

# **ECHOGRAPH Phased Array Ultrasonic Testing Systems for Bars**

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ECHOGRAPH-STPS testing system for black bars: Key properties for the STPS-system are the high testing speed up to 2 m/s and the simultaneous and simple adjustment of the five probe carriers. The coupling of the ultrasound is achieved with guided water jets. Our squirter systems for the water jet coupling allow test conditions comparable to immersion testing and short untested ends. This system is mainly arranged and operated as the existing STPS with conventional probes: changing diameter and calibration can be done in the same manner as now and the location (on site electronic and main cabinet in operator room) is also the same. The combination of the sound fields of the 5 Phased Array Probes provides a multiple overlapping with 100% coverage of the complete cross section. ECHOGRAPH PAUT-HRPS for the ultrasonic inspection of steel bars: The Phased Array Technique used in the system provides a 100% coverage of the cross-section of the bars with stationary probes without any mechanical movement and mechanical wear. The bars are tested in linear throughput up to 1m/s in special test chambers with exchangeable probe cassettes. Non-contact ultrasonic coupling is carried out in immersion technique. The ultrasonic phased array probes are mounted to probe cassettes. The cassettes are available in various sizes depending on the respective bar diameter. All probes are centrally arranged around the bar axis with a fixed distance (sound path) to the surface. The sound fields produce overlap in the circumferential and axial direction.