

Methods for measuring internal holes using fiber optic sensors

Within this work, a setup for integration of fiber-optic sensors in an industrial form measurement machine is described.

This study presents a novel fiber-optic sensor named short-gauged Brillouin fiber optic sensor, which enables basic

In this research, a contactless technique to measure small inside diameters is proposed. This new method uses

ABSTRACT Fine holes are an important structural component of industrial components, and their inner surface quality is closely

We developed a system to measure the internal profile of small diameter hole. The minimum measurable diameter is

Therefore, the integration of optical fiber sensors in WSNs introduces benefits and new capabilities for the design of advanced hybrid

Fraunhofer IPT develops fiber-optic sensors for challenging measurement tasks such as measuring the

Since optical non-contact methods are difficult to use for measuring the diameter and form errors of small hole at any cross section, a

A new method using fiber-optic sensor for surface digitizing in reverse engineering was studied and a mathematical

In-fiber interferometric-based sensors are a rapidly growing field, as these sensors exhibit many desirable

Small-diameter deep-hole components have presented significant challenges for inner wall defect detection due to

In recent years, fiber optic displacement sensors have been extensively used in civil engineering due to their obvious

This new method uses tandem low-coherence interferometry and an optical fiber cut at an angle of 45° . This optical fiber is up to 30

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Using fibre-optic sensors and miniature measuring probes, the layer position, drill hole depth and surface quality in MICROVIAS on

An optical fiber was attached on the specimen and served as a distributed sensor which measured strain distributions

Examples include the inner surfaces of micro-drilled holes, narrow gaps or complex free-form surfaces. The optical inspection

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