



NOVOTEST

Coating Thickness Gauge NOVOTEST TP-2020

Available with
Bluetooth



Datasheet

2022

1. Introduction

Coating thickness gauge NOVOTEST TP-2020 is designed for thickness measuring of coatings based on ferrous and non-ferrous metals. Variety of various sensors make it possible of non-destructive testing of protective coatings with a wide thicknesses range. Thickness gauge can also measure next parameters: the depth of grooves and corrosion, surface roughness as well as temperature control, ambient humidity and dewpoint temperature, therefore covering a wide range of tasks by one universal unit (thickness gauge).

NOVOTEST Lab is your real laboratory in your pocket!

The results of measurement, adjustment and calibration of the coating thickness gauge in smartphone – the innovative NOVOTEST application for smartphones based on Android.

The functions of devices have no been so wide before! With the Bluetooth connection, your smartphone is able to control all the functionality of the NOVOTEST coating thickness gauge without wires. The intuitive interface of the application itself, access to the Internet, mail and instant messengers, touch screen, camera, microphone and GPS receiver of the mobile device make the use of NOVOTEST devices much more convenient and versatile.

The main advantages and tasks that can be solved with Coating Thickness Gauge NOVOTEST TP-2020 :

- GAUGE THICKNESS

To suit specific control requirements depending on the thickness, base and coating to be measured, there are various types of probes. Coating Thickness Gauge TP-2020 has a wide range of measured coatings (from 0 up to 60 mm), therefore are able to make protective coatings revision starting with films, body paint thickness to coatings of metal constructing, bridges, oil and gas pipelines and other objects with biturned coatings.



- OPERATING MODES

Coating thickness gauge TP-2020 has operating modes that make it able to rapidly and with high accuracy inspect of protective coatings.

Normal – the device displays the value of the current measurement or the average over a series of measurements

Control – used in cases where it is necessary to control the coating with clearly defined thicknesses. During measurements, coating thickness gauge illustrates the difference in thickness of the measured and reference coatings,

analyzing which the operator makes conclusions about coating quality

Statistics – monitor the following parameters of a series of measurements: maximum and minimum value, deviation, average value, number of measurements

Automatic averaging mode – after each measurement, the device by default includes this result in the set of averaged values

- SPECIALIZED PROBES

Measurement of electroplated and paint coatings on steel substrates. Suitable sensor F-0.5. Coating thickness measurement range from 0 to 500 microns.

Measurement of paint, varnish, polymer (and any other dielectric) coatings on steel substrates thickness more than 0.5 mm. Use sensors F-2 and F-5, which provide a control range up to 2/5 mm, respectively.



Measurement of coatings non-ferrous metals – the NF-2 sensor is used at measurements from 0 to 2 mm (2000 μm).

Very thick coatings at metals (non-ferrous and ferrous). M12, M30 and M60 sensors are used, which are able measuring up to 12, 30 and 60 mm, respectively.

Roughness measurement – a DSh sensor is used to measuring roughness, depth of corrosion and defects, grooves surface`s.

Measurement of temperature, humidity and dew point – DTVR converter

Further, coating thickness gauge are able measuring anodized and zinc protective coatings, metal oxide films revision, rhodium and copper, which has used at automotive industry, production and construction of metal structures.



- QUALITATIVE IMPROVEMENT

Higher speed of measurements and readiness for another

Sound and visual indication

Built-in memory in thickness gauge, there are able to save the test results and transfer them to a PC

Improving at measurement accuracy and stability

Introduced new displaying measurements, thereby increasing the convenience of measuring.

A full-fledged calibration of the thickness gauge with a conditionally unlimited number of points (up to 100 points) for calibration, which are able to set up thickness gauge by definite reference at the most accurate results. Therefore there are practically haven't limitation of product shape and material bases. User can independently calibrate it in a couple of minutes instead of sending the thickness gauge to production as it was before.

- VISUAL APPEARANCE

Device is made in an ergonomic shape with convenient interface buttons that can be used with gloves (during production) or at low temperatures, and a shock-resistant case in a protective silicone bumper will protect among accidental drops. Wide range of operating temperatures from -20 to + 40 ° C make it possible to be used it at extreme conditions.



