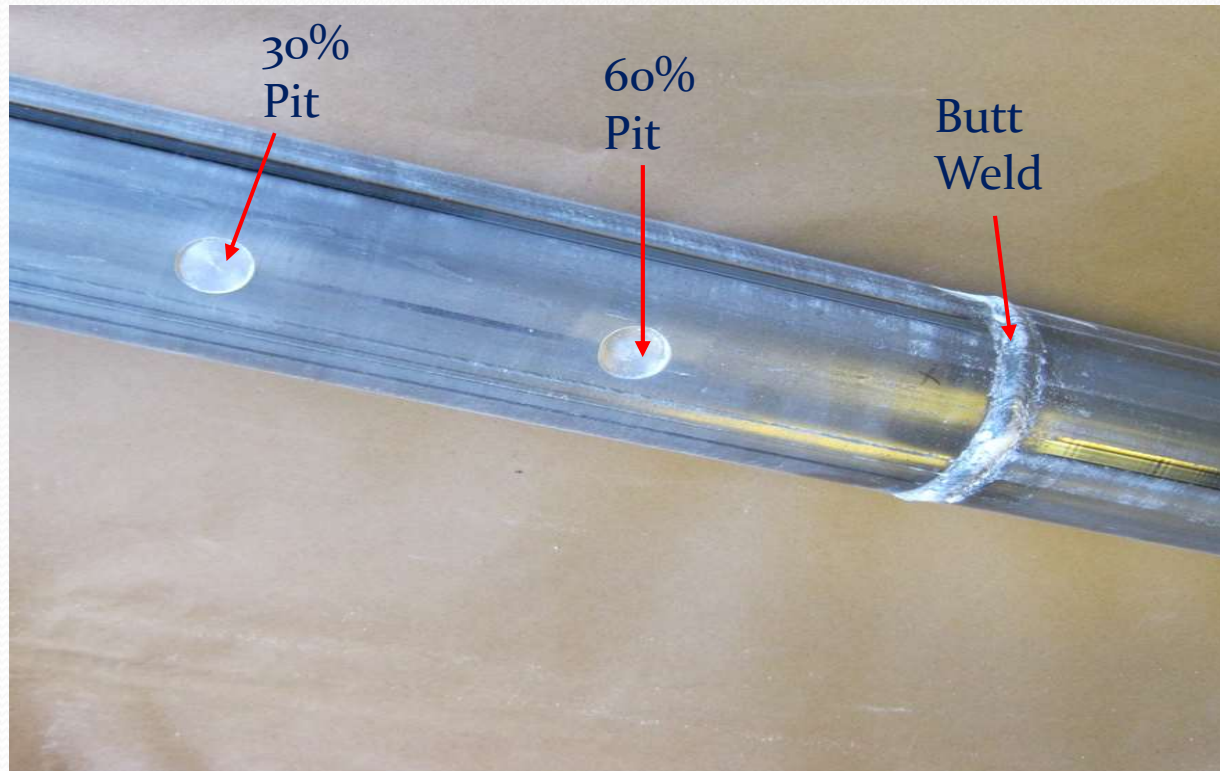
System Operation

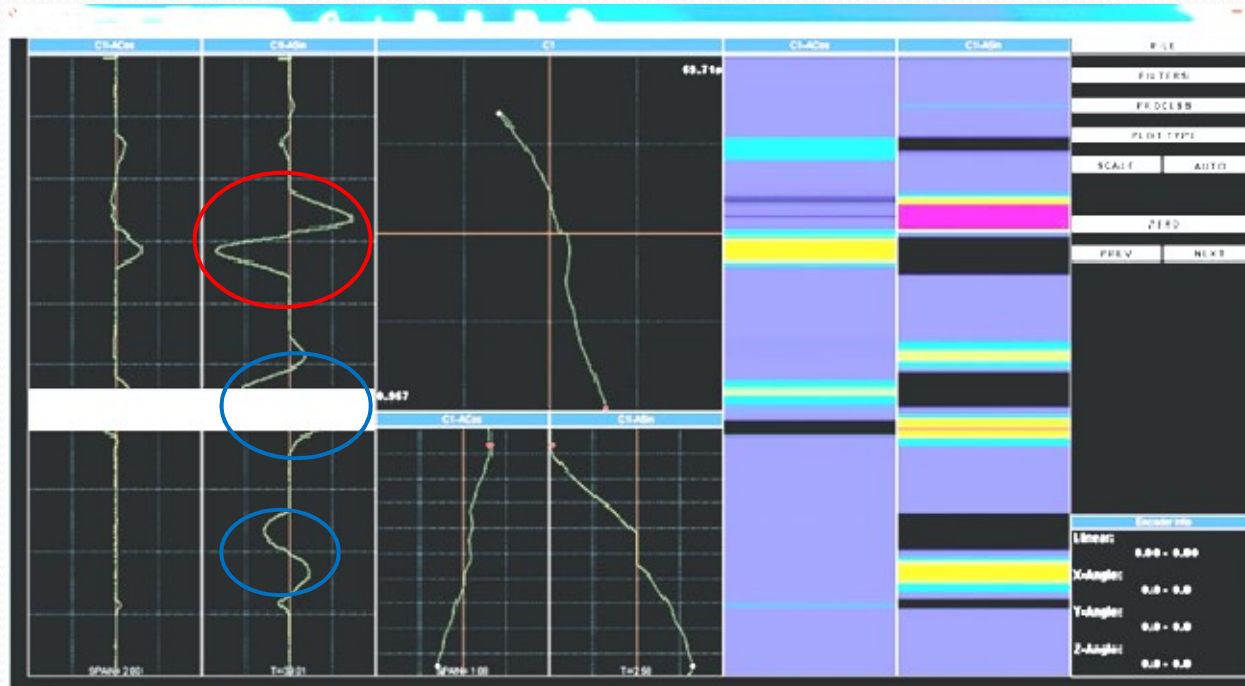
[Video](#)



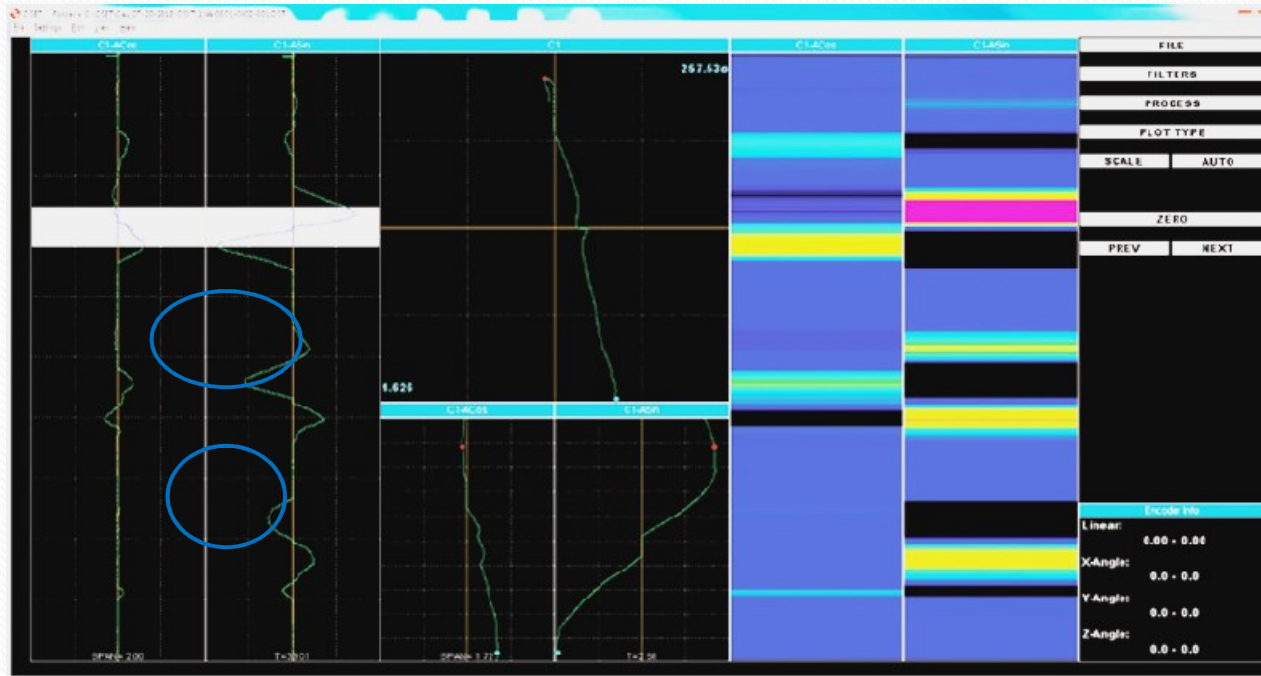
Various exciter coils are used to induce an electromagnetic field at lower frequencies. That field will penetrate through the jacketing and insulation, and into the pipe wall. Anomalies in the pipe wall will distort the field and be detected by the various receiving coils. Differential sensors are used to find “abrupt” changes such as welds and pitting, while absolute sensors will pick up gradual wall losses.

