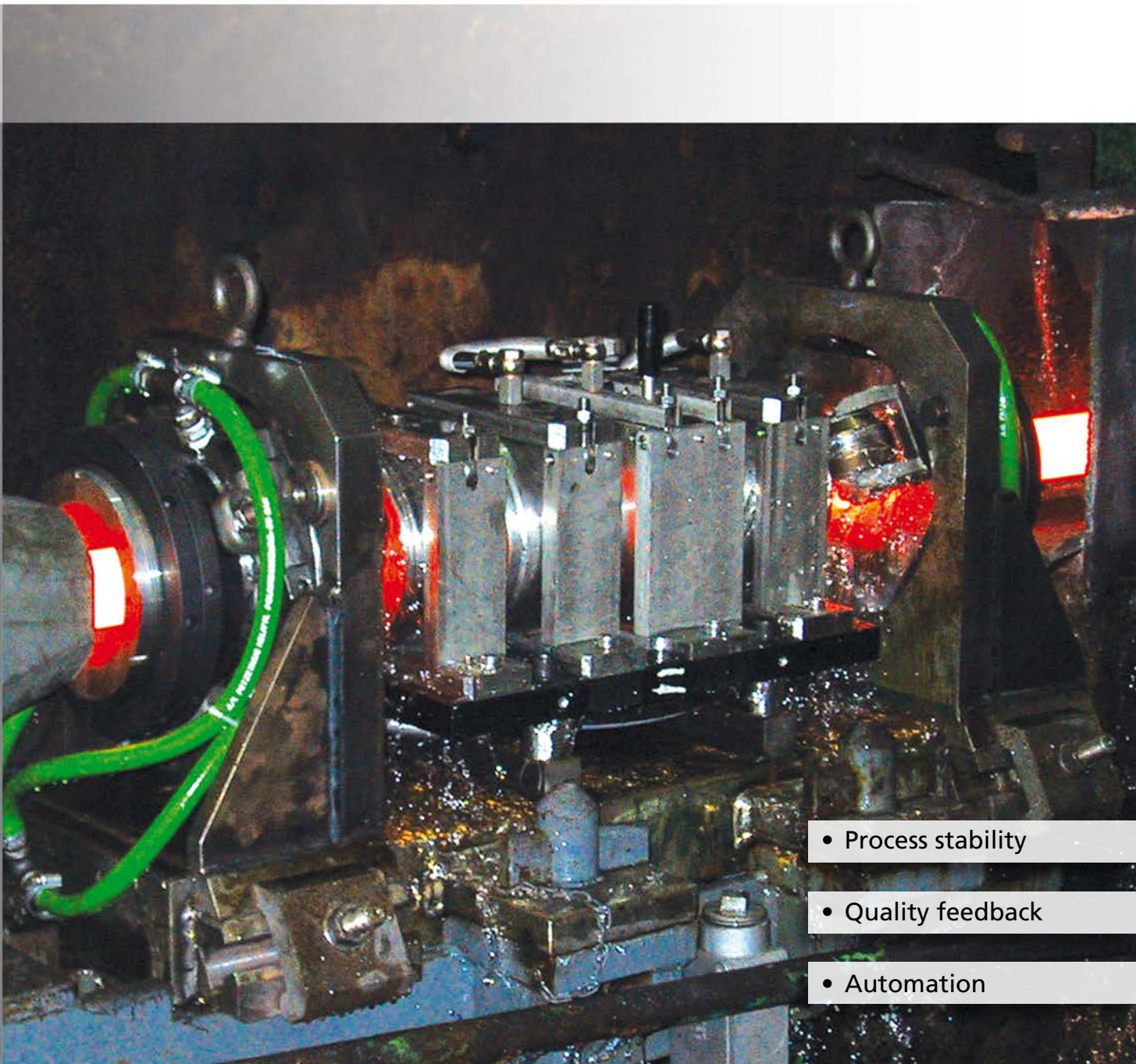


Hot Testing

EDDYCHEK[®] 5 for inspecting
hot wire, rod, and bar



- Process stability

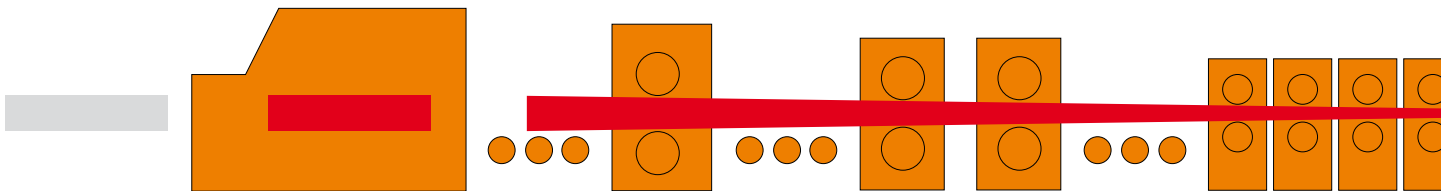
- Quality feedback

- Automation

Process and quality under control

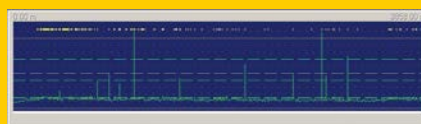
At the rapid production speeds of rolling mills, process malfunctions can cause large quantities of defective product before anyone notices. That's why it's essential for you to receive immediate feedback on quality: It lets you intervene and correct any problems at an early stage to avoid scrapping costly raw material. The PRÜFTECHNIK eddy current testing system does just that. It acts as an early warning system of defective rollers and other production problems that leave their mark on the product.

- Early warning of process problems that impair quality
- Detection of gradual quality deterioration using convenient EDDYTREND tool
