

List of test methods

Area	Testing
Mechanical-technological testing	Tensile test at room temperature with fine strain gauge up to 600 kN
	Tensile test at elevated temperature with high-temperature strain gauge up to 1,000 °C
	Tensile test at low temperature (-196 °C) with strain gauge
	Notched bend test, 2 pendulum impact testers: working capacity 450 J according to ISO regulations, 750 J according to ASTM regulations (from room temperature to -196 °C)
	Compression tests up to 600 kN
	Shear tests
	2 fully automatic hardness testing systems
	Hardness testing Vickers HV0.3 to HV30
	Rockwell HRC, HRB hardness testing
	Vickers hardness mapping in 2D and 3D
	Mobile hardness testing according to UCI method
	Testing equipment for technological tests on pipes with welded seams (e.g. bending, expansion, ring tensile and ring folding tests)
	Fracture testing
Metallography	Automated and manual sample preparation for metallographic grinding
	Digital image processing and archiving
	Microscopes and recording stations for microscopic and macroscopic examinations
	Structural examinations
	Grain size determination
	Phase analysis
	Delta ferrite determination
	Coating and surface layer characteristics
	Mobile metallography
Scanning electron microscopy (SEM)	Secondary and backscattered electron imaging
	Energy dispersive X-ray microanalysis (EDX)
	Element distribution images

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Area	Test
Corrosion testing	Fully equipped corrosion laboratory for all common corrosion tests on stainless steels in accordance with ASTM and ISO standards
	Testing for intergranular corrosion
	Testing for pitting corrosion
Analysis of chemical composition	Stationary optical emission spectroscopy
	Mobile X-ray fluorescence analysers
	Mobile optical emission spectroscopy
Other tests	Testing equipment for measuring permeability and residual magnetism
	Roughness measurement using the stylus scanning method
	Delta ferrite measuring devices (Fischer probe)
	Ferrite indicator test
	Laboratory chamber furnaces for heat treatment (temperature: max. 1,280 °C)
	Strain gauge measurement technology
	Temperature measurement technology using thermocouples

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