



SAW



SOFRATEST BY



Controle Mesure Systemes Group

SOFRATEST

*World Leader in Automated
Ultrasonic Inspection Systems*



Made in France

www.sofratest.com



SOFRA TEST BY



Controlle Mesure Systemes Group

SAW

The **SUBMERGED ARC WELDING** Manufacturing process (SSAW) refers to a spiral welding process with added material.

The strip is rolled with a specific angle and welded (both inside and outside the pipe).



STRIP UT 100 %
DELAMINATIONS



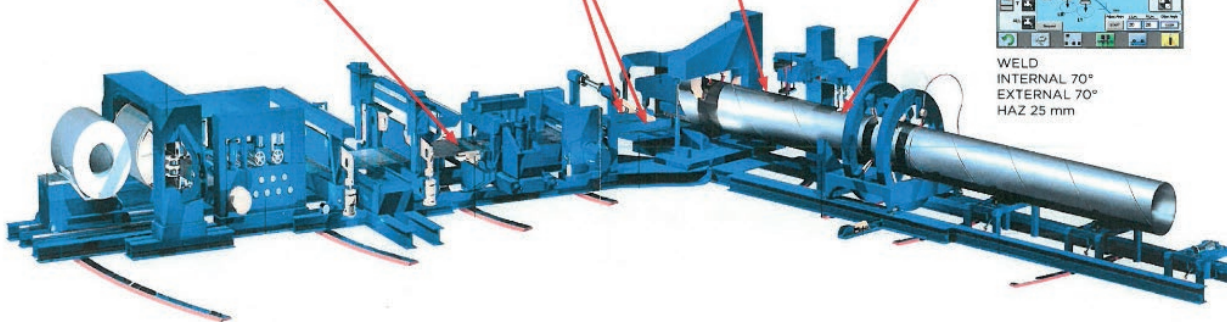
EDGES UT
DELAMINATIONS
30 mm



BODY OSCILLATOR
DELAMINATIONS



WELD
INTERNAL 70°
EXTERNAL 70°
HAZ 25 mm



SSAW QUALITY INSPECTION
BY AUTOMATED ULTRASONIC SYSTEMS

▶ Plate and coil UT Inspection

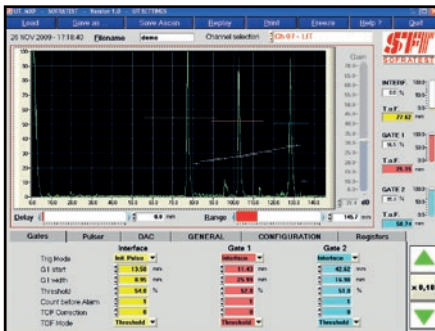
The inspection of the strip (also known as coil) before the forming & welding allows to detect defects early in the manufacturing process.

STRIP INSPECTION FEATURES

- Testing for lamination defect or inclusions
- This equipment allows for either partial inspection (oscillation of the transducers) or full body
- High clearance under the sensors when they are raised
- The side transducers follow perfectly both strip edges
- Calibration table to perform an off-line calibration
- Full data analysis with multi-A-scan screens

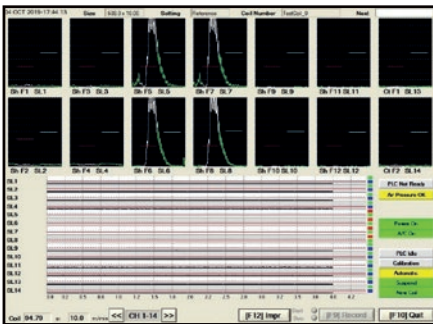
Comply with international standards:

- EN10893-9
- EN10160
- SEL072
- ASTM A578
- ASTM 435M
- BS5996
- API 5L 46TH
- ARAMCO



SYSTEMS HIGHLIGHTS

- ✓ Different probe configuration according to the required defect detection
- ✓ 100% coverage of the plate and edges
- ✓ Customized inspection report
- ✓ Possibility to connect level 3 or MES with SFT software analysis



