



# IRIS – “INTERNAL ROTARY INSPECTION SYSTEM”

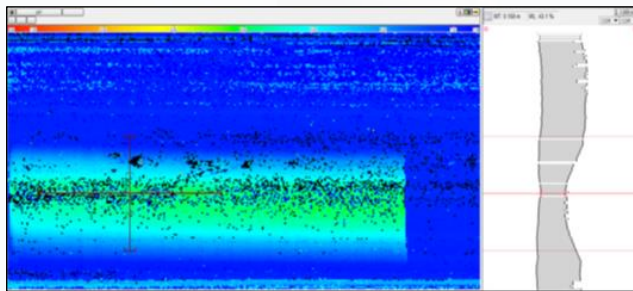


The IRIS “Internal Rotary Inspection System” is ideally suited to the inspection of carbon steel tubing although the technique can successfully be applied to all types of tubing materials.

## Method of Inspection

IRIS uses a transducer to generate an ultrasonic pulse parallel to the axis of the tube under test relying on a rotating mirror that directs the ultrasonic wave into the tube wall. The mirror is driven by a small turbine powered by the pressure of water pumped into the tube.

Part of the ultrasonic wave is reflected by the inner-diameter (ID) wall, while the rest is reflected by the outer-diameter (OD) wall of the tube. Because the ultrasonic velocity of the tube’s material is known, it is possible to assess the thickness of the wall by calculating the difference in times of flight between the two diameters. As the probe is pulled, the spinning motion of the mirror results in a helical scan path.



## Inspection Capabilities

- In the region of 100 to 150 tubes inspected per 12hour shift depending on some variables such as cleanliness and defect types.
- Suitable for most types of tube materials and configurations.
- Capable of detecting generalized and localized wastage, both internal and external.
- Highly accurate measurement. Wall thickness measurements can be made to an accuracy within 0.1mm and it should be possible to detect a 1.5mm defect in tubing that has been properly cleaned.
- A range of 12mm to 170mm ID can be inspected.
- Permanent record of results.

