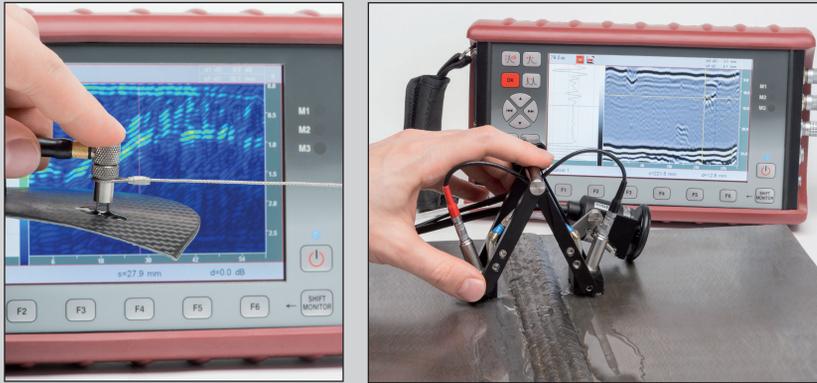


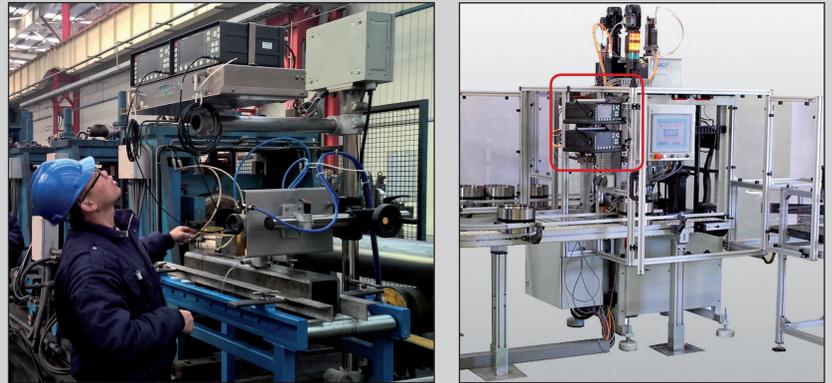
# UT Practical Examples

## ECHOGRAPH 1095: B-Scan and TOFD



Examination of a CFRP component with a wire encoder: The B-scan clearly shows the variable wall thicknesses of the component (left). A caliper scanner can be used to generate the TOFD-image of a weld (right).

## ECHOGRAPH Mobile Flaw Detectors in Automated UT Systems



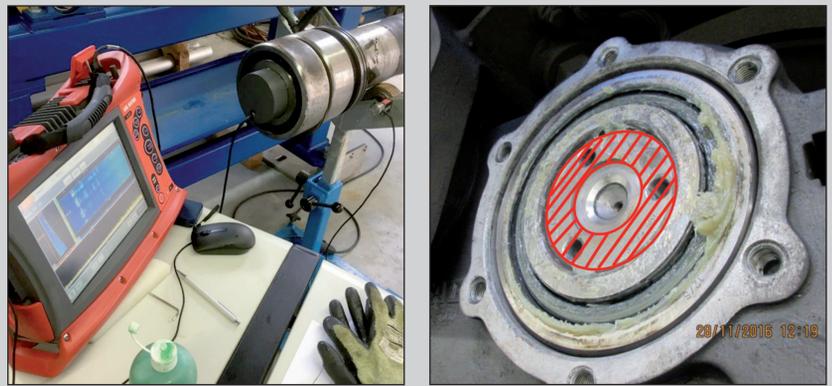
Two-channel ERW pipe weld testing during production of an endless pipe (left). Testing of ball bearing rings in immersion method (© SKF-QTC, right).