- Replay of testing history of any tested product
- Comprehensive documentation of testing
- Fully automated and networked



Periodic defects

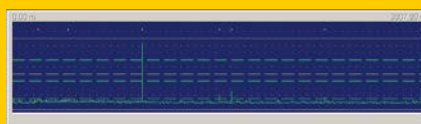
Defective roll and rollers in the production line can leave an imprint on the product at regular intervals. EDDYCHEK® 5 is able to detect these periodically repeating defects, even if they are only slight. Based on their frequency you can draw conclusions on roughly where in the production line the defective element is located.



Good product quality



Poor product quality
Periodic defect discovered



Good product quality
Defective roller replaced

Results	Info	Config
Shift: 1		
Batch: 11		
Len: 3893.10 m		
A: 757	B: 149	
C: 227	D: 0	
PE: 10=20.1 Hz		
AD=29%		

Periodic defect frequency
f₀=20.1 Hz

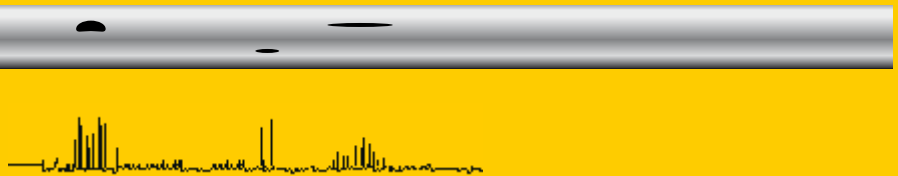
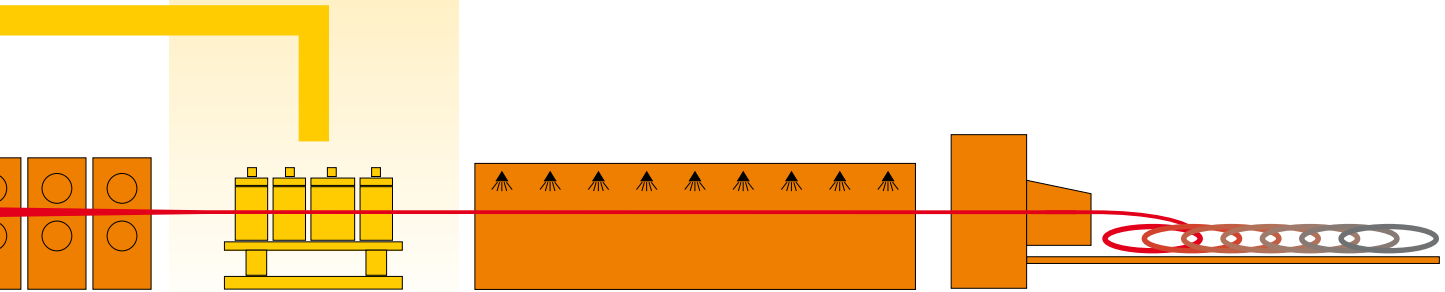


