SLOFEC is a trademark acronym for “saturated low frequency eddy current”. This non-destructive testing method is one of the most reliable techniques for tank, boiler tube and pipe inspection. The SLOFEC tank inspection services from TÜV Rheinland help you detect small cracks, pitting and general corrosion on flat or curved surfaces, while providing a color-based detailed mapping of the defects.

SLOFEC inspection services are conducted with pipe and flat scanners to enable both top- and bottom-side tank surfaces examination. The scanner offers the possibility to conduct inspections on a wide range of thick-walled and/or coated storage tanks.

The modular design of the scanner allows the scanning equipment to quickly adapt to any surface being inspected. During the tank inspection, signal data are directly recorded in the reporting system, and defects and corrosion spaces displayed and analyzed online.

Provided through a cooperation agreement with KontrollTechnik GmbH, a German company specialized in eddy-current inspection services, our experts have received specific training to conduct tank inspection services according to the SLOFEC method to help you localize corrosion in your tanks fast and reliably and to support you in finding solid and reliable solutions.

SLOFEC C-Scan reporting software

The SLOFEC tank inspection services offer you a reliable method for the precise corrosion mapping of your equipment.

The exclusive SLOFEC C-Scan reporting software is able to provide any defect marking and required inspection documentation. During the inspection, signal data are directly recorded in the C-Scan system and converted into a color map of corrosion and defects.

Upon completion of the tank inspection, the color-coded eddy-current signals provide a clear and user-friendly defects and corrosion mapping and enable our experts to provide you tailored advice on which targeted maintenance and corrective actions to undertake.

The SLOFEC C-Scan reporting software is a complete and reliable tool to help you safeguard the proper functioning of your equipment during its entire lifecycle, and start targeted maintenance at an early stage.

Benefits at a glance

- Reliable inspection and corrosion monitoring for thick-walled storage tanks.
- High detection capacity for small defects and local corrosion.
- Clear, colored corrosion mapping report.
- High-speed inspection times and results.
- Exclusive SLOFEC C-Scan reporting software.
- Applicable method for ferromagnetic and non-ferromagnetic materials.
- Testing through non-conductive coatings.

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Areas for application

The saturated low frequency eddy current inspection method can be effectively applied for corrosion monitoring on a wide range of equipments, materials and surfaces:

- Steel, carbon-steel, ferromagnetic and non-ferromagnetic materials
- Pipes and boiler tubes
- Cisterns and spheres
- Thick-walled equipments up to 22 mm
- Tank roofs, walls and floors
- Top- and bottom-side surfaces
- Walls and coatings

Inspection approach

The SLOFEC tank inspection technique is a high-speed and reliable method to detect local corrosion in storage tank on both ferromagnetic and non-ferromagnetic materials.

- Pipe and flat scanners are used to examine both internal and external tank surfaces.
- Inspection can be conducted on coated and thick-walled storage tanks from floor to walls and roof.
- The scanning device is manually moved over the equipment’s surface.
- Signal data are recorded in the computed system and analyzed online.
- Computed signals are color-coded to provide a clear and detailed corrosion mapping.

The report is used as basis for maintenance and corrective actions on the damaged material.

About TÜV Rheinland:

Founded over 140 years ago, TÜV Rheinland is a global leader in independent inspection services, ensuring quality and safety for people, the environment, and technology in nearly all aspects of life.

Our experience - your benefit

The TÜV Rheinland experts have many years of experience in the field of advanced non-destructive testing methods. Our inspection team is one of the best-resourced in the world. Our involvement in equipment development, inspection solutions and accredited training courses demonstrate our commitment to these techniques.

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