



PIPEPROOF

Electromagnetic Inspection
for Oilfield Tubular Goods



Pipe Testing with PIPEPROOF



PIPEPROOF Technical Highlights

- Reliable and highly repeatable defect detection
- Shortest changeover times in the industry
- Minimized untested ends
- Reduced maintenance due to wireless signal and power transmission
- Throughput speed up to 200 ft/min (1 m/s)

A System Made for OCTG Pipe

PIPEPROOF provides the following advantages:

- Local service
- Wear and spare parts stocked locally
- Financing available

Reinventing Flux Leakage Testing

The innovative PIPEPROOF with its new generation ROTOMAT DA / TRANSOMAT DA flux leakage system offers an improved and reliable detection of natural defects. Both, transversal and longitudinal on OD and ID. The wall monitor function together with the defect detection make the PIPEPROOF a complete testing systems.

The miniaturization of sensors together with highly integrated electronic components dramatically increases the number of channels. This makes a more precise and focused scan of the surface possible, giving customers a more complete set of information regarding detected defects. The C-Scan, which visualizes these defects in high-definition and real-time, results in a completely new evaluation of the test material to meet rising quality requirements.

Operation Software



Easy-to-Use Operation Software

The highly modular software design allows for customer-specific solutions achieving optimally adapted configurations. The software offers an easy to operate graphical user interface (GUI). The different windows of the GUI can be tailored to individual preferences. It is also possible to split the GUI on several screens, e.g. to have the signals of the ROTOMAT DA on one screen and the signals of the TRANSOMAT DA on another screen.

High-Definition C-Scan to Detect Oblique Defects

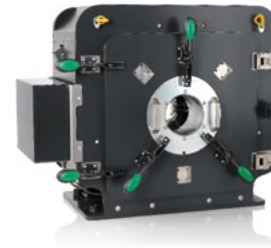
The newly developed high-resolution sensor array technology of the ROTOMAT DA / TRANSOMAT DA allows the detection of even the finest changes in the material surface. Smallest stray fluxes can be detected by the highly sensitive sensors. Special algorithms (patent pending) working on the high-definition C-Scan enable the detection of defects on the outer and inner pipe surface in all directions. Therefore, it is possible to find oblique defects as well as short defects.

Reliable Detection of Natural Defects

This opens up completely new testing possibilities. In addition to oblique defects, natural defects of all angles and lengths can be reliably detected. High reproducibility for any defect length down to 1/2" is achieved. For the first time, defects can be visualized in high-definition quality on the C-Scan, so that all defects can be seen in real time on the screen. This significantly reduces processing costs in terms of time-consuming manual or visual inspections at the proof up station, as well as the special end area testing.

The new PIPEPROOF

FOERSTER has developed the PIPEPROOF for the unique requirements of the OCTG inspection market. This standardized system will provide significantly improved defect detection with the new generation instrumentation ROTOMAT DA / TRANSOMAT DA. FOERSTER's PIPEPROOF is also capable of detecting oblique defects with optimized signal to noise ratio. Due to its small footprint the turnkey system can be integrated easily into any existing environment on customer site. PIPEPROOF represents high performance pipe inspection with maximized uptime and reduced changeover times.



Centric Upright

The new TRANSOMAT DA
With the new TRANSOMAT DA sensor system, pipes with a diameter of 2 3/8" (60.3 mm) to a maximum of 14" (355.6 mm) can be tested for transversal defects.

