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Magnetic Flux Leakage (MFL)

Magnetic flux leakage methods provide asset owners with the information required to assess tank-life suitability. Applus+ employs various scanners to accomplish the integrity assessment, which is generally performed on, yet not limited to, tank floors. Magnetic flux leakage methods work by inducing a strong magnetic field, near saturation, within ferrous materials. When an area affected by corrosion or metallurgical change is traversed by the sensor head, a change in flux density is measured and depicted on a digital computer screen, alerting the operator in real time while also being recorded for post-analysis.

THE Applus+ SOLUTION

Applus+ has developed a systematic approach to magnetic flux leakage, ensuring inspections are conducted using state-of-the-art technologies and reporting the findings with the requisite level of detail to be able to assess a tank's suitability for continued operation.

With the breadth of equipment and reporting software available to Applus+ personnel, clients benefit from having readings obtained by the system in a real-time C-Scan presentation. Through methodical threshold placement, Applus+ can help its clients to focus on the worst-affected areas instead of applying a blanket prove-up approach, thereby reducing overall downtime.

Taking magnetic flux leakage opportunities and coupling the efforts with a well-designed API 653 programme, clients may be able to assess tanks in their entirety, satisfying jurisdiction requirements and minimising potential production upsets.

Target customers

This technique can be used in all environments and industries that have storage tanks within their scope of operation.

Key customer benefits

Benefits of this technology include:

- Efficient means for tank bottom/roof assessments
- Either semi-automated or automated
- Ability to be applied over coatings
- Ability to discern top- and bottom-side corrosion cells
- Reliable and repeatable results