

SLOFEC Tank floor, Pipe and Pressure Vessel Inspection

The SLOFEC™ (saturated low frequency eddy current) corrosion-inspection technology has been developed as a new and superior alternative to complete storage tank floor, pipe and vessel inspections.

The SLOFEC™ NDT inspection deployed by Applus+ can operate through different coatings and cladding types, at high temperatures and through thick-wall components. This makes the method ideal for risk-based inspections and also non-intrusive inspections (NII).

SLOFEC's high sensitivity allows it to detect corrosion within a large wall-thickness range from 0mm to 33mm. This capability to inspect greater thickness makes SLOFEC™ suitable for inspecting thick-wall components and also for thinner walls 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 with very thick linings, for example to inspect shell-to-annular welds in lined tanks.



THE Applus+ SOLUTION

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

- Storage tank floor inspections: small, previously untested zones close to the tank wall or to plate welds; testing under installations; heating pipes with diameters of only 130mm; plates up to 25mm (testable plate thickness depends on the scanner type); high-speed testing; testing through non-conductive coatings up to 15mm (testable coating thickness depends on the scanner type)

- Pipe line inspection: testing of pipe walls up to 18mm; testing through non-conductive coatings up to 8mm; 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.

The SLOFEC™ testing 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. The SLOFEC™ system is also capable of inspecting plates with non-magnetic and non-electric coatings (GRP, rubber, paint, etc.) with thicknesses of up to 10mm.

Target customers

SLOFEC™ has developed into a much-used technique in the oil, gas and petrochemical industries for above ground oil tank inspections to 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