

自动化

用于电力光纤到户的光纤复合低压电缆接续技术研究

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摘要:

光纤复合低压电缆(optical fiber composite low-voltage cable)接续技术是实现电力光纤到户及智能小区建设的关键技术之一。针对OPLC接续特点提出了光电安全分离、光纤接续及保护、电缆连接及保护等技术要求; 全面分析比较了光纤接续技术的特点, 建议电力光纤到户建设实施的中间节点应采用光纤热熔连接, OPLC终端可采用冷接技术制作快速接头。最后根据电力光纤到户的不同接续场景提出接续技术的整套应用方案。

关键词: 光纤复合低压电缆 电力光纤到户 光纤熔接 机械压接 活动连接器 接续损耗

Splicing Technology of Optical Fiber Composite Low-Voltage Cable for Fiber to the Home

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Abstract:

Splicing of optical fiber composite low-voltage cable (OPLC) is one the key technologies to implement the power optical fiber to the home and the construction of intelligent community. According to the features of splicing of OPLC, technical requirements for safe separation of electric circuit from optical circuit, splicing of optical fiber and its protection, connection of cable and its protection and so on are listed, and the features of splicing of optical fiber cable are overall analyzed. It is proposed that the hot-splicing of optical fiber cable should be applied to intermediate nodes for power optical fiber to the home and the fast connector for the power optical FTTH, which is made by mechanical connection technology, should be applied to the terminal of OPLC. Finally, according to different circumstances of power optical fiber cable to the home a complete set of application scheme for splicing technology is proposed.

Keywords: optical fiber composite low-voltage cable (OPLC) power optical fiber to the home optical fiber splicing mechanical connection optical fiber connector splicing loss

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