

APPLICATION NOTE

QUALIFICATION OF COPPER-BASED ALLOYS FOR PRODUCTION OF ELECTRIC COMPONENTS

Incorrect alloy compositions in copper materials can reduce the conductivity of electrical components. Conductivity measurement reliably qualifies copper-based alloys before production.



THE CHALLENGE

Copper-based alloys such as bronze, brass and nickel-silver are widely used in electrical applications requiring high conductivity and non-magnetic behavior. For connectors and sensitive electronic systems, relative permeability must remain close to $\mu_r = 1.00000$. Precise measurement of very low magnetic susceptibility is therefore essential to ensure compliance with industry standards.

THE SOLUTION

Permeability testing is carried out using the MAGNETOSCOP 1.070 with a dedicated permeability probe in accordance with IEC 60404-15 and ASTM A342M. The portable system measures μ_r in the range from 1.00000 to 2.00000 at a defined magnetizing field of 30 kA/m. It enables fast, in-situ inspection of raw materials and semi-finished components without complex preparation.



THE RESULT

High-resolution measurement ensures reliable differentiation between non-magnetic and weakly magnetic materials. The system supports qualification of copper-based alloys for magnetic-sensitive applications such as connectors and precision electronics. Accurate permeability control contributes to consistent material performance and compliance with specified μ_r limits.

THE PRODUCTS

MAGNETOSCOPI

Portable Solution For Magnetic Field and Permeability Measurement



PROBES AND SENSORS FOR MAGNETOSCOPI & MAGNETOMAT

Flexible Solutions for Magnetic Field and Permeability Measurements



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