AUTOMATED 100% CRACK TESTING OF WHEEL HUBS

Surface cracks in wheel hubs threaten torque transfer and safety. Eddy current testing with STATOGRAPH ensures seamless inline inspection.

THE CHALLENGE

Wheel hubs transmit torque from the drive shaft to the wheel and are therefore safety-relevant components. Surface defects such as longitudinal or transverse cracks can impair load transfer and compromise operational safety. To guarantee defect-free material, reliable non-destructive crack inspection is required directly within the production process.

THE SOLUTION

Eddy current crack testing is performed using the STATOGRAPH system with static and rotating probes. NC-controlled probes scan the complete outer contour of the wheel hub. A tandem test station with two parallel holders enables continuous loading and unloading during inspection, ensuring efficient 100 percent inline testing with optimized cycle times. Seamless testing in the hub area is possible with the FOERSTER test software STATOVISION.

THE RESULT

The system achieves inspection rates of approximately 240 parts per hour while covering complex geometries with high reproducibility. After testing, automatic sorting into OK and NOK parts is performed, with optional fault zone assignment. Integrated documentation and evaluation software support continuous quality monitoring of wheel hub production.

FOERSTER

STATOGRAPH CM+ / CM

Crack testing of complex workpieces with eddy current

STATOGRAPH PROBES

Probes for non-destructive crack detection of complex components using eddy current testing

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