

论文

电缆、光缆对地绝缘电阻原位测试研究

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摘要:

对直埋电缆、光缆对地绝缘电阻及土壤环境因素进行原位连续测试,研究电缆、光缆的绝缘性能随时间变化规律,探讨土壤环境因素变化对绝缘电阻的影响.研究表明,具有PVC护套的电缆对地绝缘电阻值随土壤温度、水分的升高而降低,而且随时间推移对地绝缘电阻值逐步上升.

关键词: 线缆对地绝缘电阻 土壤环境因素 原位测试

IN-SITU STUDIES ON CABLE AND OPTICAL FIBRE CABLE INSULATION RESISTANCE AGAINST GROUND

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Abstract:

By means of long-term consecutive in-situ measuring insulation resistance against ground of buried cable and optical fibre cable and soil environment factors,the changing rule of insulation quality of cable and optical fibre cable with time was studied.The effect on insulation resistance arising from soil environment changing was discussed.It was observed that insulation resistance against ground of cable with PVC jacket increased from November to April the next year,and it decreased from June to September.There was remarkable negative correlation between fluctuating of insulation resistance and soil temperature and soil humidity.The insulation resistance against ground kept rising gradually as burying time passed by years.The maximum insulation resistance of cable with PE jacket was in the level of about 100 times as much as that of cable with PVC jacket.Experiments indicated that the value of insulation resistance against ground could maintain relatively steady and high if the quality of PE or PVC jacket and the quality of construction were both ensured.

Keywords: cable insulation resistance against ground soil environment factors in situ measurement

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