Calibration





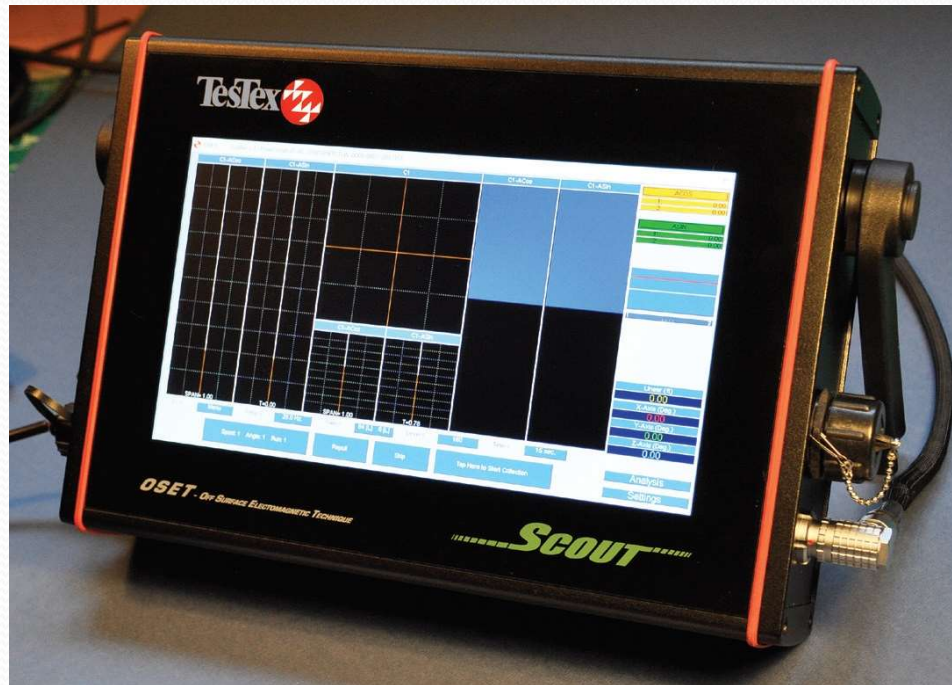
Indications of the two pits are **circled in blue** and the weld is circled in **red**. The 60% pit is highlighted as well.



This is the same wave form with the weld highlighted and the 30% and 60% pits in blue circles.



