GDR Telecom Site Energy Systems

Analysis Methods for Excess Optical Cable Joints

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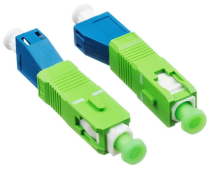
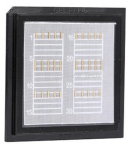
Detecting partial discharges in cable joints is critical for timely defect identification and reliable transmission system operation. To improve the long-term reliability and sensitivity of the sensing ...



Extensive experiments are conducted on the collected cable joints'' point cloud and simulated cable joints'' point cloud. With the help of the proposed method, we can achieve the best ...

Due to the difficulty in accurately detecting the health status of cable joints, a new method of identifying and assessing the cable joints'' health status based on traveling wave reflection ...

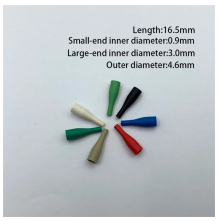


It is concluded that the non-destructive and non-intrusive methods like terahertz imaging and ultrasonic testing, and multi-source information fusion ...

To ensure the electrical performance of the cable joint, this study proposes a method for implanting the optical fiber between the insulating layer and the outer shielding layer of the cable joint.

This paper proposes a low-power, fiber-powered acoustic emission sensing system for partial discharge (PD) monitoring in cable joints. Firstly, finite element simulations are conducted to ...

During their service life, cables are exposed to adverse environmental conditions (accelerated ageing) and interventions (third-party damage, poor service work). The most vulnerable points therefore tend ...



This study proposes a PD monitoring system for power cable joints based on distributed optical fiber sensing technology. By tightly and meticulously wrapping the optical fiber around the ...

The correctness of the simulation results was verified through experiments. This analysis can provide basis for acoustic partial discharge detection of cable joints.

This paper performs a finite element simulation of the cable joint to further specify the effect of optical fiber-implanted sensors on the electric field distribution inside the cable joint and establishes a three ...

In this paper, the fiber optic-based PD sensing (OptiFender) technology is applied to monitor the PD in 245 kV cable joints. Test results show that the sensitivity of the proposed solution, ...

	Learn the essential methods for testing OPGW (Optical Ground Wire) cables, including OTDR analysis, insertion loss measurement, and mechanical stress tests, to ensure optimal performance and ...

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