Defective roller with crack



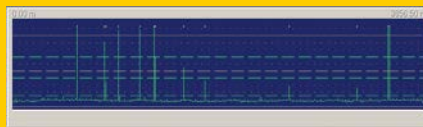
Water-cooled test head

The test coil and its holder have a particularly robust design made to withstand the rigors of the rolling mill environment. They are cooled by a continuous flow of water, and a flow meter provides added safety by alerting the controller should the water flow be interrupted.



Random raw material and process defects

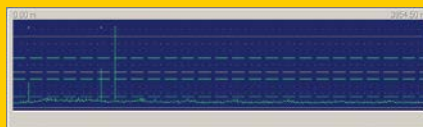
Random defects stem from a variety of causes such as poor billet quality, worn rolling mill parts, and process malfunctions. With its sensor installed in the production line, EDDYCHEK®5 is able to detect a rise in the number of defects on a test piece, giving you warning of a potential problem with the process or billet quality.



Good product quality



Poor product quality
Sudden rise in number of defects



Good product quality
Worn or broken mill part replaced



Server and process control center

Parameters are set up in advance for each type of product and can be downloaded to the EDDYCHEK® 5 when needed. Test results are returned to the server for inclusion in overall line control processes.



Control pulpit

Keeping an eye on product quality is easy with the EDDYTREND software that displays the test results for the current and previous three test pieces. An alert signal can be issued if quality deteriorates beyond a certain point.

EDDYCHEK® 5 compact

The testing electronics are tucked away in a compact unit that can be installed close to the line.



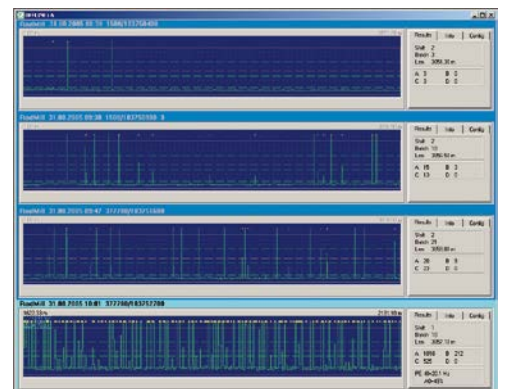
Coil and coil holder

Water-cooled and robust, the testing head is designed for quick size changeovers.



Testing automation

The EDDYCHEK® 5 inspection system integrates smoothly into existing process control systems. LAN networking capability and extra long transmission lines permit the transfer of testing settings and test results to a control pulpit and on to a central processing server.



EDDYTREND analysis software

The EDDYTREND trend analysis software shows a history of the last four test pieces, letting you rapidly identify quality trends. You can also call up, replay and analyze the testing signals of previous test pieces.

Material under inspection

- Rod and bar of all metals
- Dimensions: Ø max. 125 mm (4.9")
- Maximum material temperature: 1200 °C (2192 °F)
- Maximum coil length: for rod 30 km (18.6 mi); for bar 3 km (1.86 mi)
- Up to 120 m/s (393.7 ft/s) for rod
- Up to 20 m/s (65.6 ft/s) for bar

Sensor technology

- Water-cooled encircling coil, guide sleeves, cooling sleeve
- Coil holder and cleaning unit
- Size 1: Ø 5–25 mm (0.2–10")
 - Size 2: Ø 20–60 mm (0.79–2.6")
 - Size 3: Ø 50–125 mm (2–4.9")
- Material: stainless steel

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