FOERSTER

AUTOMATIC CRACK INSPECTION OF SINTERED GEAR COMPONENTS

Complex geometries make crack detection on sintered gears difficult. Robotic eddy current testing with STATOGRAPH reliably detects surface defects.



THE CHALLENGE

Gears are essential transmission components and must be free from surface cracks to ensure reliable torque transfer. Sintered gear components feature complex geometries that make sensitive defect detection challenging. To maintain continuous quality assurance, automated non-destructive crack testing is required directly within or alongside the production process.

THE SOLUTION

FOERSTER provides automated crack inspection using a robotic test cell equipped with the STATOGRAPH CM system and flexible probes. The robot arm rotates each gear at a defined distance from the adapted probe to scan complex surfaces. Test signals are evaluated and documented in real time. The system can be integrated inline or operated offline.





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.

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STATOGRAPH CM+ / CM

Crack testing of complex workpieces with eddy current



FLEX PROBES

Flexible probes for eddy current testing of complex geometries

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