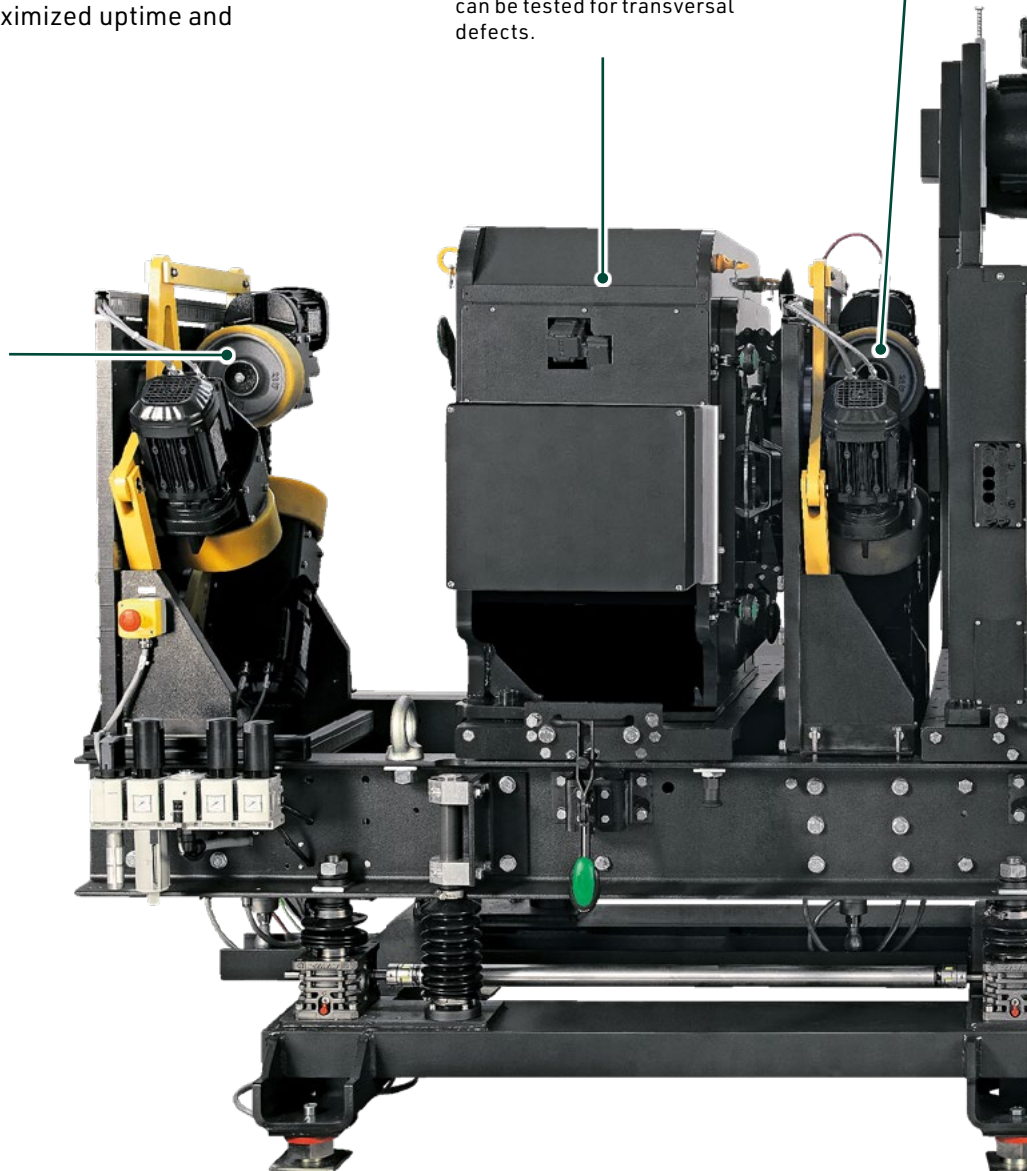
Centric Upright

Centric upright with motor drive for the mechanically coupled guiding and driving rollers, which are arranged at a 120° angle. Diameter adjustment is automatic.



Grade Verification (optional)

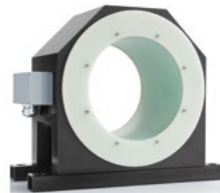
The MAGNATEST D is used for testing materials for their properties. The combination of high excitation currents and complex evaluation electronic equipment detects even very small grade discrepancies.





The new ROTOMAT DA

The new ROTOMAT DA is a fully digitized, robust and maintenance-friendly flux leakage test system. It's used for the detection of longitudinal defects.



