# STRUCTURE TESTING OF CAST COMPONENTS

Microstructure or material deviations in cast components can affect safety and performance. Magneto-inductive testing reliably identifies variations.

## THE CHALLENGE

Cast components, such as parts of brake systems, require reliable material and structure testing to ensure consistent quality. Variations in microstructure, alloy composition or cementite content can affect mechanical properties and performance. Non-destructive magneto-inductive testing is therefore applied to identify structural deviations and enable clear material classification within production.

## THE SOLUTION

FOERSTER performs structure testing using the MAGNATEST D system with high-performance harmonic evaluation. Components are positioned reproducibly within geometry-adapted test coils and exposed to a strong alternating magnetic field. The magnetic and electrical properties of the test piece serve as an indicator of its material properties. To set up the testing system, a tolerance field is automatically defined using reference parts. All components from series production are then compared against it, classified, and sorted.

## THE RESULT

The system enables reliable separation of cast components into defined material groups based on structural characteristics. Automatic comparison with tolerance limits allows sorting into OK and NOK categories or multiple classes. Graphical evaluation and documentation functions support continuous quality monitoring and stable production of safety-relevant cast parts.

## MAGNATEST D

Magneto-inductive testing of metallic components for material properties

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