

Accurate characterization of early-time cement stress and behavior is essential for assessing wellbore integrity. Fiber Bragg grating (FBG) technology offers a robust solution for ...

The quasi-distributed FBG sensor module designed in this paper can invert the three-dimensional insitu stress by measuring the hole-wall strain, which lays a theoretical and experimental foundation for the ...

In this paper, a Fiber Bragg Grating (FBG) stress sensor is developed to measure the stress variation between the lower Excavation Damaged Zone (EDZ) and the ...

In this paper, a Fiber Bragg Grating (FBG) stress sensor is developed to measure the stress variation between the lower Excavation Damaged Zone (EDZ) and the upper undistributed rock.

This fiber processing simulation has the common components (capstan, pulleys, belts and adjustable tension) of a typical fiber manufacturing process; and therefore, the Bragg sensor should experience ...

The paper presents the results of a numerical analysis of the stresses in a polymer composite material (PCM) in the vicinity of an optical fiber embedded in the material, and the results ...

Based on the hole-drilling strain sensing method, a ring fiber Bragg grating (FBG) array is proposed to realize comprehensive and convenient measurement of residual stress for homogeneous or ...

The integration of Fiber Bragg Grating (FBG) sensors designed for skewed stress fields into multi-axis sensing systems presents significant technical challenges that must be addressed to ...

30 overcoring stress relieving method is an in-situ stress measurement method based on borehole, which inverses the in-situ stress field by detecting the strain and deformation in the process of ...

In this paper, we controlled the furnace to sustain a defined temperature and applied increasing stress steps to the sample. In this way, we can differentiate between the changes caused ...

In this paper, a strain-sensing array based on fiber Bragg grating (FBG) is designed by using the main structure of the classical hollow inclusion cell, and its layout scheme on the hollow ...



Fiber Bragg grating drilling stress

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