

Storage tank should be inspected regularly to ensure the health. A quick remedial act at an early stage is very important to avoid the future extra cost. Effective inspection recognizes the failure before the leakage or other failure occurs, avoiding Leakage of contaminants in the environment, product loss, or even catastrophic failure.

Smart Floor Scanner is a non-destructive tool based on magnetic flux leakage(MFL) principles which has been designed to inspect the metallic floor storage tanks for the locations, dimensions, depths of corrosion and defects above and under the surface. Smart Floor Scanner is auto-motorized, allows the inspector to scan the floor of tank very fast. Also, Smart Floor Scanner has been equipped with a high-performance PC and a special software for real time analysis and display of defects and corrosion data simultaneously. Powerful magnets and high resolution Hall-effect sensors have been located in the form of special arrangement to detect and classify the corrosion and defects in the floors with different thicknesses accurately. Therefore, Smart Floor Scanner can detect effectively the corrosion, pitting and other failure in high resolution. It has benefited:

- **High Durable and Powerful Magnet**
- **High accuracy data acquisition**
- **Special signal processing by WII algorithms**
- **Smooth auto-motorized mechanism drive**
- **Detachable Structure for easy Handling and Transportation**
- **Professional Smart Floor Scanner Software (SFS)**

Together these features have led to achieve high quality inspection and to reduce the inspection time and cost. As a result, tank's owner can plan an optimum repair map and improve Fitness For Service (FFS) assessments, Remaining Life Assessment (RLA), and Risk Based Inspection (RBI) programs.

WII software has a user-friendly interface to define the map of plates in tank. Also it can modify the inspection data manually by data from other method (MFL Hand Scanner, UT based, Vision based, etc.). A special Technical Report Generator is implemented on the software.