

SLOFEC Pipe, Plate, Tankfloor, Boilertube, Vessel, Inspection

The SLOFEC™ (saturated low frequency eddy current) corrosion-inspection technology has been developed as a new and superior alternative for the inspection of storage tank floors, pipes and vessels. The ability of the SLOFEC™ technique to inspect through different coatings and cladding types, at high temperatures and through thick wall components makes it ideal not only for risk-based inspections but also non-intrusive inspections (NII). SLOFEC™ is highly sensitive in the detection of corrosion within a large wall-thickness range, from 0mm to 33mm. The technique's extended thickness capability makes it suitable not only for the inspection of thick wall components but also for thinner walls that are covered with thick non-metallic protection layers (such as glass-fibre reinforced epoxy coatings on the floors of oil-storage tanks). SLOFEC™ is also capable of scanning welds covered by very thick linings, for example shell-to-annular welds in lined tanks.



THE Applus+ SOLUTION

The Applus+ SLOFEC™ testing solution is ideal for the following applications:

- Tank floors: small, previously untested zones close to the tank wall or to plate welds; testing under installations; heating pipes with diameters of as little as 130mm; plates up to 25mm thick (testable plate thickness depends on the scanner type); high-speed testing; testing through non-conductive coatings up to 15mm thick (testable coating thickness depends on the scanner type)
- Pipes: testing of pipe walls up to 18mm thick; testing through non-conductive coatings up to 8mm thick; testing of pipes with a wide range of diameters (our pipe scanners are designed to allow rapid adaptation to different pipe diameters,

simply by changing the pole shoes and wheels sets). For testing of long pipe sections, the scanner can be moved axially along the pipe; for inspection of the zone close to girth welds, the scanner can be moved parallel to the weld.

Due to its unique properties, this technique can even distinguish top from bottom corrosion. In addition, pitting on the top side does not prevent the detection of corrosion on the bottom side. As well as being a superior alternative to MFL inspection tools, the SLOFEC™ system is capable of completely mapping the condition of a tank floor, pipe or vessel. It is also capable of inspecting plates with non-magnetic and non-electric coatings (GRP, rubber, paint, etc.) with thicknesses of up to 10mm. And finally, it does not require direct coupling.

Target customers

Over the past years, SLOFEC™ has not only developed into a much-used technique in the oil and gas and petrochemical industries, but it has also become an important element of risk-based inspections and non-intrusive inspections. More importantly, it is used as a fast and reliable, general, corrosion-detection tool for the detection of pitting, corrosion areas and cracks.

Key customer benefits

The benefits of calling on Applus+ to implement a SLOFEC™ solution include:

- Higher reliability
- Fewer false calls
- Faster and more accurate sizing
- Greater in-house knowledge
- Proven technology
- Cost efficiencies
- Widespread global reach