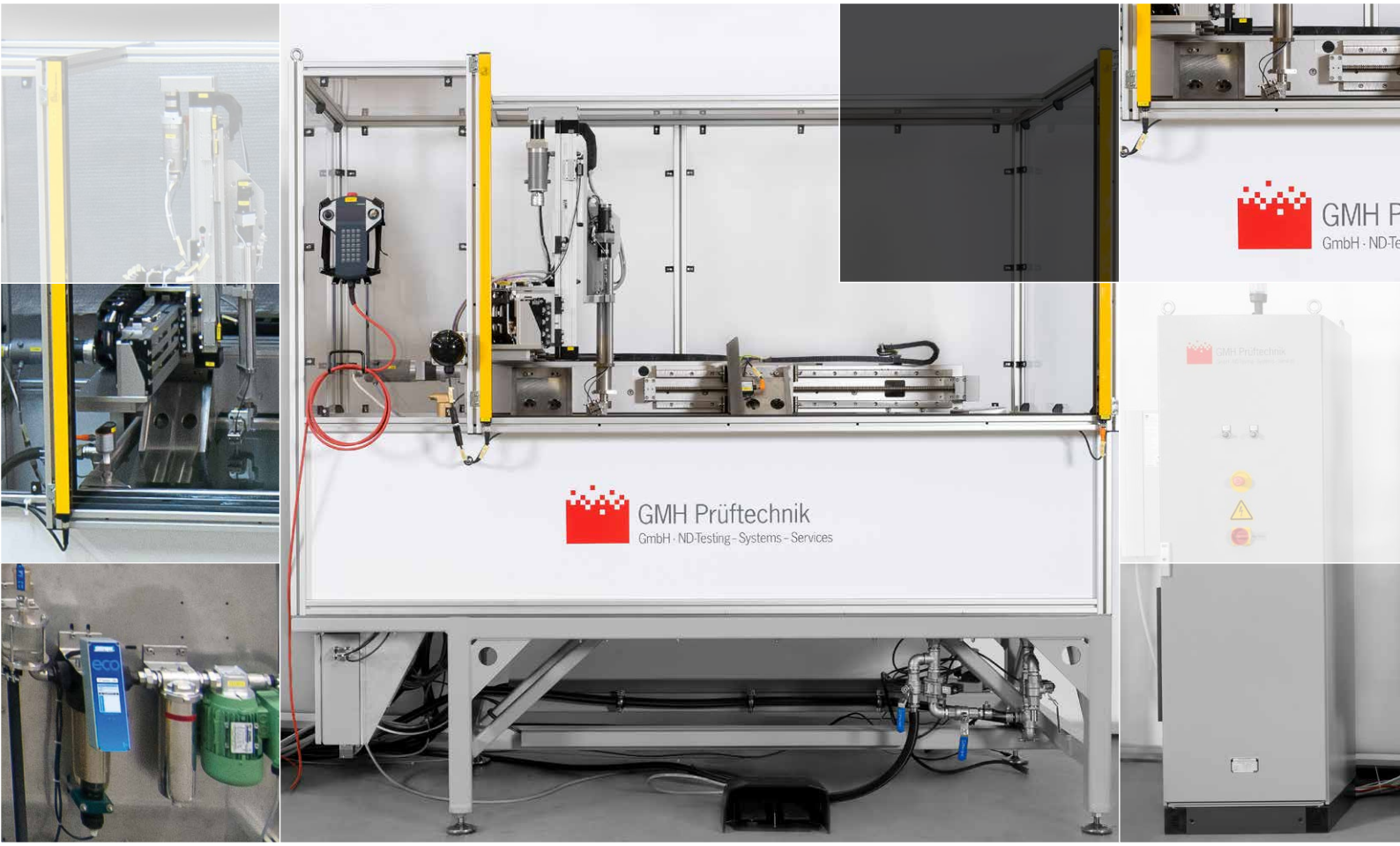
Ultrasonic Immersion Tank Testing System

