Magnetic polymer measurement technology – a Method for measuring the properties of polymer or polymer-bound materials

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Summary

The further development of printing and injection moulding processes in manufacturing technology also includes polymer-bound magnetic materials, which can have hard or soft magnetic properties. In the following, their field of application in magnetic actuators is extended to free-form applications. Following this step, already moulded, pressed and sintered hard magnetic materials are successively substituted in magnetic actuators by injecting polymer-bound materials into adaptive, free forms. Adapted measurement technology is required to monitor the magnetic properties of the magnetic particles bound in the polymer material during production or during the product's lifetime. The measurement results obtained allow conclusions to be drawn about the condition of the carrier material (plastic, polymer) as well as statements about the magnetic particles bound in it and their magnetic parameters. Measurements of free-form bodies are possible. Simple, safe handling and calibration of the measuring device simplifies the measurements.