FOERSTER

BEARING BALL QUALITY CONTROL BY EDDY CURRENT TESTING

Defective bearing balls can cause increased wear and bearing failures. Eddy current testing reliably and non-destructively checks the balls before installation.



THE CHALLENGE

Rolling elements are critical components in bearings, and even a single defective steel ball can lead to premature failure or severe damage. Material mix-ups, hardness deviations after heat treatment or grinding cracks cannot be detected visually. In high-volume production with multiple steel grades, reliable and cost-efficient 100% inspection is essential.

THE SOLUTION

Eddy current testing is performed using MAGNATEST D or MAGNATEST TCL with encircling coils. As each steel ball passes through the coil, changes in impedance indicate variations in electrical conductivity and magnetic permeability. This enables detection of material mix-ups, heat treatment abnormalities and surface or grinding cracks in a continuous process.





THE RESULT

The system allows rapid and automated sorting of defective balls with high sensitivity and low operating cost. Differences in steel grade, hardness condition or structural defects are reliably identified. Continuous inspection ensures consistent bearing quality and reduces the risk of premature failure in demanding applications.

MAGNATEST D

Magneto-inductive testing of metallic components for material properties



MAGNATEST TCL

Magneto-inductive testing of components critical for safety



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Headquarters
Institut Dr. Foerster GmbH & Co. KG

In Laisen 70
72766 Reutlingen
Germany

+49 7121 140 0
info@foerstergroup.com

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