EDC RAIL 5065





System Of Automated Eddy Current Rail Testing

EDC RAIL 5065 System of automated eddy current rail testing

INTENDED USE

The System of automated eddy current rail testing EDC RAIL 5065 is designed for high-performance inspection of rails in process flow manufacturing.



COMPOSITION OF THE SYSTEM

MAJOR FEATURES

• The System allows for testing of rails of various lengths – from 12.5 m to 100 m.

• The System is a modular structure the equipment of which can be mounted either as a standalone unit or built into an NDT System of the enterprise.

• It can be equipped with the eddy current arrays for testing of rails with geometrically different profiles.

• The System's structure provides for a stable gap between the eddy current probe (ECP) and the rail surface through the entire testing process.

Structurally, the System consists of two independent modules performing the inspection:

Module no.1 - designed for eddy current testing of:

- the rail head (±24 mm from the rail longitudinal axis)
- the rail base (except for the near-edge areas of 5 mm)

The testing is performed with the eddy current arrays including 10 ECPs for the rail head testing and 40 ECPs for the rail base testing.

Module no.1 provides for longitudinal and transverse manufacture defects detection equivalent in amplitude to the artificial flaws:

- length 10 mm, width 0.5 mm, depth 1.5 mm
- length 20 mm, width 0.5 mm, depth 1.0 mm.

Module no.2 – designed for eddy current testing in accordance with DIN EN 13674-1-2017. Corresponding to the requirements of this document the testing of the parts listed below is performed:

- upper lateral radii of the rail head
- lateral faces of the rail head

The testing is performed by the eddy current arrays composed of 8 ECPs for testing of left and right sides areas of the rail head.

Module no.2 provides for longitudinal and transverse manufacture defects detection equivalent in amplitude to the artificial flaws:

– length – 10 mm, width – 0.5 mm, depth – 1.5 mm

– length – 20 mm, width – 0.5 mm, depth – 1.0 mm

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	Main technical features of the EDC RAIL 5065 System
1	Testing speed – up to 1.5 m/s
2	 Maximum length of untested ends of the rail: of the front end – 200 mm of the back end – 70 mm
3	The System ensures longitudinal and transverse manufacture defects detection equivalent in amplitude to the artificial flaws: – length – 10 mm, width – 0.5 mm, depth – 1.5 mm – length – 20 mm, width – 0.5 mm, depth – 1.0 mm
4	Automatic determining of the length of the tested rail.
5	Marking of the rail defective sections with precision of ±100 mm.

Defects detected by the System













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