Equipment





Scanning

[OSET VIDEO](#)





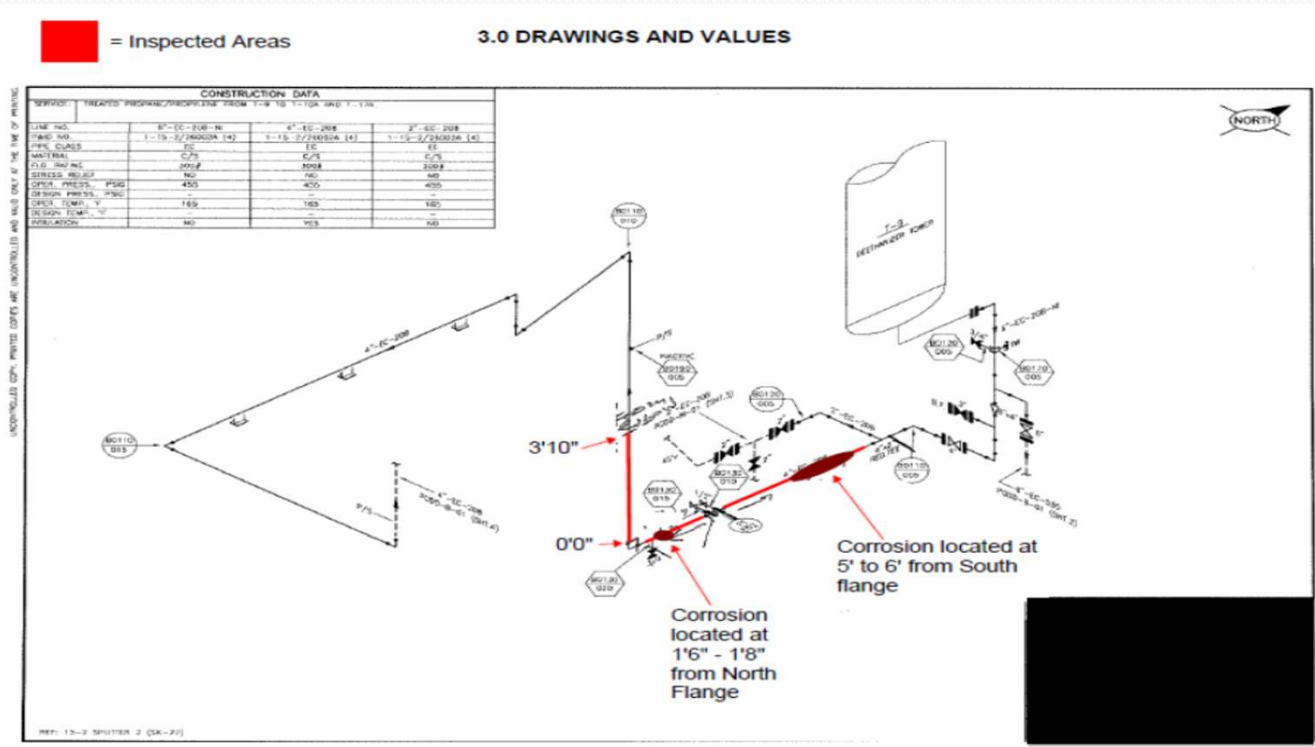
OSET Scanner performing a linear scan



OSET Scanner performing a circumferential overlap scan



Reporting Information



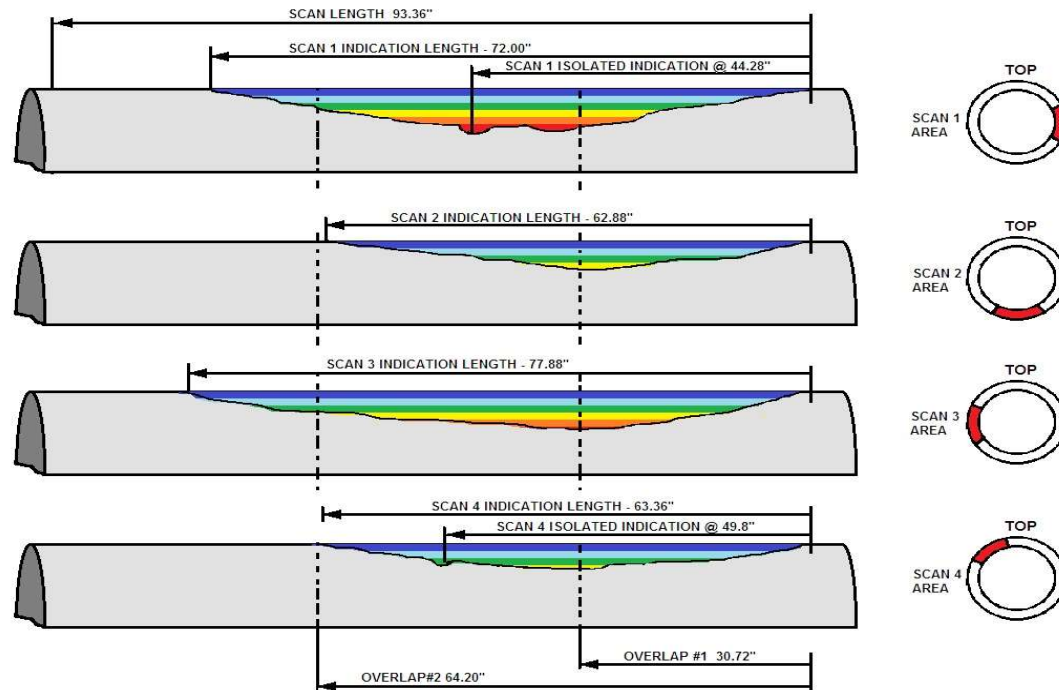
Reports can include drawings of the pipes that were inspected, sections that were scanned, and locations of any indications. Physical markers can also be placed on the actual piping.



Reporting Information

PIPE "C"

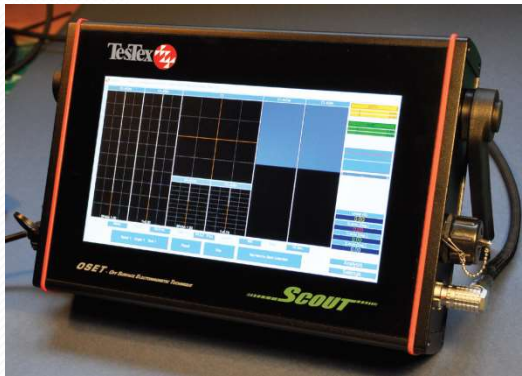
PHASE INDICATIONS (DEGREES)	
0 - 30	Blue
31 - 60	Light Blue
61 - 90	Green
91 - 120	Yellow
121 - 150	Orange
151 - 180+	Red



This is a representation of the scanned pipe showing wall loss at various scanned clock positions. Note that the corrosion is most extensive at the 3:00 O'clock and 9:00 O'clock positions.

SYSTEM SPECIFICATIONS

Instrument Specifications:



Dimensions: 12" W (305mm) x 8" H (203mm) x 3" D (76mm)

Weight: 7.6 lbs (3.45 kg)

Display: 10.1" (257mm) Capacitive, 10 point multi-touch input

- Anti-reflective coating
- Sunlight readable
- Chemically strengthened tempered glass cover
- Optically bonded LCD and touch screen

Connectivity: USB 2.0 Gigabyte Ethernet

Power: 100-240VAC, 47-63Hz, 1.5-0.6A, or 14.8VDC 10Ah Lithium Polymer (5 hour charge life)

Frequency Range: 5 to 40 Hz

Channels: 2 channels (1 Absolute, 1 differential)



Scanner Specifications

Technique: Off Surface Electromagnetic Technique (OSET)

Dimensions: 5.5" W (140mm) x 2.5" H (64mm) x 8.3" D (211mm)

Weight: 5.2 lbs (2.36 kg)

Cable: 10ft (3.05m) and 25ft (7.62m) standard with 12 pin right angle lemo connectors. Longer cables are available upon request

Encoders: Quadrature linear encoder and 6 axis positioning encoder

Wheels: Polyurethane with 95A durometer, extra durable for a much longer life

Coverage: 3" (76.2mm) wide scanning path

Options

- Mapping Software
- Extra batteries/chargers
- 75ft. (23m) extender cable
- Specialty calibration pipes with specified defects (a standard pit calibration pipe and a welded calibration pipe are included with system purchase)

For more information, please visit:
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