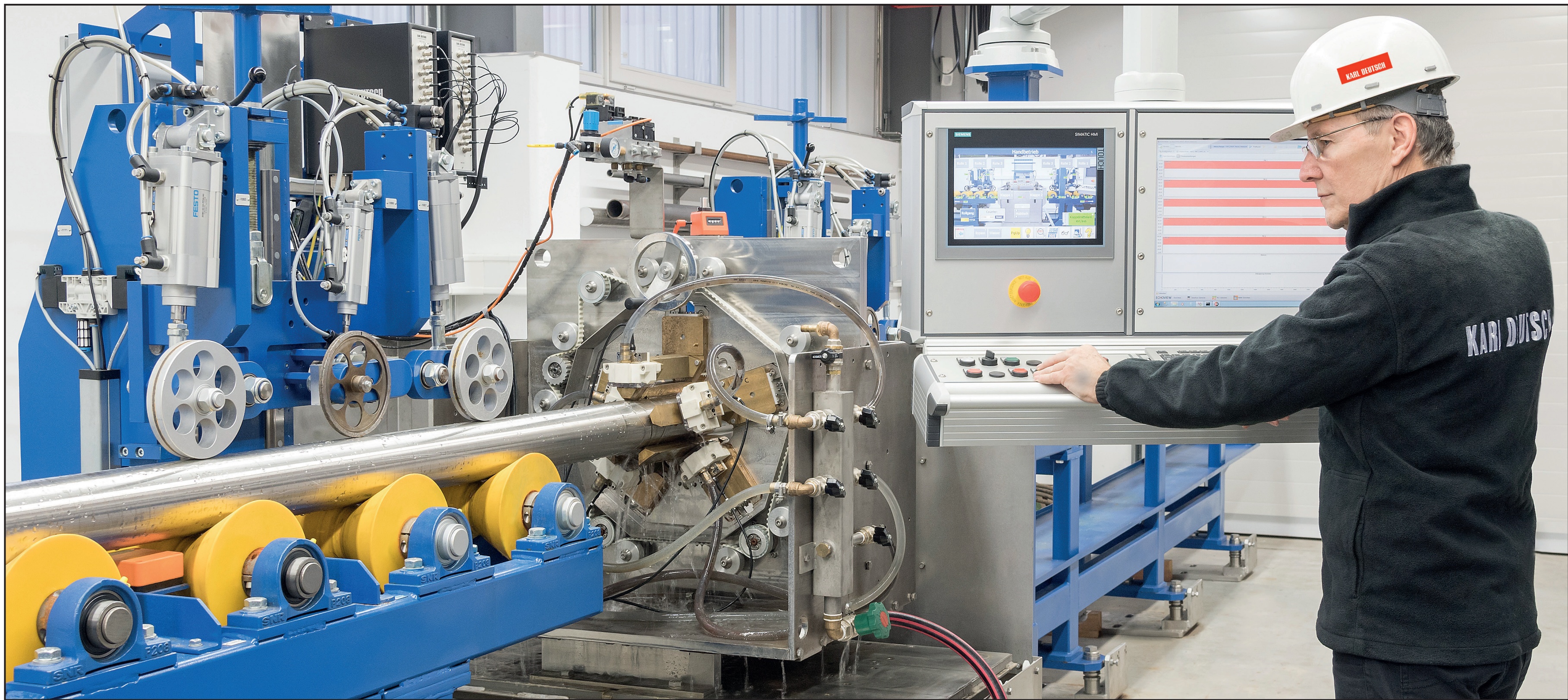


Phased Array Inspection of Bars

ECHOGRAPH-STPS-PAUT



The phased array bar inspection system ECHOGRAPH STPS-PAUT is designed for a high testing speed of up to 2 m/s. Simultaneous and simple adjustment of the probe carriers ensure short change-over times. The height adjustable test table with a sliding device is used to move the test mechanics between test position (in-line) and calibration position (off-line), which can also be used to execute calibration and service work without interfering with the ongoing production.

