

ADSS Optical Cable Corrosion Investigation



Overview

This paper proposes a new method for electrical corrosion assessment of ADSS optical cables based on leakage current characteristic analysis. Firstly, ADSS cable samples are subjected to salt spray treatment for varying durations, and the leakage current of each sample is is. All-dielectric self-supporting (ADSS) cable is a type of optical fiber cable that is strong enough to support itself between structures without using conductive metal elements. It is used by electrical utility companies as a communications medium, installed along existing overhead transmission. During operation, the ADSS optical cable, which is under tension, is in a strong electromagnetic field in the space around the conductor. The capacitive coupling between the optical cable and the conductor and the earth puts it in a position of spatial potential. Jiangyin Xi Neng Industry Company Limited, Jiangyin Jiangsu 214400, China 2.

Article Content

Analysis Of The Structure And Materials Of ADSS

In summary, ADSS power cable adopts special structure and material, which has high strength and wind load resistance. In addition, through the synergistic effect

The structure and characteristics of ADSS optical cable

Resistant to Corrosion: ADSS optical cable is resistant to corrosion and can withstand harsh environmental conditions such as high humidity,

Leakage Current Characteristic Analysis for Electrical Corrosion ...

This paper proposes a new method for electrical corrosion assessment of ADSS optical cables based on leakage current characteristic analysis. Firstly, ADSS cable samples are subjected to salt spray

The defect detection method for communication optical cables based

In the field of defect detection of all dielectric self supporting (ADSS) communication cables, the detection of galvanic corrosion defects across scales has the problems of high computational

Defect recognition network for optical fiber cables based on feature ...

To address the challenge of detecting electrical corrosion defects in ADSS optical fiber cables and enhance inspection efficiency, this paper presents a novel optical fiber cable defect

How To Protect ADSS Fiber Cables ?

In the power communication system, ADSS optical cables (all-dielectric self-supporting optical cables) have become an indispensable part of

Defect detection method of communication optical cable based on ...

With the expansion of communication line coverage, the traditional inspection method for electrical corrosion defects in all dielectric self-supporting (ADSS) optical cables have faced issues of low

(PDF) Electrical design parameters of all-dielectric-self

Abstract and Figures A lumped circuit model for calculating voltages and currents on all-dielectric self-supporting (ADSS) fiber optic cable near high

Research on Electro-corrosion Mechanism of ADSS Optical Cable and ...

Article "Research on Electro-corrosion Mechanism of ADSS Optical Cable and Application of Preventive Measures" Detailed information of the J-GLOBAL is an information service managed by the Japan

ADSS Fiber Optic Cable Erection and Operation

ADSS fiber optic cable is currently the most commonly used fiber optic cable for power communication, which is installed on high voltage

CN105675480A

The traditional optical cable electric tracking resistance test method is: apply a certain stress to the optical cable, and directly pressurize the ADSS optical cable in the salt spray...

A Tracking-Resistance Test for ADSS-Type Optical Cables

A series of simulated arcing experiments are conducted in a laboratory setting to investigate the characteristics of dry band arcs on ADSS fiber optic cables.

Experimental Investigation of Aging Effects of Dry-Band Arcing on ADSS ...

The object of this paper is to develop a testing method for the evaluation of quality of ADSS fiber optic cables, and to study the aging effects of dry-band arcing on ADSS fiber-optic cables.

ADSS optical cable applications

Therefore, the application level of ADSS optical cable should be improved gradually and its performance should be comprehensively optimized

Defect detection method of communication optical cable based on ...

To address these issues, a detection method for electrical corrosion defects in ADSS communication cables based on adaptive feature extraction was proposed. This method achieved detection of

Defect recognition network for optical fiber cables based on feature ...

Moreover, existing defect detection algorithms for industrial issues, such as electrical corrosion in ADSS optical fiber cables, are prone to feature information loss. To address this, we

Experimental investigation of the aging process on ADSS optical fiber ...

Request PDF | Experimental investigation of the aging process on ADSS optical fiber cables | Tests with new samples are conducted to investigate the aging process of repeated low

A Tracking-Resistance Test for ADSS-Type Optical Cables

Abstract—Results are presented of an investigation of an ADSS optical cable for resistance to tracking. This cable is intended for a zonal communication line that is mounted on the supports of high-voltage

Experimental investigation of aging effects of dry-band arcing on ADSS ...

A testing method for evaluating the quality of ADSS fiber optic cable is presented. Aging effect due to arcing under different voltage and pollution levels (heavy and light) is described. Measurement of

Main factors of electrical corrosion in ADSS optical

Under the premise of ensuring the quality of ADSS optical cables, standardizing engineering design, construction and operating conditions, the

Assessing Deterioration of ADSS Fiber Optic Cables Due to Corona

A long-term laboratory test replicated the dry-band arcing cause of fiber optic cable deterioration. The failure mechanism was identified and the cable life expectancy was estimated. A result of this project

Analysis on Measures for Corrosion Protection of Overhead ADSS Optical ...

Principle of electrocorrosion occurring on ADSS optical fibre cables is introduced. Through analysis on causes resulting in electrocorrosion, measures for corrosion protection of ADSS optical fibre cables

Safeguarding Grid Communication: ADSS Optical Cable and Its Anti ...

When power grids hum with electricity, the unseen backbone of their reliability lies in fiber optic communication—enter ADSS (All-Dielectric Self-Supporting) optical cable. As a pivotal

All-dielectric self-supporting cable

Overview Construction details Accessories and installation Application issues

All-dielectric self-supporting (ADSS) cable is a type of optical fiber cable that is strong enough to support itself between structures without using conductive metal elements. It is used by electrical utility companies as a communications medium, installed along existing overhead transmission lines and often sharing the same support structures as the electrical conductors. ADSS is an alternative to OPGW and OPAC with lower installation cost. The cables are designed to be s

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