

Fiber Optic Grating Anchor Bolt Testing



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The entire rod axial force real-time monitoring system comprises a flameproof fiber grating signal processor, FBG force-measuring bolt, jumper, grating junction box, and optical cable.



This paper proposes a new approach to detecting bolts' anchoring qualities based on the fiber Bragg grating sensing principle. Moreover, it studies the strain transmission mechanism between the ...



A novel fiber Bragg grating (FBG) sensor technology is proposed for use in mines, specifically designed to enhance the monitoring of anchor rods.



This article deals with anchor tests instrumented with FBG deformation gauges of the root and the tendon of the pre-stressed strand anchor in a test field in the Central Bohemian Region.



The literature reveals diverse applications of fiber optic sensor in bolt tension monitoring, incorporating different fixation methods and demonstrating varied responses.



A fixed cylinder is installed under the main body of the fiber grating bolt test device, and a moving column is slidably connected to the inner side of the fixed cylinder.



In this paper, a mine-used fiber Bragg grating anchor sensor technology is proposed.



The FBG Anchor (Bolt) Dynamometer AD-01 is made of constant elastic, high-strength, and corrosion-resistant materials. Two FBG strain gauges are installed on the annular elastic base to accurately ...

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