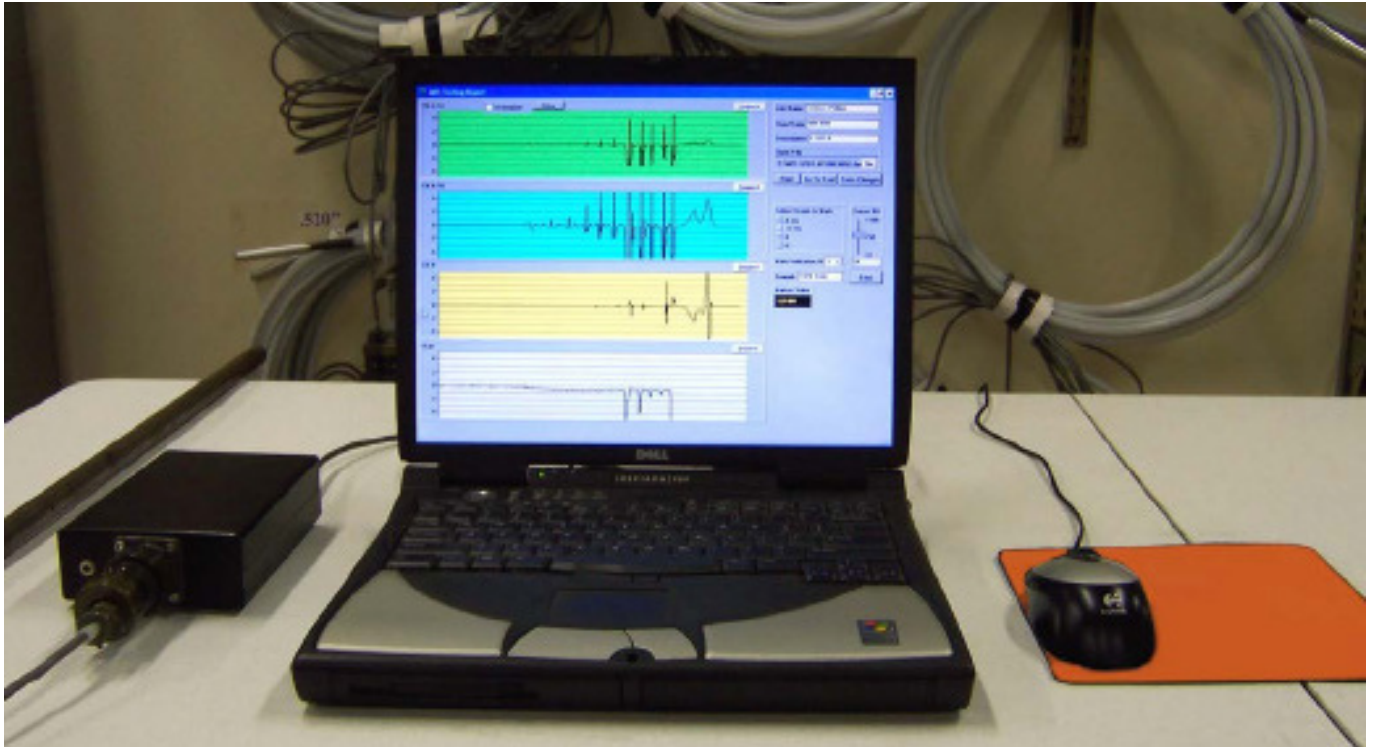


# Magnetic Flux Leakage Technique

## A Method for Inspecting Ferromagnetic Materials



*The MFL technique yields accurate and easy to interpret results.*

The magnetic flux leakage (MFL) technique is based on the magnetization of the material being inspected. The magnetization is provided by a strong magnet located inside the probe. As the probe encounters a wall reduction or a sharp discontinuity, the flux distribution varies around that area and is detected with a Hall-effect transducer or with an inductive pickup coil.

MFL measures the magnetization of the tube to detect irregularities such as corrosion and steam erosion. MFL is recommended for the inspection of aluminum-finned carbon steel tubes because the magnetic flux is not affected by the presence of fins. The MFL technique is also suitable for the detection of circumferential cracks, a type of flaw that is not detected by RFT or IRIS inspections.

### Applications

- Ferrous materials such as carbon steel, nickel, monel, etc.
- Internal tubing inspections
- Fin-fan coolers, packaged boilers, Freon after coolers

### Advantages

- High spanning speed of 1m/s
- Component evaluation at variable depths is achievable through measurement at a range of frequencies or through different coil sizing