## GEKKO Semi-Automatic PAUT with TFM Flaw Characterization



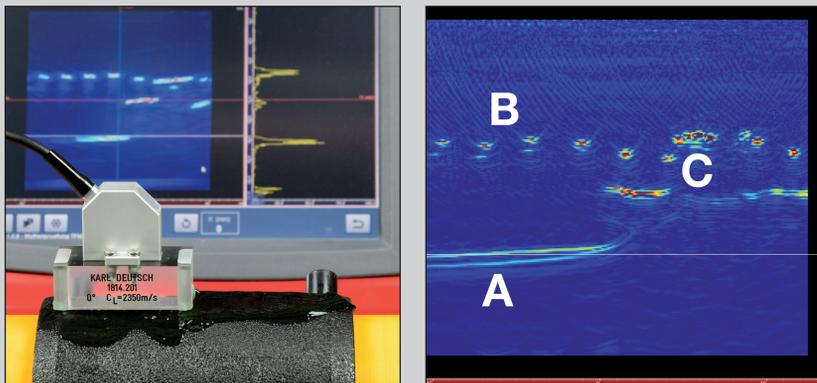
Testing of T-welds on offshore wind turbines with a motorized scanner and a 35 m long cable set for remote control and probes @ Ocean Breeze.

## GEKKO Semi-Automatic PAUT on Train Axles @ DB Berlin



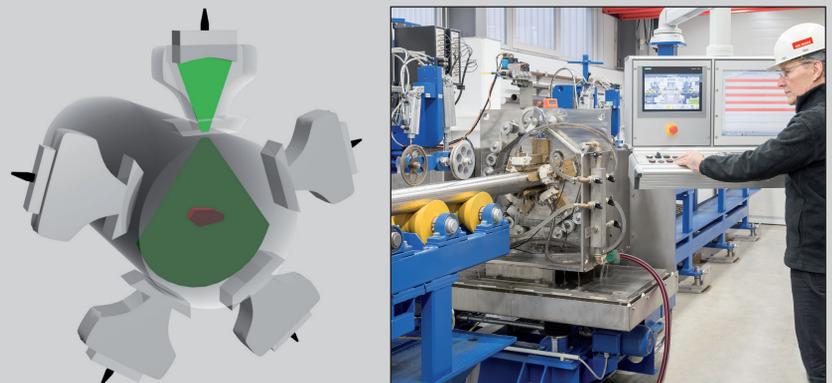
PAUT axle test with insonification on the front side by means of a compact scanner (grey prototype, left) and a view of the axle front side (right) with the coupling area (hatched).

## MANTIS Semi-Automatic PAUT of Plastic Pipe Fittings with TFM



A linear PAUT probe is placed on the black fitting that joins two yellow PE pipes. The real-time TFM-B-scan shows the PE pipe backwall (A), the heating wires (B) and the backwall echo reduction of the fitting (defective area C).

## ECHOGRAPH-STPS-PAUT High-Speed Bar Testing (Linear Feeding)



High-speed bar testing system with squirter coupling and 5 PAUT probes. Five sector scans provide complete cross-sectional coverage (left). Testing system and conveyor in the KARL DEUTSCH lab (right).

## ECHOGRAPH-RPTS Rotational Inspection of Bars with Test Bridge



UT system in bridge design for bars up to 18 m in length. Six identical carriages ensure reliable overlapping testing. A return-to-defect function, a C-scan software and a paint marking system are provided.

## Presentation P15 @ German NDT Conference, Leipzig Germany, May 2018

This presentation covers various industrial applications of ultrasonic testing. Besides ultrasonic testing with conventional handheld flaw detectors, examples of modern phased array portables are shown. Some of the devices provide imaging documentation that is used by the inspectors to assess the tested components, thus rendering semiautomatic testing. Finally two UT systems for steel bars are shown.

Authors:  
Dr. (USA) Wolfram A. Karl Deutsch, Dipl.-Geol. Stefan Kierspel, Dr. Helge Rast  
c/o KARL DEUTSCH Pruef- und Messgeraetebau GmbH + Co KG, 42115 Wuppertal, Germany  
info@karldeutsch.de, www.karldeutsch.de, Youtube -> NDTChannel



Sales Department, Administration, Manufacturing of Portables, Sensors and MT + PT Liquids



Workshop for Manufacturing of UT, MT and PT Systems