

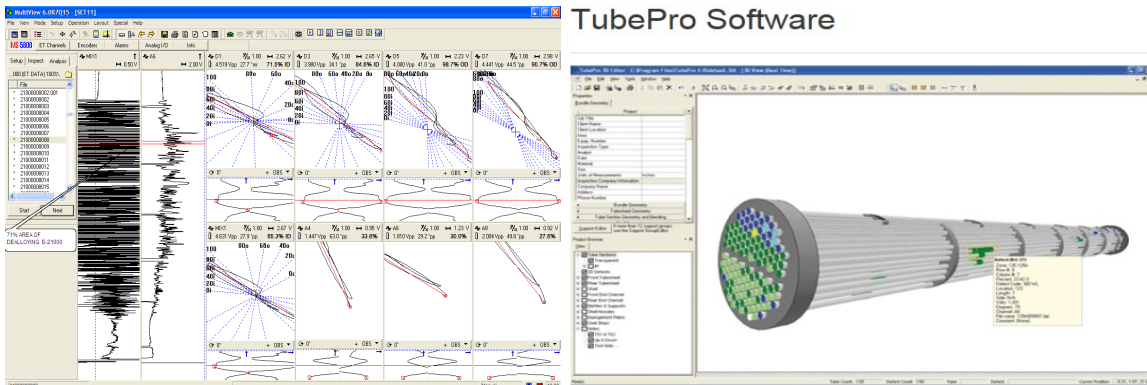
## EDDY CURRENT (ET), REMOTE FIELD TESTING (RFT), AND NEAR FIELD TESTING (NFT)

### Eddy Current

ET is the most commonly used method, but limited to nonferromagnetic and slightly magnetic alloys. It can detect various forms of internal and external damage. The inspection consists of full-length tube examination for degradation such as cracking, corrosion, pitting, fretting and gradual wall loss.

### Remote Field

RFT is an electromagnetic method which utilizes through transmission effect to produce a resultant field that detects anomalies measured a few diameters away without magnetizing or saturation. RFT is used primarily for in-service inspection of ferromagnetic tubing/pipe. This inspection also consists of full length examination performed inside the tube looking for the same anomalies as ET.



- ⇒ High examination rate
- ⇒ Pitting
- ⇒ Corrosion
- ⇒ Cracking

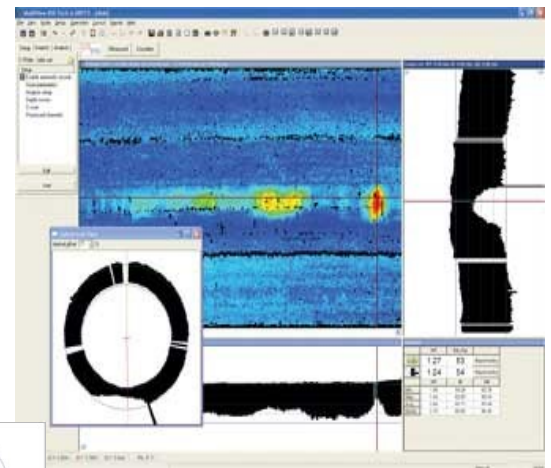
### Internal Rotating Inspection System (IRIS)

#### IRIS

The IRIS technique uses a unique water driven rotating mirror to direct an ultrasonic beam, which is reflected 90 degrees to the internal tube wall. The ultrasonic transducer is mounted axially in the tube and the ultrasonic beam is directed toward the mirror, which is placed at a 45 degree angle to the transducer. The water is coupled in the tube to transmit the sound waves into the tube wall. Using a special ultrasonic electronics and computer graphics a B-Scan or C-Scan image is presented.

This presentation shows the tube wall thickness and outlines the I.D and O.D. surface. The inspection consists of a full-length examination performed on the inside of the tube with equal inner and outer surface discontinuity detection and sizing. The purpose of this application is to detect I.D. and O.D. degradation such as corrosion, erosion, pitting, fretting and gradual wall loss generally found in ferromagnetic and nonferromagnetic tubing. IRIS is often used to quantify data results from various tubing applications.

- ⇒ Accurate wall thickness readings
- ⇒ Detect wall loss at baffle locations
- ⇒ Detect isolated pitting
- ⇒ Accurately inspect up to 3" diameter tubes



### IRIS Centering Device, ET Probe, and RFT

