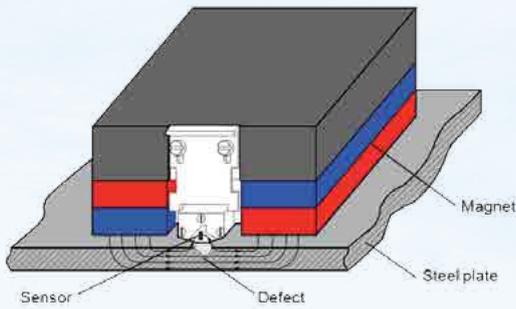


Non-Destructive Inspection of Steel Plates

- Measurement of remaining thickness of steel and coating
- Wide range of applications, including storage tanks
- Inspection under protecting coating
- Adjustable to reach high sensitivity
- Assessment of defects size
- C-scan and mapping





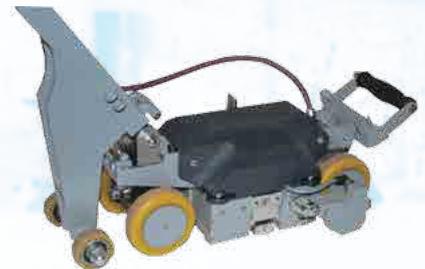
MFL instrument INTROCOR M-150 is designed to non-destructively inspect plates from ferrous steel, e.g. above storage tank bottom, wall, roof, for corrosion and cracks. The scanner can reveal defects at inner and outer surfaces of the plate, and identify surface where defects are located. Inspection is possible even the plate has protecting non-ferrous coating. INTROCOR M-150 contains strong permanent magnets to magnetize the steel plate. If the plate has defect, e.g. is corroded or contains crack, the flux leakage above plate changes and sensor pick this change. Signal from sensor is transferred to tablet PC, where it is processed with special imbedded software.

INTROCOR M-150 is a reliable and effective equipment to inspect integrity of above ground storage tanks. The instrument acquires such defects, as transverse cracks, pitting, and general corrosion. In addition measurement of actual steel plate thickness and thickness of protecting coating is possible. Design of the scanner allows inspecting plate areas close to the welded seam. The air gaps between magnetic poles and plate, as well as between sensors and plate are adjustable, therefore it is possible to reach the best sensitivity to defects and protect parts of scanner from damage; the ergonomic design enables easy manipulation of the instrument.

The instrument consists of the MFL scanner and industrial tablet PC, which controls the operation of the equipment, stores data, and makes downloading for analysis with the software Wintrocor®. Tablet PC can be fixed on the main handle and connected to the scanner with short cable. Alternatively tablet PC can be located apart from the scanner and connected with cable 10 m length. Following information is available resulting inspection:

1. C-scan of the individual plate(s) with defects identification
2. Trace of remaining thickness of steel plate
3. Trace of the thickness of protecting coating
4. Location of defect – outer or inner surface of the plate
5. Map of the whole object, e.g. tank bottom with defects identification.

INTROCOR M-150 is proved to be cost effective, easy to operate, accurate and reliable mean to inspect tank floor, roof, walls, as well as steel plates of other applications.