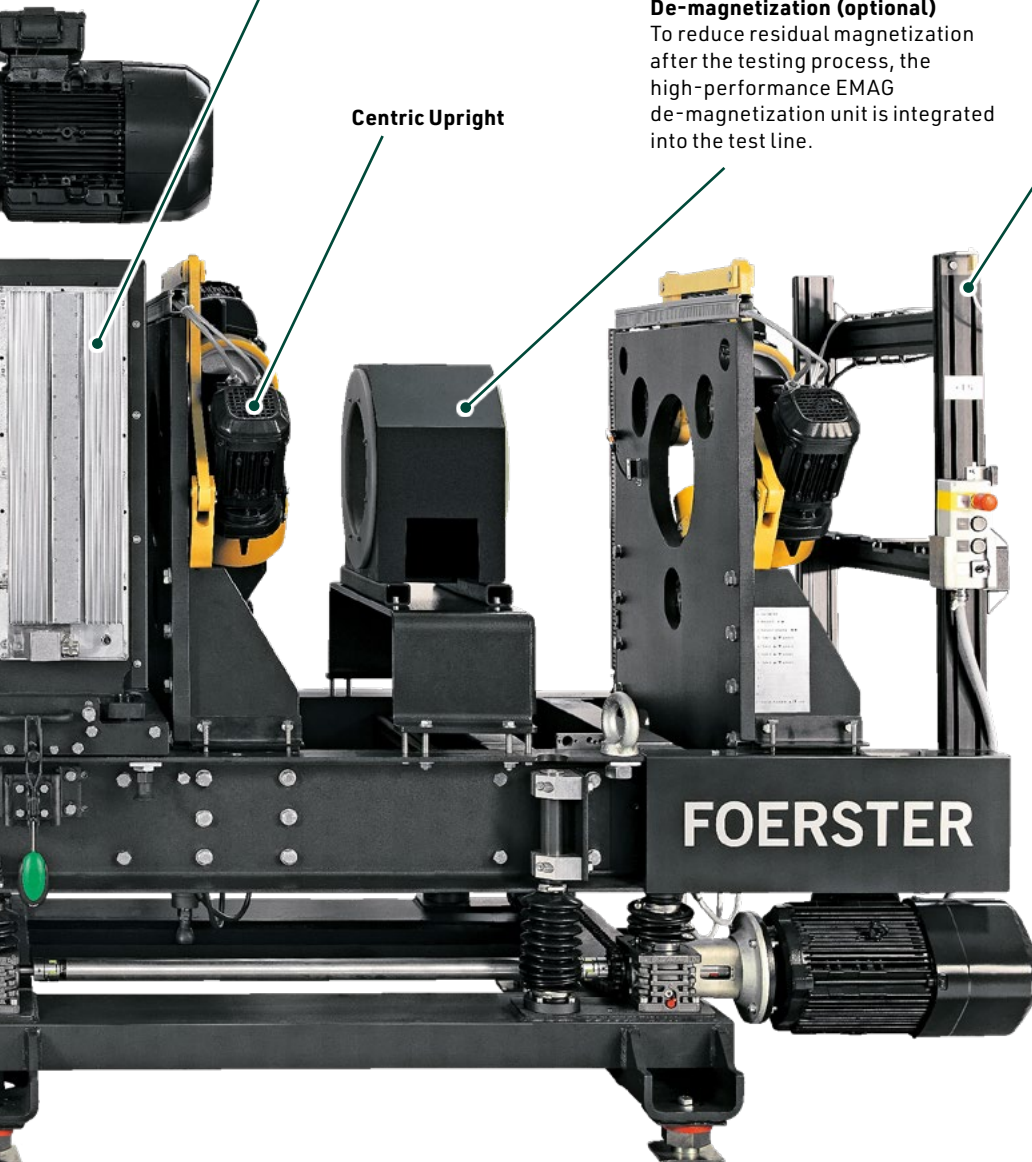
De-magnetization (optional)

To reduce residual magnetization after the testing process, the high-performance EMAG de-magnetization unit is integrated into the test line.

Centric Upright

Color Marking (optional)

A color marking system is integrated into the test line for accurate defect marking.



Technical Data

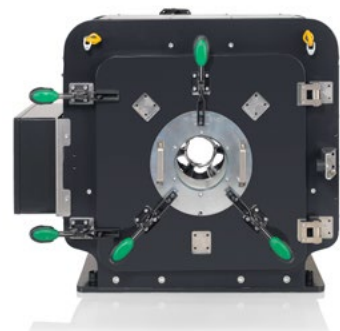
General

PIPEPROOF	
Standards	API 5 CT, L, D, latest versions
	DIN EN ISO 10893-3
	Other standards on request
Test methods	Non-destructive testing with Direct Current Magnetic Flux Leakage (DCMFL) to detect longitudinal, transversal, oblique, external and internal defects
Pipe end condition	Plain, upset or threads and couplings
Test material	Round ferromagnetic steel pipes (seamless or longitudinally welded)
Pipe diameter	Size 1: 2 3/8" (60.3 mm) – 8" (196.8 mm)
	Size 2: 4 1/2" (114.3 mm) – 14" (355.6 mm),
	optional: down to 2 3/8" (60.3 mm)
Wall thickness monitoring	down to 5% wall thickness reduction
Untested ends	max. 4" (100 mm)
No. of channels	ROTOMAT DA: RO 205: 80, RO 365: 192
	TRANSOMAT DA: TR 205: 288, TR 365: 576
Test head operation	ROTOMAT DA: controlled
	TRANSOMAT DA: controlled
Testing speed	Testing speed 200 ft/min at rotating speed of 400 RPM
	Pipes with an outside diameter greater than 4 1/2" having a wall thickness of > 0.5" may require adapted rotating speed for best ID detection
	Detailed speed diagram provided upon request
Straightness	0.2% of the total pipe length and 1/8" (3.18 mm)
	max. drop over a length of 6.0 ft (183 mm)
Pipe temperature	5 – 80 °C (41 – 176 °F)

Changeover Time

Complete changeover including calibration procedure takes one person less than 20 minutes.

- Easy to use mechanical quick releases allow for a dimension change of TRANSOMAT DA in less than 5 minutes
- Adjustment procedure for ROTOMAT DA in less than 10 minutes



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The FOERSTER Group is represented by subsidiaries and representatives in over 60 countries worldwide. You can find a complete overview on our website.

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