

VID-345

MAGNETIC-EDDY-CURRENT FLAW DETECTOR



The magnetic-eddy-current flaw detector VID-345 is intended for detecting and measuring of depths of stress-corrosion fractures in ferromagnetic structures as well as fractures under the insulating coating and/or corrosion layer.

The device can also monitor thickness of the insulating coating on the controlled items.

The flaw detector operation is based on a combination of the magnetic and eddy-current methods that enable the user to monitor items with coarse and corroded surface and measure through a layer of insulating coating of varying thickness without additional readjustment.

Shock-resistant housing



OBJECTS OF CONTROL:

- pipes, pipelines,
- oil - and gas pipelines,
- containers, pressure vessels,
- power supply industry items, parts of structures and machinery.

OPERATION MODES

- Searching for stress-corrosion fractures, with simultaneous detection of their depth and monitoring the thickness of the insulating coating – used if the thickness of insulating coating is from 0 to 4 mm.
- Searching for stress-corrosion fractures – used when the thickness of insulating coating is over 4 mm.

EXPLOITATION ADVANTAGES

- Simultaneous detection and depth measurement of stress-corrosion fractures, thickness of the insulating coating and/or corrosion layer.
- Continuous monitoring of the thickness of insulating coating enables user to detect corrosion fissures.
- Real-time adjustment of readings.
- Adjustable threshold units for minimally detectable fracture depth and thickness of the insulating coating.
- Intuitive interface.

CONSTRUCTION ADVANTAGES

- Capability to use additional changeable sensors.
- Metallic housing of electronic unit for use in severe field conditions.
- The contact surface of the sensors is made of abrasion resistant zirconium ceramics.
- Signalization of the defect detection: lighting, audio signaling through loudspeakers or headphones.

MAIN TECHNICAL PARAMETERS

Minimum fracture opening	0.05 mm
Minimum detectable fracture length	5 mm
Detectable fracture depth range	0.3–5 mm
Fracture depth measurement inaccuracy	0.2 mm + 0.1h
Insulating coating thickness measurement range	0–10 mm
Insulating coating thickness measurement inaccuracy	10 %
Maximum insulating coating thickness allowing fracture depth measurement	4 mm
Maximum insulating coating thickness allowing fracture detection	10 mm
Operating temperatures range	-15° ... + 40 °C
Dimensions of the electronic unit of the flaw detector	150 x 80 x 35 mm
Dimensions of the sensor	25 x 25 x 60 mm
Power supply	Ni-MH accumulators (AA 1.5B ALK can also be used)
Time of device functioning	10 hours
Control of accumulator discharge	yes
Weight of the electronic unit of the flaw detector	0.5 kg
Warranty period	12 months



BASIC DELIVERY SET

Elements	Quantity
Electronic unit of the flaw detector	1
Sensor of the flaw detector	1
Cable for connecting the sensor to the flaw detector	1
Sample of crack	1
Sample of isolating coating	1
Accumulator (pre-installed in the device)	2
Charger	1
Headphones	1
Special case for the operator to carry the flaw detector on his chest	1
Bag for transportation and storage	1

ACCESSORIES:

- Additional sensors
- Additional cables
- A set of reserve accumulators
- Reference samples