Immersion Tank Testing System USTB 600/5-1C



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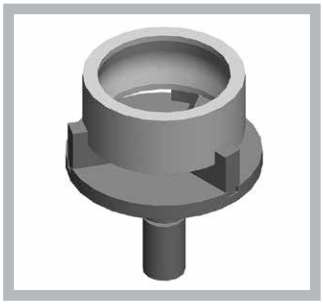
Roller support



Turntable

Deposit table

Water treatment with table

Brief description

The immersion tank testing system is used wherever extremely flexible use is important. It offers users the option to test very precisely a wide variety of test objects with different geometries. Its wide range of additional equipment provides you flexible options for use connectedwith high precision. In particular, the tests for ascertaining the degree of quality and purity of steel samples in conformance with various standards and regulations are performed very efficiently. The equipment meets the stringent requirements of regulation SEP 1927, where the highest test class corresponds to a KSR of 0.3, and impressively underlines the extraordinary proof sensitivity of the testing system. This value can be even lower depending on the application. This has been achieved because right from the developmental phase of the testing system, special attention was paid to precise guidance of the testing objects. In addition, interferences were minimized using a drive technology developed in-house. A software with an intuitively and conveniently operated user interface - developed specially for this application - provides a fully automated evaluation of the test results for the first time ever. This simplifies the test sequence considerably, improves test safety and delivers comparable results. Moreover, the high-performance 2D CAD import function reduces the set-up times and test times which substantially reduce costs of tests for quality and purity.

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Technical data

Features

- Simple teaching of motion sequences
- High degree of mechanical precision
- Fully automatic analyse of the test results conforming to SEP 1927
- Rapid testing periods with high resolution
- High-performance operating software
- Results are displayed in images A-, B- and C-scans, runtime
- C-scans, TD-scan and much more
- Can be extended to meet customers' requirements

Ultrasonic testing system

- Fully integrated PC-based ultrasonic test system
- Test results displayed on a 22"-TFT-monitor
- Various access hierarchies always ensured by using passwords
- High signal-to-noise ratio
- DAC – dynamic depth compensation (with graphical representation of the curve)

Probe frequency	0,5 MHz…20 MHz
Bandwidth	30 MHz
Filter	HP, TP
Adjustable dynamics	96 dB (analog)
Digitizer	100/200 MS/s with 12 bits
Pulser Voltage	approx. 230 V at 50 Ω neg. Pulse
Slew rate	≤ 4 ns

Control system

- Fully integrated drive and control system
- Automatic control of the test sequence
- Extremely low-noise precision servo drives
- Lowest interference in testing technology
- Direct move of scanner to indicators via C-scan

Automation and mechanics

- Stainless steel tank with edge, pedestal and adjustable machine feet
- Precision clamping device for round samples
- Precision deposit table with positioning support for tetragonal test samples
- Flexibly adjustable test probe holder with fine mechanical adjustment of the angle of the test probe
- Safety light barrier

Sample length	0 mm…600 mm
Sample diameter (round)	20 mm…250 mm
Sample dimensions (rectangular)	20 mm…250 mm
Sample dimensions (flat) (w x h)	500 mm x 250 mm
Weight of sample	100 kg max.
Test grid	0,1 mm…5 mm
Repetitive positional accuracy of the test probe	± 0,1 mm
Path resolution	± 0,01 mm min.
Maximum testing speed	200 mm/s
Dimensions of tank (w x h x d)	1200 x 450 x 450 mm
Overall dimensions (w x h x d)	2500 x 2000 x 1100 mm
Quantity of water	approx. 250 l
Weight (without liquid):	approx. 450 kg

Evaluation and operating software

- Operating system Windows 7/64 bit
- 2D CAD Import Function
- Test data and sample data input manually
- Several algorithms for evaluation
- 2D and 3D evaluation
- Parameters of various standards can be stored
- Freely adjustable assessment thresholds
- Evaluation of individual samples
- Charge evaluation and management of extensive
- Range of zoom functions
- Displays appear directly in the C-scan
- Powerful report generator with various export functions
- Data backup using USB-drive or LAN/WAN
- Remote diagnosis and offline analysis functions

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