SCREENSHOTS
OF OUR SOFTWARE SOLUTION

SFT
The assurance
of a quality
inspection

SFR Our know-how, a guarantee of quality

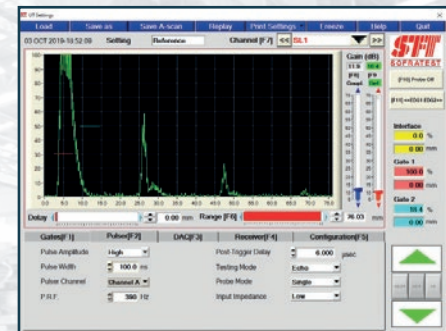
► On-line weld inspection

SOFRATEST on-line weld inspection unit allows to check the quality of the weld close to the welding station and detect potential defect early in the production process.



ON-LINE WELD INSPECTION FEATURES

- Allow to detect longitudinal and transverse defect in the weld seam (several transducer patterns available: I, K, X)
- Allow to detect lamination defect in the Heat Affected Zone (HAZ)
- The inspection head can slide in an off-line position to perform calibration on a standard pipe (moving at production speed)
- Several inspection head configurations are available
- Up to 10 channels can be integrated per inspection head
- Possibility to have multiple inspection heads



SYSTEMS HIGHLIGHTS

- ✓ Moving inspection head which hold several UT transducers
- ✓ The UT transducers position around the weld is easily adjustable
- ✓ Cycle of coupling verification
- ✓ Laser tracks the weld to adjust the position of the UT head automatically
- ✓ Reliable and robust mechanical design (vibration free)
- ✓ Customized inspection report
- ✓ High inspection speed
- ✓ Remote calibration screen on the line

Comply with international standards:

- API 5L 46TH
- ASTM E317
- EN10893-11
- SHELL
- BP
- ARAMCO

Find out more on our website: www.sofratest.com



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▶ Off-line weld inspection

SOFRATEST offers off-line solutions to inspect the weld seam after end facing and hydrostatic test.

OFF-LINE WELD INSPECTION FEATURES

- Allow to detect longitudinal and transverse defect in the weld seam (several transducer patterns available: I, K, X)
- Allow to detect lamination defect in the Heat Affected Zone (HAZ)
- Allow to perform full body inspection with lamination defect detection
- Allow Special End Area (SEA) inspection
- Several inspection head configurations are available
- Up to 10 channels can be integrated per inspection head
- Possibility to integrate several UT inspection heads with SEA and body lamination combined on the same quality control station (in this case 2 Z vertical gantries are installed)

SYSTEMS HIGHLIGHTS

- ✓ Moving inspection head which hold several UT transducers
- ✓ The UT transducers position around the weld is easily adjustable
- ✓ Laser tracks the weld to adjust the position of the UT head automatically
- ✓ Remote calibration screen on the line (one per inspection head)
- ✓ High inspection speed
- ✓ Reliable and robust mechanical design (vibration free)
- ✓ Customized inspection report
- ✓ The SOFRATEST PLC ensures a perfect synchronization of the pipe rotation with the longitudinal and transverse motions of the UT head



SFA software

*Our software solutions
create custom inspection
reports using the raw data
from the NDT equipment.*

Find out more on our website:

www.sofratest.com



SOFRATEST BY



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For more than 35 years

SOFRATEST is one of the world leaders in designing and manufacturing automated Ultrasonic inspection systems.

SOFRATEST develops his own heavy-duty systems specially designed to operate within harsh conditions including reliable automation solutions and user friendly software.

SOFRATEST organization charts allow to deliver customized turnkey solution to our customer.

SOFRATEST has been serving numerous markets such as aerospace, steel industries, automotive and nuclear.



Made in France

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