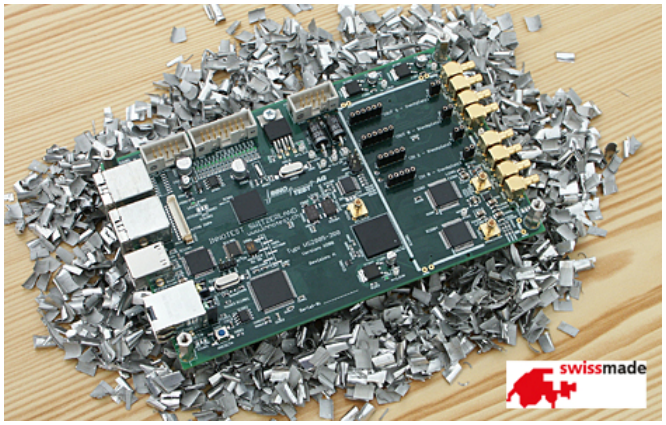
Eddy Current Slave WS2005

Universal Multifrequency Eddy Current Slave

Requirements in concern to today's eddy current measuring and testing systems are steadily increasing. Higher flexibility and improved technical specifications are due to a wide spread up range of products and applications.

To fulfil recent requirements a brand new, fully digitized Eddy Current Slave WS2005 with highest performance has been realized. Investigated and built in Switzerland the new universal slave is based on the long term experience and educated knowledge of the Innotest stuff in relation with eddy current inspection technique as well as an up-to-date hardware technology.



WS 2005-XNN: a high performance Eddy Current Slave

Specifications of the WS2005 Eddy Current Slave

- eurocard size 100x160 mm, SMB connectors
- testing frequencies free selectable from 10 Hz to 15 MHz (optional up to 25 MHz)
- 2 measuring channels with absolute stable phase relation e.g. for a simultaneous multi frequency inspection and measuring mode
- integrated coil-breakage check
- signal processing and data compression trough onboard DSP
- sequential multi-frequency mode (up to 10 frequencies, standard version 4 respectively 8 frequencies)
- frequency-sweeping for coil characterization and / or impedance measurements and analysis
- digital high- and lowpass filter
- harmonic wave analysis
- data rate up to 100 kHz / channel (16 Bit)
- 8 input- and 8 output signals on 5V level, individually controlled
- synchronization and masking of the measuring data with input-signals (e.g. position, …)
- data transfer to PC / µP trough onboard interfaces:
  - Ethernet (10/100 Mbit/s)
  - USB 2.0 (480 Mbit/s)
  - SSI (120 Mbit/s)
- synchronized multislave mode for multichannel systems (stable phase)
- application selectable driver and preamplifier modules, symmetric und asymmetric modules available (e.g. measuring bridges)
- standalone mode with alarm- and signing options

Applications

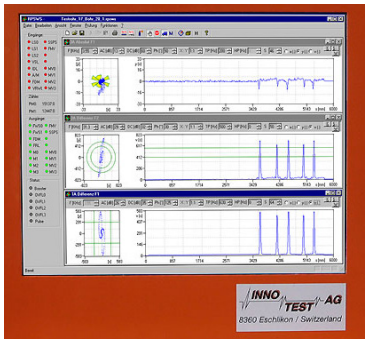
Due to performance and universality the slave can be parameterized and adapted for quite a lot of different applications using Innotest modular accessories. Customized Innotest measuring and testing devices and systems cover a wide range of industrial eddy current applications and needs. Main interest with corresponding WINDOWS software packages belong to nondestructive material characterization (AMC 3.0; Adaptive Material Characterization) and nondestructive flaw detection (RPSWS 3.2, MFECIS 3.0; inspection of tubes, wires and bars including C-Scan data imaging).

Material Characterization

Nondestructive Testing and Measuring of: Hardness, Hardnessdepth, Decarburization Depth, Tensile Strength and Stress, Electrical Conductivity, Magnetic Permeability, Material Sorting,… and others

Flaw detection integrated in the production line

Nondestructive Testing and Flaw detection for tubes, wires and bars with encircling or segmented through-type coils (allowing maximum testing speed, e.g. 120 m/s and more) and rotating sensors guaranteeing a maximum detection sensitivity for surface exposed flaws.



GUI der Windows Anwendung RPSWS

Typical applications relate to tube welding lines and drawing machines. International and national product standards such as ISO, EN, DIN, AF, BS, ASTM and JIS refer to this method of eddy current testing.

More and more surface flaw control of metallic plates and tapes as well as on turned parts becomes interesting.

Software and Driver

The slave is integrated in different Innotest WINDOWS software packages (AMC, RPSWS,MFECIS,..) through a Driver-DLL.

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Innotest AG
Rosenstrasse 13B
CH-8360 Eschlikon
Tel.: 071 970 0 970
Fax: 071 970 0 974
email: info@innotest.ch
homepage: www.innotest.ch