

INSIS-EX

Advanced simultaneous multifrequency Eddy Current Test System for
In-service inspection of heat exchangers and steam generators
Remote Field Eddy Current Tests for ferromagnetic tubes
General purpose static eddy current tests
Rotating probe / dynamic tests
Conductivity and Coating thickness measurement

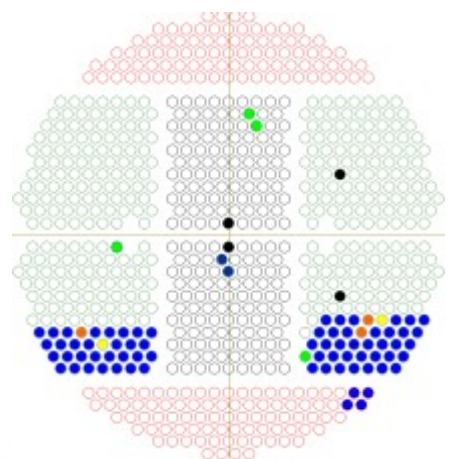
INSIS-EX is a powerful leading-edge multifrequency multichannel eddy current test system ideally suited for manual or automatic in-service inspection of steam generator / heat exchanger / BOP tubes.

Up to eight frequencies can be used simultaneously for testing with up to 16 differential and absolute channels at very high sampling rates. Multiplexing extends the capability to up to 512 channels at 256 test frequencies.

Up to 8 probes/coils can be used with the system which is compatible with bridge, send-receive, rotating or array probes, making it extremely versatile. Remote field eddy current inspection is supported through a compact external amplifier.

Software includes data acquisition, storage, automatic analysis, tubesheet mapper, history compare and reporting. It optionally supports probe pusher and robotic manipulators for use in hazardous areas. TCP/IP servers accept connects from remote PCs on Internet or Intranet over ethernet.

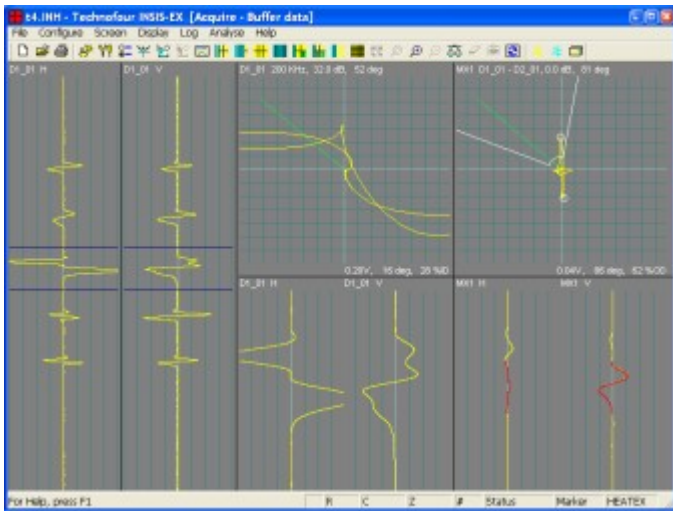
- ✓ High speed inspection due to fast sampling rates
- ✓ Simultaneous Injection or Multiplexed operation
- ✓ Automatic setup for ASME calibration tubes
- ✓ Three automatic mixers provide flexibility
- ✓ Automatic analysis with flagging of flaws
- ✓ Animated slow-motion signal replay
- ✓ Total data integrity with indelible timestamps
- ✓ Generate power reports with tubemaps
- ✓ Online manual and context-sensitive help
- ✓ Intuitive user-configurable displays
- ✓ Scalable architecture: Choose the right system
- ✓ Windows XP Professional platform
- ✓ Stay connected from anywhere in the world
- ✓ Get e-mailed reports at scheduled times
- ✓ Optional support for robotic manipulators
- ✓ Optional support for automatic pusher-pullers
- ✓ Ultimate versatility for all eddy current tests
- ✓ Remote field testing at multiple frequencies



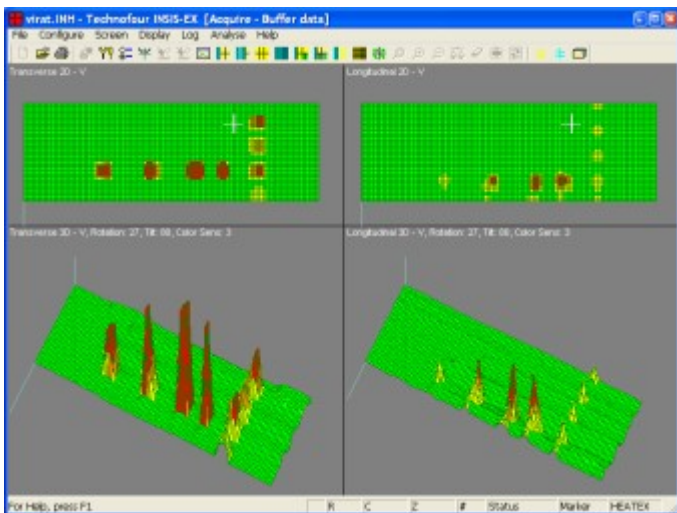
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INSIS-EX TECHNICAL DATA



INSIS-EX displays are highly configurable. The user can select from several templates and bring up any channel at any position on screen.



Technofour ViRAT array probes can be used with INSIS-EX for detection of tight cracks like PWSCC in tubesheet area, roll-transition regions and U-bends. ViRAT offers significant improvement over motorized pancake probes in terms of speed of inspection, costs and reliability. 3D C-Scans present eddy current data for a more intuitive recognition of defects. Any indication can be analyzed in a corresponding 2D display using familiar phase analysis against calibration curves.



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Frequency Range

55 Hz to 6 MHz

Number of Channels

Simultaneous Injection

Up to 16 (8 differential and 8 absolute)

At up to 8 frequencies

Multiplexed Operation

Up to 512 (256 differential, 256 absolute)

At up to 256 frequencies

Number of Probes / Coils

Up to 8 simultaneously

Sampling Rates

Simultaneous Injection: Up to 50K samples/sec

Multiplexed Operation : Up to 15K samples/sec

Data Resolution

14-bit

Signal Gain

0 to 86 dB in 0.5 dB steps

Phase Rotation

0 to 359 degrees in 1 degree steps

Automatic Mixers

3 mixers real-time as well as post-acquisition

Thresholds

Sector-and-amplitude for differential channels

Amplitude for absolute channels

Data presentation

X-Y, strip-chart, 3D C-Scan, waterfall

Data security

2 level password protection

Data analysis

Automatic phase analysis based on calibration

curves. Automatic flagging of events

Data storage

Hard disk drive, USB

Connectivity

Intranet / Internet over Ethernet

Operating System

Windows XP Professional

Sensors supported

Differential, absolute, send-receive, pancake,

rotating, ViRAT array probes, special probes. Most

commercially available probes are supported

through adaptors

Power Requirement

85-260 V AC, 50/60 Hz

Included software

Data acquisition, storage, analysis, reporting,

tube-mapper, history compare, RemoteViewer

Optional software

ManPOS manipulator and pusher controller

Optional hardware

Remote field amplifier, Robotic manipulator,

automatic pusher-puller etc

Straight/flexible bobbin probes, coils, arrays

Variants

INSIS-EX-2 2 frequencies/4 channel simultaneous

64 frequencies/128 channel muxed

INSIS-EX-4 4 frequencies/8 channel simultaneous

128 frequencies/256 channel muxed