Testing Principle

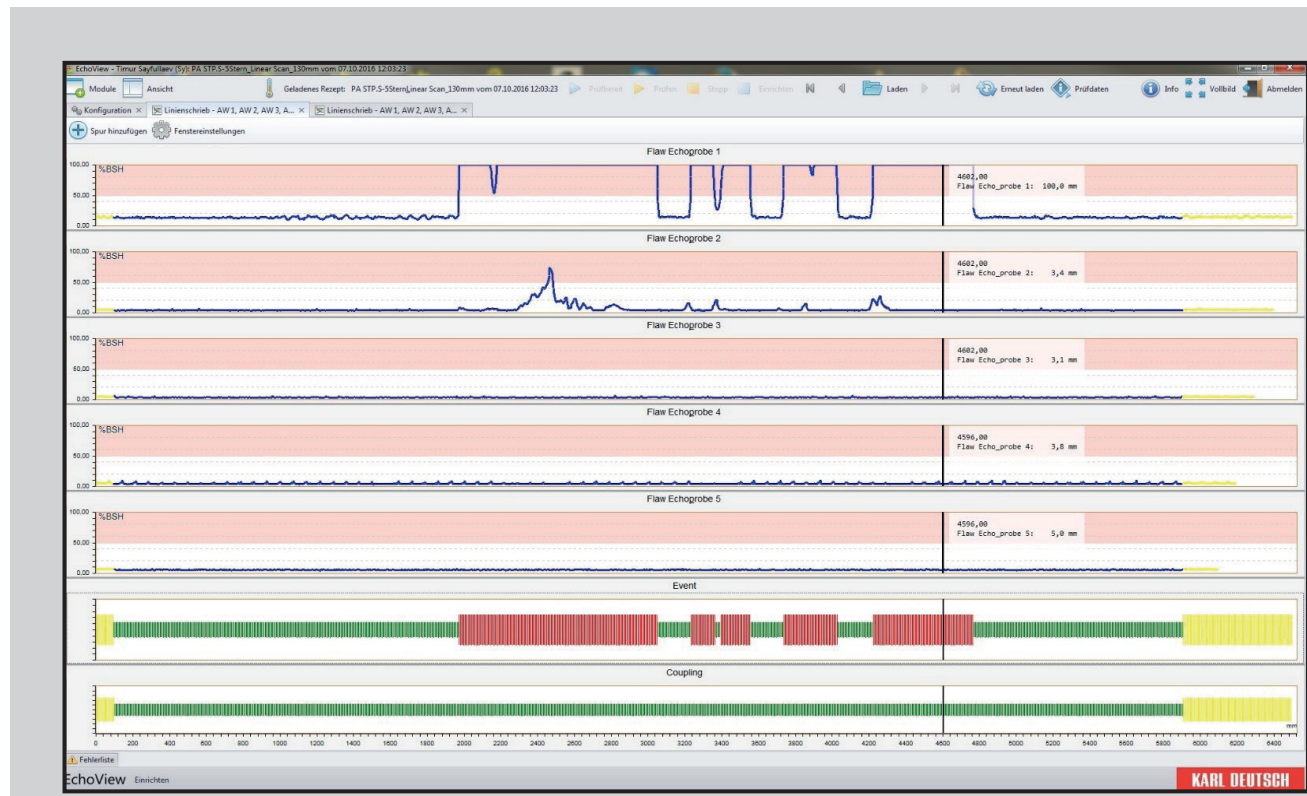
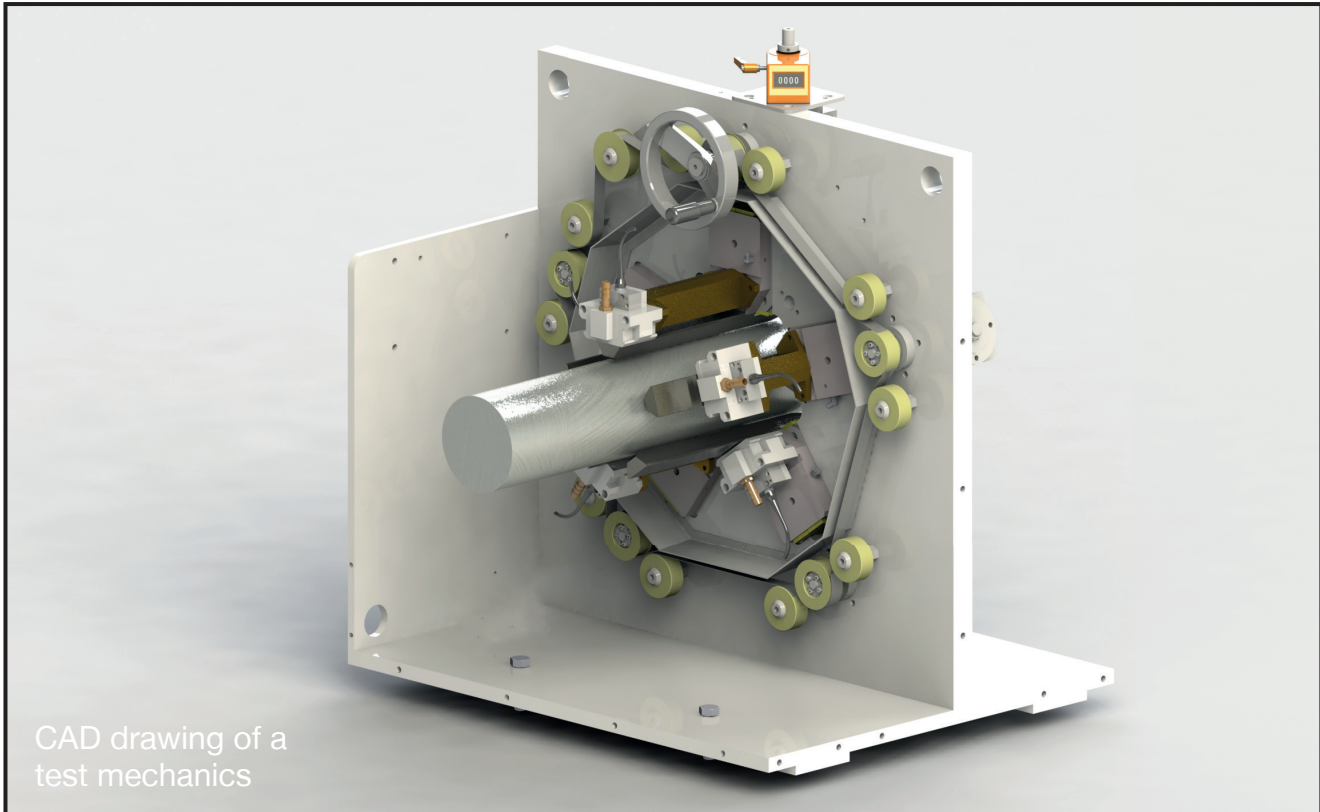
- 5 phased array probes, equally spaced (72°) around the bar circumference
- Straight beam shots for core defect detection and angle beam shots for surface defect detection
- Probes generate sector scans with up to 20 shots and, in total, up to 120 active parallel test channels
- Overlapping sound fields for 100% coverage of the cross section
- Short untested ends

