WTM – Monitoring Unit

Measurement of the wall thickness of all metallic materials and plastics.

The patented and retrofittable WTM Monitoring Unit provides exact and validated data about the wall thickness of your plants and equipment. Both erosions (corrosion/abrasion) as well as deposits are reliably detected. The data transmission via LoRaWAN® ensures the functionality even in difficult conditions.

With up to three specially developed ultrasonic probes and one external temperature sensor in each WTM monitoring unit, short- and long-term signs of wear and corrosion in your systems are detected and transmitted at an early stage. This is conducted under consideration of the individual operating conditions of your equipment.

Integrated dynamic analyses in the unit and AI algorithms on the ACM platform determine when critical wall thicknesses have been reached, as well as an “end-of-life” forecast of the monitored objects. This allows plant safety to be increased, unplanned outages to be avoided and maintenance to be better planned.

Key benefits:

- Patented and retrofittable sensor technology
- Battery powered, up to 10 years runtime
- Data available at any time
- Automatic alerts via instant messaging, mail, etc.
- Integrated self-calibration of the measuring instrument and automatic self-test
- Integrated dynamic end-of-life assessment
- Simple & clear reporting features
- Immediate initiation of actions possible
- No additional effort for accessing the measuring points
- No random error (human factor)

Brief technical information:

- Test probe: 5 MHz for steel, others possible depending on material
- Evaluable materials: steel and its alloys, all non-ferrous metals, stainless steels, plastics, GRP and hybrids
- Connectivity: Bidirectional communication via LoRaWAN®
- Temperature range: Min: -20°C Max: 90°C
- Wall thickness: Min. ~2 mm, Max. ~30 mm,
- Accuracy: +/- 0,02 mm
- Battery life: up to 10 years depending on the number of regular measurement cycles (LTC lithium battery, non-rechargeable, 3.6 V, 19Ah)