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ED-45

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.

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 to 10 mm.

EXPLOITATION ADVANTAGES

- ▶ Detection and depth measurement of stress-corrosion fractures, simultaneously monitoring thickness of the insulating coating and/or corrosion layer.
- ▶ Continuous monitoring of the thickness of insulating coating.
- ▶ Operational adjustment of the operating modes of the device.
- ▶ Intuitive interface.

CONSTRUCTION ADVANTAGES

- ▶ 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 speakers or headphones.
- ▶ Capability to use additional changeable sensors.

▶ MAIN TECHNICAL PARAMETERS

Minimum crack depth	0,2 mm
Minimal fracture opening	0,05 mm
Minimum detectable fracture length	5 mm
Crack depth detection range	0,3 – 5 mm
Fracture depth measurement inaccuracy	0,2 mm + 0,1h (where "h" is crack depth)
Measuring range of insulation coating thickness or corrosion layer depth	0 – 9 mm
Measurement error	10 %
Maximum insulating coating thickness allowing fracture detection	10 mm
Maximum insulating coating thickness allowing fracture depth measurement	4 mm
Signalization	light, sound alarm
Power supply	Ni-MH accumulators (or battery type AA 1.5V ALK) - 2 pcs.
Continual working time from battery is	10 hours
Control of battery discharge	yes
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
Weight of electronic module and sensor	0.5 kg
Operating temperature range	-15 ... +40 °C
Guarantee 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
Protective case	1
Bag for carrying and storing	1

ACCESSORIES:

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