Probes Mechanics and UT Coupling

- Guiding skids protect probe carriers
- Coupling via guided water jets (squirters)
- Contact-free coupling ensures little probe wear, also for black bar testing
- Spring-loaded probe carrier suspension for compensation of unavoidable mechanical bar straightness tolerances

Work Environment

- Electronics mounted in a shielded and fully air-conditioned electronic cabinet
- Movable operating panel to be relocated next to the test mechanics
- 24"-monitor for setting of the test parameters and for visual data display
- Remote access via diagnosis module



ECHOVIEW GUI with strip charts, assigned event and coupling information

ECHOVIEW Data Management Software

- Designed for industrial PC with a RAID managed HD system for highest data safety
- Windows® 10 operating system
- Documentation, storing and processing of the test parameters, test reports and results
- Optional support of communication with a remote host computer

Technical Data	
Material	round bars: steel hot rolled or cold drawn, aluminium extruded or cast, copper, brass, etc.
Diameter range (D)	16 to 130 mm (standard), option: from 8 mm up to 150 mm, various system set-ups are available
Length	min 2.5 m
Ovality	max. 2% of D
Straightness deviation	max. 2 mm/m
Surface condition	black, bright, drawn or cast
Temperature	max. 60 °C
Bar ends	machined, no burr
Sensitivity	min. FBH 0.7 under static conditions (dependent on diameter, surface condition, straightness)