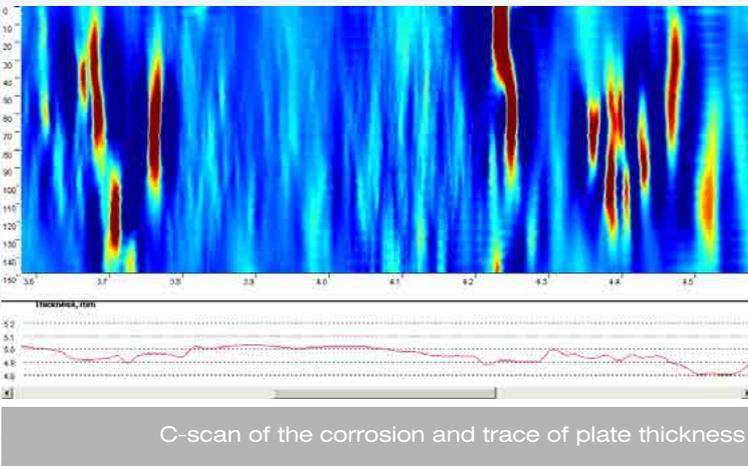




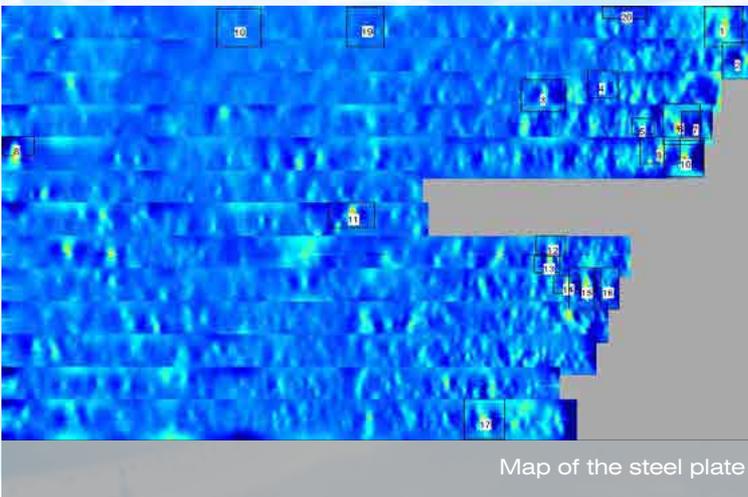
Inspection of bottom level of tank wall



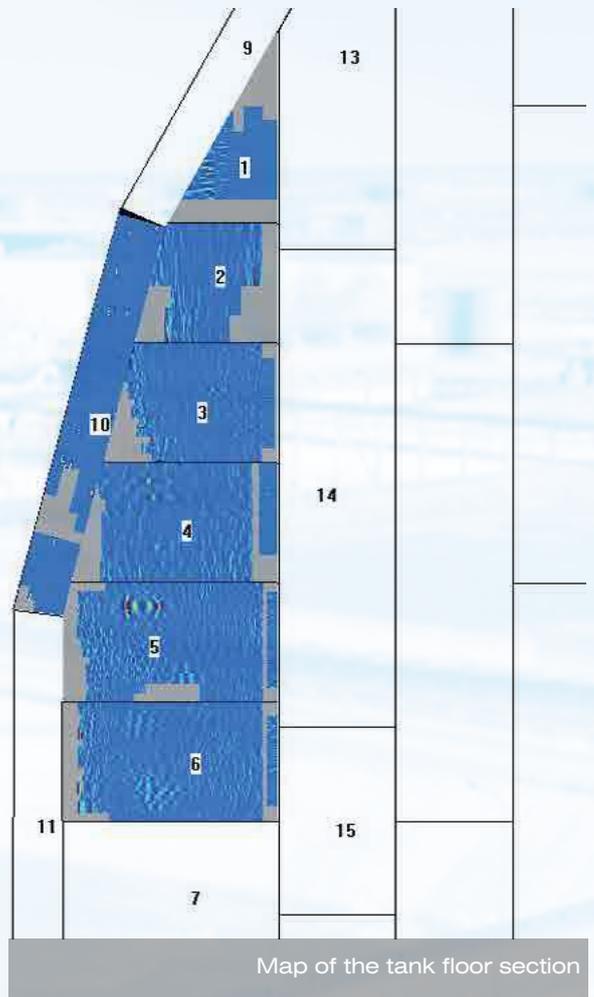
Inspection of the wall of oil and gas separator



C-scan of the corrosion and trace of plate thickness



Map of the steel plate



Map of the tank floor section

Technical specification

Principle of operation	Magnetic Flux Leakage
Embedded sensors	Hall Effect sensors, Eddy current sensors
Number of Hall Effect sensors	48
Number of eddy current sensors	3
Inspected surface	Inner and outer
Scan width	150 mm
Method of movement	Hand-operated
Inspection speed	From 0 to 1 m/s
Steel thickness, maximum	From 4 to 16 mm
Test through coating	Yes, if non-ferrous
Coating thickness, maximum	6 mm
Sensitivity threshold	10% of steel plate thickness
Electronic unit	Tablet PC
Power supply	Rechargeable batteries
Continuous operating time	6 hours
Weight without main handle and tablet PC	20 kg
Dimensions (L x W x H) without main handle	430 x 210 x 170 mm
Ambient temperature	From -25 to +55°C
Ingress Protection Marking	IP 65
Explosion proof version	Yes
Mapping	Yes
Carrying case	Meets IATA requirements for magnetic subjects

INTRON PLUS also produce equipment and provide services for non-destructive inspection of steel wire ropes and steel cord conveyor belts.

