Are you familiar with our accredited industrial testing services?

- Test laboratory accredited according to DIN EN ISO / IEC 17025 and competent to issue certificates for qualifying and validating (new) non-destructive testing (NDT) processes for industrial testing
- Accelerated time-to-market and opportunity for qualified, standard-compliant deployment in industrial applications both for new in-house developments and for custom adaptations of innovative NDT technologies in fields where standards have not yet been established
- Certification of the corresponding quality management system in accordance with DIN EN ISO 9001

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These test signals comprise four echos which are evaluated regarding to amplitude, quantity, and time-of-flight. At least three echos of fitting amplitude have to be present for the transmitter/receiver channel being labeled as operative. Then, this channel is marked in green color within the channel survey map. If a channel doesn’t fulfill the inspection criteria, the channel is marked in red. Additionally, the software can easily and quickly find and change the adjusted IP address.

Benefits

- Customer can perform an in situ rapid test
- No expensive defect diagnostics in the system
- Worldwide operation and control by teamviewer
- IP address of the inspection system can be changed online
- Search for IP address in the subnetwork
- Primed operation with USB3 interface

Situation

Fraunhofer IZFP provides a large spectrum of inspection modules for multiple nondestructive inspection methods. These methods and modules can be found in diverse industrial branches – automotive, railroad, construction of components, energy plants, environmental engineering etc. – and can be adapted to a wide variety of tasks. Typically, the modules add new features to existing inspection equipment or are assembled into new inspection systems. Many of these modules are on duty for many years and in divergent scenarios. This also applies to the so-called ETHUS electronics (“Ethernet Ultrasound”), which is an ultrasound board that can be controlled worldwide via ethernet.

In industrial environments, the components’ hardness is crucial. In this regard, cabling or connector assemblies can become a problem by causing the breakdown of the inspection equipment. This often results in costly extra maintenance.

Solution

The probe simulator developed at Fraunhofer IZFP provides an easy method for a rapid test of the cabling including the connector assembly. The associated software can be adapted to the electronics, e.g., to choose between the applied channel boards (16/8 channel) or to adjust the slot position of a board fast and easily. The simulator is able to test all channels or special segments in a matter of seconds.

The simulator consists of

- attachment box and
- software.

The attachment box can be attached to the inspection electronics via x-pin connector. Then, the software-triggered test can start immediately. From the transmission pulses of the single channels test signals are generated which are sent back via the corresponding receiver channels.