

TUBULAR ULTRASONIC INTERNAL ROTATING INSPECTION SYSTEM



FOR ALL YOUR INSPECTION NEEDS



IRIS is a technique that can be applied on both ferrous and non-ferrous materials and even on non-conductive materials like plastics. With IRIS the remaining wall thickness of tubes can be accurately measured.

IRIS is more accurate than other tube inspection techniques and has the advantages of presenting information about the geometry of defects. Local defects and wall-loss on both sides of the tube can be accurately measured. Defects under support plates can be measured without any limitations.

Theory

The probe used in IRIS examination is made up of a centering device, an ultrasound transducer and a rotating mirror. An ultrasound pulse will be generated in the transducer that is mounted in axial direction. A 45 degree rotating mirror in the probe will guide the sound bundle towards the tube wall. An ultrasound reflection (echo) will take place at the inner and at the outer wall of the tube.

These echoes are reflected back and processed by the equipment. The time between these two echoes represents the wall thickness of the tube. Knowing the sound velocity in the material under test, an accompanying wall thickness can be calculated. Water is used to rotate the probe mirror and is also needed as a couplant between the transducer and the tube wall.

A calibration standard of the same material and dimensions as the tubes to be examined is used to check the IRIS system response.

After an inspection an "on-site" report detailing the condition of each tube will be presented to the client.

