Fiber Bragg Grating Flow Rate

This paper presents an embedded and miniaturized pressure sensor based on the Fiber Bragg Grating (FBG) technique for the measurement of both flow rate and flow-induced pressure in ...

In this study, FBG is used to monitor the fluid flow rate in a pipe by analyzing changes in the output power generated by the FBG. This research was designed by varying the pipe diameter, ...

A novel fiber Bragg grating (FBG) flow sensor with high sensitivity is proposed in this article, which consists of a target disk, a solid beam, an L-shaped leve

Fiber Bragg Grating"s Side Mode Suppression Ratio (Sidelobe Suppression Rate or SLSR), is it better to have a larger or smaller SLSR? The Side Mode Suppression Ratio (SLSR) of FBG is a measure of ...

At present, FBG sensors have been widely accepted in China, and the project client has designated the use of FBG sensors. Therefore, an FBG sensor for flow velocity and flow direction monitoring is ...

The flow rate is known to be related to the vibration excited by the turbulent internal flow, but there exists some scatter in the vibration data at low flow speeds (<2m/s) due to the resolution ...

A new fiber-optic sensor system consisting of a fiber Bragg grating cantilever as a transducer is proposed and demonstrated to realize simultaneous measurement of fluid flow rate and ...

Thus, knowing the curves for different flow rates and analyzing the spectral characteristics of the entire FBG array, it is possible to determine not only the flow rate, but also its direction both ...

Abstract The paper presents the study of the possibilities of optical monitoring of the fluid flow velocity. An optical fiber with an array of Bragg fiber gratings, the central wavelengths of which varied ...

In this work, we show how to design an optical fiber sensor based on FBGs with different coatings for measuring water flow in pipes. We start by giving a general outline of the mechanical ...

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