2. Specifications

2.1 Advantages

- Measures coating thickness on ferrous (Fe) and non-ferrous (nFe) metals
- Automatic sensor detection
- Wide range of sensors for different tasks
- Selecting units of measure
- Storing individual calibrations in probes memory
- Average calculation, minimum and maximum indication
- High measurement accuracy
- Transfer of measurement data to PC via usb
- Portability
- Large buttons
- Enlarged screen
- Shockproof housing with a special protective silicone bumper case
- Charge control

2.2 Specifications

Thickness measurement range(depends on probe type)	0 μm ... 60 mm
Measured parameter	coating thickness, corrosion depth, roughness, temperature, humidity, dew point temperature
Measuring units	μm , mm, inch, mil
Revision modes	calculation of average, indication of minimum and maximum
PC connection	yes
Menu languages	English, Spanish, French, Russian
Dimensions, mm	122x60x25
Operating temperature range, $^{\circ}\text{C}$	-20 ... +40 $^{\circ}\text{C}$
Batteries	2 AA
Type of connectors of probes	Lemo
Storage of measurement results and PC software (optional)	256
Standards	AS 2331.1.4, AS 3894.3-B, AS/NZS 1580.108.1, ASTM B 499, ASTM D 7091, ASTM E 376, ASTM G 12, BS 5599, EN 13523-1, IMO MSC.215(82), IMO MSC.244 (83), ISO 1461, ISO 19840, ISO 2063, ISO 2178, ISO 2360, ISO 2808-7C, ISO 2808-7D, ISO 2808-12, NF T30-124, SSPC PA 2, US Navy PPI 63101-000, US Navy NSI 009-32, ASTM D 1186-B, ASTM D 1400, BS 3900-C5-6B, BS 3900-C5-6A, BS 5411-11, BS 5411-3, DIN 50981, DIN 50984, ECCA T1, ISO 2808-6A, ISO 2808-6B, SS 184159
Time of continuous work hours, not less	20
Weight of electronic unit with batteries, no more, kg	0.2

Specifications of probes for Coating Thickness Gauge NOVOTEST TP-2020

Coatings on steel (dielectric and conductive coatings on ferromagnetic metals and alloys)

Type of probe	Coating thickness measurement range	Measurement accuracy	Dimensions of the probe, mm	Purpose
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probe F-0,3	0-300 μm	±(0,03h+0,001) mm	Ø5×40	Measurement of paint, varnish and galvanic coatings
probe F-0,5	0-500 μm	±(0,03h+0,001) mm	Ø 8×15	
probe F-2	0-2000 μm	±(0,03h+0,002) mm	Ø 10×35	Measurement of paint and varnish coatings
probe F-5	0-5000 μm	±(0,03h+0,002) mm	Ø 18×40	Measurement of paint, varnish and mastic coatings
Coating on the non-magnetic metals (Any (dielectric or metal) coatings on non-ferrous metals and alloys)				
probe NF-2	0-2000 μm	±(0,03h+0,002) mm	Ø 12×35	Measurement of anodic-oxide films and paint coatings
Thick coatings on metals (dielectric coatings on metals)				
probe M-12	0-12 mm	±(0,03h+0,02) mm	Ø 15×50	Measurement of mastic coatings
probe M-30	0-30 mm	±(0,03h+0,03) mm	Ø 40×50	
probe M-60	0-60 mm	±(0,03h+0,05) mm	Ø 70×60	
Measurement of surface roughness, Rz (After abrasive blasting pre-painting work)				
probe DSH	2-300 μm	±(0,03h+0,002) mm	Ø 18×40	Measurement of surface roughness after sand and shot blasting
Temperature, humidity and dew point				
probe DT	-50 ... +80 °C	+ / – 1 ° C	Ø 12×107	Temperature measurement

probe DTVR	Humidity: 0 – 100% Temperature: -50 ... 80 °C Dew point: -15 – +40 °C	± 5% ± 1 ° C ± 2 ° C	Ø 50×120	Measurement of temperature, humidity and dew point
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2.3 Available options

- Additional probes for thickness gauge (depends on requirements)
- Batteries
- Set of reference thickness samples

2.4 Standard package

- Thickness gauge electronic unit TP-2020
- Standart probe (by customer's choice)
- Set of reference thickness samples
- Batteries (AA) – 2 pcs
- Charger
- USB cable
- Operating manual
- Case

