

DINSEARCH

DINSEARCH 1.01



- Fast and efficient inspections
- Superior detection
- Wide range of applications
- Easy to use
- Detailed results and storage
- No need to clean tubes
- Manual and winch operation

Fast, easy, and reliable high-resolution tube inspection.

Dinsearch 1.01 helps you rapidly inspect carbon steel tubes in heat exchangers, coolers, boilers, and similar equipment, using electromagnetism for high-resolution analysis.

The system can inspect tubes with an O.D. ranging from 15mm to 70mm and with typical wall thicknesses. A probe is inserted and withdrawn from each tube to generate signals that indicate the tube's condition.

Dinsearch 1.01 utilises a unique approach that differs from conventional eddy current, remote field eddy current, and magnetic flux leakage techniques. The system partially magnetises the tube wall. Any metal loss due to pitting, corrosion, erosion, or other mechanisms causes localised variations in the magnetisation level within the wall. Sensors on the probe detect these variations to assess the tube's condition.

The system inspects tubes at speeds around 50 meters per minute, similar to conventional eddy current systems for non-ferrous tubes. This is significantly faster than IRIS ultrasonic systems, and unlike IRIS, Dinsearch 1.01 doesn't require the tubes to be clean or filled with water.

The inspection data from each tube is presented on a computer monitor, initially displaying the entire tube

length. The system allows for zooming in on any specific section to view it with high resolution.

The system stores inspection data on a hard disk with capacity for several thousand tubes. This data can be downloaded for archival storage.

Dinsearch 1.01 features user-friendly controls that don't require complex adjustments or lengthy setup procedures.

For those who prefer a traditional approach, Dinsearch 1.01 works with a conventional chart recorder alongside the computer display.

While a winch is available to move the probe through the tubes, it's not essential. Dinsearch 1.01 gets good results regardless of the speed you pull the probe, so you can do it manually if you prefer.



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General Unit

Display	Three-channel display for data visualisation: top trace (differential), middle trace (absolute), and bottom trace (filtered version of the top trace).
Scan View	Initial post-scan view presents the complete scan length. This view allows for user-selectable magnification to examine any section in greater detail.
Storage	Local data storage and download capability for inspection results
Power	AC mains, universal input 90-250V, 50/60Hz, 500VA
Housing	Lockable aluminium case
Dimensions	460 x 390 x 240mm
Weight	15Kg (excluding probes)

Applications

Carbon steel tubes (15mm to 70mm O.D. with standard wall thicknesses) in various types of heat exchangers.

Tubes larger than 35mm O.D. in water-tube boilers. For larger tubes in water-tube boilers (or furnace wall tubes specifically), use Dinsearch 2.00.

Fin-fan coolers with aluminium fins.

Carbon steel tubes (with typical wall thicknesses) in heat recovery boilers, ranging from 15mm to 70mm O.D.

Tubular exchangers with ferromagnetic alloy tubes, e.g., ferritic stainless steels and some nickel alloys. Essentially, if a magnet sticks to the tube material, Dinsearch 1.01 can likely be used for inspection.

Sensitivity

Capable of detecting pits less than 1mm diameter in the best quality steels. Performance can be influenced by the steel quality and tube design; however, the resolution is sufficient to identify most typical defects.

Full calibration certification provided, traceable to The National Physical Laboratory (NPL), UK.

The Validation Centre (TVC) Limited reserves the right to alter or change product specifications without prior notice. Images are representative of full optional additions installed; delivered equipment and software may vary depending on options purchased.



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