QUALITY CONTORL IN POWDER METALLURGY FOR RELIABLE COMPONENTS

Powder or sintering variations in PM parts can compromise mechanical properties. MAGNATEST enables fast, non-destructive 100% inspection.

THE CHALLENGE

Powder metallurgy enables cost-effective production of complex, high-precision components, particularly for automotive and wear-resistant applications. However, variations in powder quality, particle size distribution, material mix-ups or improper sintering and heat treatment can significantly affect mechanical performance. In mass production, defective parts must be identified immediately before assembly.

THE SOLUTION

Magneto-inductive testing with the MAGNATEST system provides rapid quality assessment. Components are placed inside an encircling coil containing excitation and receiver windings. The induced magnetic field generates eddy currents in the part. Deviations in material composition, microstructure or hardness alter the signal response, allowing instant detection of non-conforming components.

THE RESULT

The system enables fast, non-destructive 100% inspection directly in the production line. Material mix-ups, incorrect sintering conditions and structural inconsistencies are reliably detected. Automated sorting ensures stable process control, consistent mechanical properties and high product reliability in powder metallurgy applications.

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MAGNATEST D

Magneto-inductive testing of metallic components for material properties

MAGNATEST TCL

Magneto-inductive testing of components critical for safety

MAGNATEST SENSORS

Sensors for magnetic induction testing of metallic materials in the automotive and aviation sectors and for semi-finished products

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