

QUALIFICATION OF MATERIAL FOR MANUFACTURING OF ELECTROMAGNETIC ACTUATORS

Magnetic property variations can reduce actuator performance. KOERZIMAT precisely qualifies raw materials for reliable electromagnetic actuators.

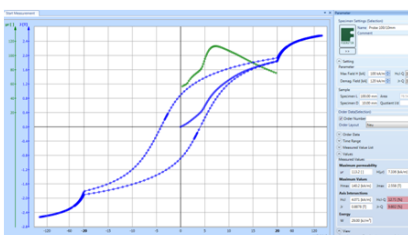


THE CHALLENGE

Soft magnetic steels used in solenoid valves for automotive actuators must meet strict magnetic requirements. Fast and efficient energy conversion depends on defined hysteresis behavior and high relative permeability. Variations in annealing condition influence μ_{max} values typically between 700 and 1800, requiring precise and reproducible qualification of raw materials.

THE SOLUTION

Material qualification is performed with the KOERZIMAT 1.097 J-H system based on magnetization in an open magnetic circuit. The device measures the complete hysteresis loop and relative permeability curve, including μ_{max} , without complex specimen preparation. Round bars can be tested directly, ensuring efficient and geometry-independent evaluation.



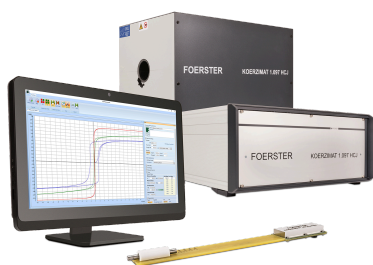
THE RESULT

The system enables measurement of μ_{max} in a range from 100 to 2500 and precise evaluation of hysteresis characteristics. Open-circuit magnetization eliminates mechanical adaptation, reducing testing effort and improving reproducibility. Reliable material qualification supports consistent actuator performance and stable supply quality in steel manufacturing.

THE PRODUCTS

KOERZIMAT 1.097 J-H

System for measuring magnetic properties of soft magnetic materials



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