OKTANTA

Design and manufacture of
non-destructive testing equipment

EM1501 Thickness Gauge
EMA+Piezoelectric Transducers Operate with Pulsed Electromagnet Transducers



WITHOUT SURFACE PREPARATION AND COUPLANT!

Operating gap of up to 7 mm!

Application of EM1501:

EM1501 is designed for thickness measurement of steel pipes wall, flat steel, steel flat bars or steel sheets, aluminum or other metal constructions.





EM1501 allows measurements:

- without the using of couplant;
- without any surface pretreatment;
- through the working gap up to 7 mm (for EMAT);
- after a single button touch;
- on both flat surfaces and surfaces with bending radius from 10 mm.

Transducers with a pulsed electromagnet



EM1501 can operate with:

- transducer with a pulsed electromagnet to which dirt does not stick!
- piezoelectric transducers to extend the range of measurable thicknesses:
  - 5 MHz transducer, dimensions of crystal 10 mm
  - 5 MHz transducer, dimensions of crystal 7.2 mm
  - 10 MHz transducer, dimensions of crystal 5 mm
- standart EMA transducers

EM1501 features:

- Thickness measurement through the gap up to 7 mm;
- A-scan display with a possibility of scaling;
- Selection of the algorithm for the thickness calculation (automatic, 2 gates, 1 gate);
- B-scan, C-scan display;
- Saving the C-scan measurement information (including A-scans);
- Connecting to various types of transducers including high-temperature ones that provide thickness measurement on hot objects heated up to 750 °C;
- Dirt does not stick to the surface of the **transducer with the pulsed electromagnet**



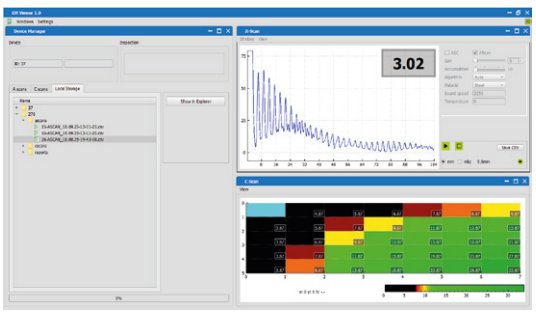


EM1501 is easily and quickly calibrated using specified thickness or sound velocity, as well as the known metal type.
The high operating speed of the device (16 measurements per second) allows you to easily and quickly measure the thickness of extended test objects.



The EM1501 Thickness Gauge can be connected to the **EMT14014T high-temperature transducer**, which can measure the thickness of objects heated up to 750° C, as well as the **EMT1501TP high-temperature transducer with the pulsed electromagnet,** which does not stick to dirt when operating with hot objects.

The **bright color screen** of the EM1501 allows displaying the thickness, A-scan, B-scan and C-scan for the current test object.
The EM1501 can transfer measurement results to a PC and generate reports on control results in the **EMViewer application**.



EM1501 specifications

Range of operating ambient temperature	-20...+50 °C
Duration of continuous work without battery recharge	7 hours
Range of sound velocity setting	1000...9999 m/s with 1 m/s step
Highest number of measurements per second	16
Dimensions	232 x 135 x 44 mm

For EMA transducers

Range of measured thickness for steel	2...200 mm
Thickness measurement error 2..25 mm	0.08 mm + 0.001·H
Thickness measurement error 25..200 mm	0.1 mm + 0.005·H
Permissible gap between the EMT14012 transducer and test object	up to 4 mm
Permissible gap between the EMT14013 transducer and test object	up to 7 mm
Permissible transducer skew	±25°
Lowest permissible radius of curvature of the test object surface	⩾10 mm
Operating frequency of the device	4 MHz
Range of operating temperature on the test object surface	-20...+80 °C (-20 ...+750 °C with EMT14014T)

For piezoelectric transducers

Range of measured thickness for steel	0.5...200 mm
Thickness measurement error 0.5 .. 25 mm	0.08 mm
Thickness measurement error 25 .. 200 mm	0.1 mm + 0.005·H
Lowest permissible radius of curvature of the test object surface	25 mm
Operating frequency of the device	5 MHz, 10 MHz
Range of operating temperature on the test object surface	-10...+60 °C

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