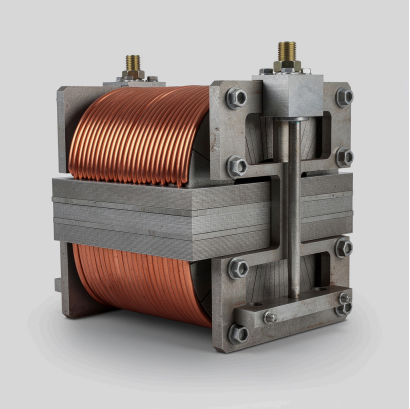
APPLICATION NOTE

PERMEABILITY CONTROL OF NON-MAGNETIC STEELS FOR HIGH-POWER MAGNETIC SYSTEMS

Incorrect permeability of non-magnetic steels can cause increased energy losses in magnetic systems. Permeability measurement with MAGNETOSCOP reliably identifies suitable materials.



THE CHALLENGE

High-power electromagnetic systems such as maglev trains, MRI facilities or synchrotron installations are highly sensitive to magnetic interference. Steel structures with elevated magnetic permeability generate eddy currents and opposing magnetic fields, causing heat losses and mechanical resistance. To maintain energy efficiency, non-magnetic steels with μr ≤ 1.1 must be strictly controlled throughout production and installation.

THE SOLUTION

The MAGNETOSCOP 1.070 enables precise measurement of relative magnetic permeability in the range of μr 1.00000 to 2.00000, in accordance with IEC 60404-15 and ASTM A432/A432M. The portable, battery-powered device allows fast in-field testing of steel bars, bolts and structural components, ensuring compliance before assembly or further processing.



THE RESULT

Magnetic permeability deviations are detected immediately, preventing unintended magnetic interactions and energy losses. The lightweight instrument supports quality control from manufacturing to construction site inspection. Reliable permeability management enhances efficiency, reduces heat generation and improves operational stability of high-power magnetic systems.

FOERSTER



MAGNETOSCOP

Portable Solution For Magnetic Field and Permeability Measurement

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