

# VID-345E

## MAGNETIC EDDY CURRENT FLAW DETECTOR

Magnetic eddy current flaw detector VID-345E is designed for detection and depth measurement of cracks in metallic structures, including under a layer of corrosion and/or insulating coating.

The device enables depth measurement of corrosion damage, as well as thickness and heterogeneity of protective coating.

The combination of magnetic and eddy current flaw detection methods allows inspection of items with rough and corroded surfaces, work on the surfaces with variable thickness of insulating coating without additional adjustments.



Impact resistant metallic housing

## TEST OBJECTS

- Pipes;
- Oil & gas pipelines;
- Vessels, pressure vessels;
- Objects at energy facilities;
- Parts of structures, machinery and mechanisms.



## OPERATIONAL ADVANTAGES



- In the process of scanning the device simultaneously detects cracks and measures their depth (including stress corrosion cracking), determines coating and/or corrosion layer thickness;
- Able to detect cracks through insulating coating of more than 10 mm;
- Able to detect corrosion pits under insulating coating;
- Prompt adjustment of the device operation modes;
- Adjustable minimum thresholds for detectable cracks depth and insulating coating thickness.

## FLAW DETECTOR DESIGN FEATURES

1. Metallic housing of the electronic unit withstands harsh conditions of industrial and field application.
2. Probe housing is made of metal, contact surface – of high strength ceramics. This guarantees abrasion resistance.
3. User friendly interface.
4. Keyboard is suitable for work in gloves.
5. Light and sound alarm (headphones are included into the kit) when a defect is detected.
6. Available for equipment with alternative probes.

## MODES OF OPERATION

Mode of cracks detection with simultaneous measurement of their depth and insulating coating thickness inspection

Applied if insulating coating thickness is up to 4 mm

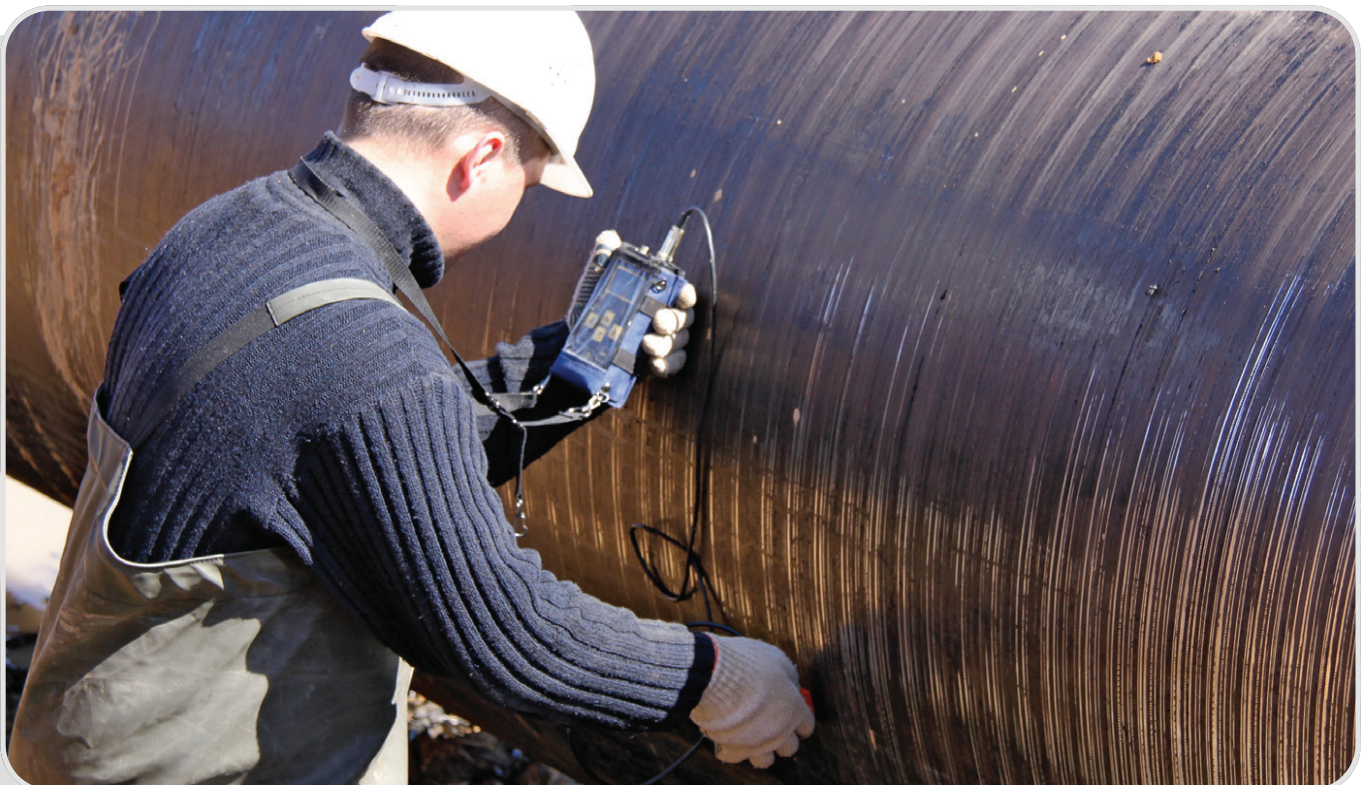
Cracks detection mode

Applied if insulating coating thickness is up to 10 mm



## MAIN TECHNICAL PARAMETERS

Minimum detectable crack depth	0,2 mm
Minimum crack opening	0,05 mm
Minimum detectable crack length	5 mm
Minimum test object diameter	from 100 mm
Cracks depth measurement range	0,2 – 5,0 mm
Crack depth measurement error( h – crack depth)	$\pm(0,2h + 0,15 \text{ mm})$
Insulating coating thickness/corrosion damage depth measurement range	0 – 10 mm
Insulating coating thickness/corrosion damage depth measurement error	10%
Maximum thickness of insulating coating allowing	10 %
cracks depth measurement	4 mm
Operating temperatures range	-15 ... +35°C
Dimensions of the electronic unit	160 x 85 x 35 mm
Dimensions of "N-345" probe	25 x 25 x 60 mm
Electronic unit and probe weight	not over 500 g
Power supply	autonomous supply from two accumulators (Ni-MH type; 1.2 V – or similar ones) or from batteries (AA 1,5V ALK type)
Accumulator life (when in operation)	up to 10 h
Monitoring of accumulator discharging	Yes
Warranty period	12 months from the commissioning date, but no more than 15 months from the date of sale



# DELIVERY KIT

Kit Components	Basic	GTU
Flaw detector electronic unit with an integrated accumulator	✓	✓
Standard probe "N-345"	1 pc	2 pcs
Cable for connecting the probe to the device	1 pc	2 pcs
Control sample (testing block) with crack imitation	✓	✓
Control insulation coating sample, thickness – 2mm	✓	✓
Set of accumulators (2 pcs)		1 pc
Charger	✓	✓
Headphones with an adapter	✓	✓
A case and a cuff for securing the device on the chest (or arm)	✓	✓
Special carrying and storage bag	✓	✓



# ADDITIONAL ACCESSORIES

- Additional probes;
- Cable to connect probes to the flaw detector;
- Additional set of backup accumulators;
- Control samples (test blocks).

