

The Flux Leakage method of testing tubular goods has been used for many decades for full body inspection. Using this method to test weld seams in small diameter (12mm and up) tubes has, up to now, not been practical because of the difficulties in obtaining uniform magnetic fields with minimal pole piece spacing.

InspectTech[®] has refined the Flux Leakage method, using advanced signal processing. InspectTech remains the only test equipment manufacturer to offer Flux Leakage weld testing equipment for tube producers, to be used directly on the tube mill.

Inspect small diameter carbon steel tubes, on-line, at high speeds.

Superior Absolute and Differential operation compared to Eddy Current inspection systems

Ideal NDT for carbon steel tubes, ϕ 12mm and up in diameter.

Capable of testing Galvanized and Aluminized product.

Calibrates to 10% OD & ID notches and 0.8mm holes.

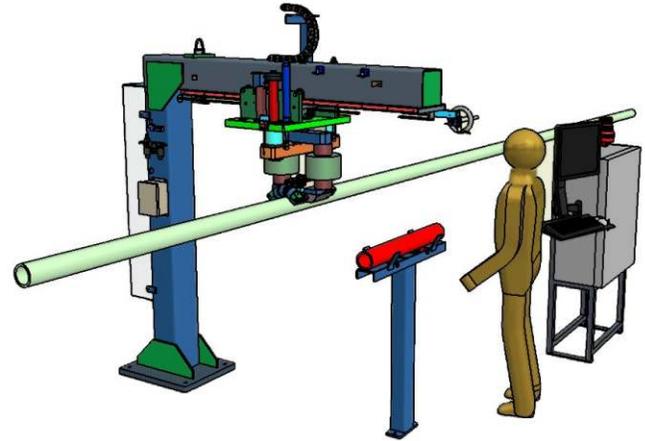
Flux Leakage testing is economical and user-friendly.

The complete Flux Leakage NDT test system includes two basic components: the robust mechanical subsystem that manipulates the on-line sensor, and the electronic package, which processes the signals from the sensor.

InspeTech® offers two standardized Flux Leakage weld test units, based upon the size of product to be tested. Systems can be custom built for other size ranges or customer needs.

The smaller unit magnetizes the tube from below and is suitable for products in the general range of diameters from 0.5" (13mm) to about 3.5" (90mm). The larger system is an overhead version, which magnetizes from above and is used for diameters 2" (50mm) and up.

Test heads cover a wide test zone allowing for weld wander.

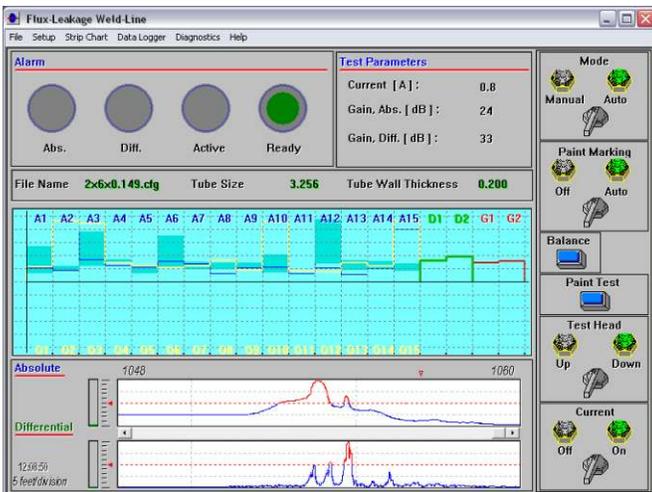


The preferred location of the flux leakage test system within the mill process stream should be immediately downstream of the weld process. Often, this is not always practical due to plant layout and sometimes there may be reluctance to locate the test station in this particular area of the production line.

The closer the test station is located after welding, the more rapid will be the feedback of defect information and the subsequent correction of the problem.

Cooling of the tube (momentarily) is **IMPERATIVE** for sensor operation as temperatures in excess of approximately 100° C can affect the devices utilized in the sensor assembly adversely.

Testing close to the weld station will lessen the possibility of losing signal due to the tendency of the product weld line to drift from centre.



Flux Leakage testing relies on magnetic field measurement close to the surface of magnetized material. Flaws (defects) in the material cause "leakage" of the magnetic field.

With the absolute and differential channels, this Flux Leakage system is able to detect a wide variety of defect types, from ID and OD notches to pinholes and also some types of cold and pasty welds.

The InspeTech Flux Leakage software has a Data Logger, designed to log all the significant events that occur during the test session such as alarms, flaws detected, calibration data and system events throughout a shift. Stored data can be later hard-copied or downloaded. Strip Charts can also be retrieved at a later date.

