Fiber optic sensor detects steel balls

Overview

The design of the optical fiber sensor system is used to detect the steel ball surface roughness and defects with displacement change such as cracks, pits, bumps and so on. Home Applied Mechanics and Materials Applied Mechanics and Materials Vol. The optical fiber sensor system comprises a reflection type optical fiber sensor probe, an 820-nanometer light transmitter, a photoelectric converter, a signal processing. Fiber optic sensors embedding via EFAS 4. Functionality of embedded fiber 4., Enhancing safety in nuclear. In this paper, we compare algorithms based on multivariate data analysis as well as data processing using neural networks, comparing their performance on a real structure. Introduction Fiber Bragg Gratings (FBGs) began to be used as strain sensors in the early 1990s, and approximately a decade.

Article Content

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This research starts from the optical fiber technology to detect steel balls surface quality, a dual wavelength coaxial optical fiber sensor was designed and tested to find an optimal method for ...

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The design of the optical fiber sensor system is used to detect the steel ball surface roughness and defects with displacement change such as cracks, pits, bumps and so on.

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The results show optical fiber sensing technique is an effective method to separate different surface of steel ball with extracting of two parameters displacement and surface reflectivity.

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Defects Inspection of Steel Ball Based on Optical Fiber Sensing ...

It is difficult to detect bearing ball surface defects with high precision and low cost by conventional methods. In this paper one new classification method based on optical fiber sensing ...

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