FOERSTER

AUTOMATED GEAR CONTACT PATTERN INSPECTION USING THERMOGRAPHY

Precise contact patterns are essential for smooth operation and long service life of gear systems. Thermographic inspection enables automated, non-contact evaluation of gear tooth contact without marking compounds or time-consuming cleaning.



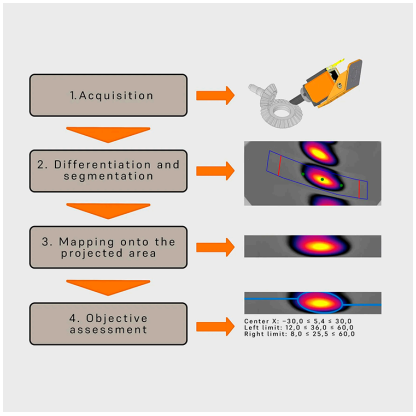
THE CHALLENGE

The position and distribution of tooth contact areas affect power transmission, noise levels and gear service life. Incorrect contact patterns can lead to increased wear and operational issues. Conventional inspection using marking compounds is time-consuming, relies on visual evaluation and requires subsequent cleaning. It is therefore only partially suited for automated quality control in series production.

THE SOLUTION

FOERSTER uses passive infrared thermography to visualize gear tooth contact through friction-induced temperature patterns. Digital analysis of thermal images enables automated evaluation of contact areas by position, shape and size. With EDECAM, FOERSTER offers an industrial infrared camera for suitable inspection applications. The non-contact process delivers reproducible results and can be integrated into automated inspection systems.





THE RESULT

Thermographic contact pattern inspection delivers objective, reproducible and digitally documented results. Short inspection times and automated processes enable 100% inspection in series production. Manufacturers benefit from more efficient inspection processes, lower costs and early detection of unfavorable contact conditions – ensuring consistently high gear quality.

FOERSTER

EDECAM

High-speed LWIR infrared camera for active thermography



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