

Standardized Design of Optical Cable Vibration Dampers



Article Overview

Optical cable vibration dampers are designed to reduce wind-induced vibrations in OPGW and ADSS cables, using either Stockbridge or spiral designs with materials and configurations optimized for energy dissipation and cable protection.

Types of Vibration Dampers

1. Stockbridge Dampers

- Consist of a messenger cable with two end masses attached via a clamp to the conductor or earthwire .
- Designed to reduce aeolian vibration, which is high-frequency wind-induced oscillation that can cause fretting-fatigue and conductor breakage .
- Features include asymmetrical designs with multiple resonance modes to flatten resonance peaks and provide a wide frequency response .
- Materials typically include stainless steel, aluminum, and metal hardware for durability and proper energy transfer .
- Installation involves clamping the damper to the conductor at specific locations along the span, often near hardware attachments.

2. Spiral Dampers

- Made of weather-resistant, non-corrosive plastic with a helically-formed damping section that wraps around the cable .
- Designed for ADSS cables, they reduce overall vibration by dissipating energy through bending of the cable strands .

Article Content

Home-Feiboer Fiber Optic Cable

Hunan Feibo Guangtong Communication Equipment Co., Ltd is a comprehensive high-tech optical fiber communication product

Spiral Vibration Damper, ADSS Hardware Manufacturer

Spiral Vibration Damper A spiral vibration damper is used to lengthen the cable line's lifespan. It reduces wind-induced vibration or

Determination of damping effectiveness of impact damper on ADSS cable ...

All dielectric self-supporting (ADSS) fiber optic cables vibrate at severe vibration levels due to their low self-damping characteristics.

Improvement of Stockbridge Damper Design for Cable-Stayed

Stockbridge dampers are widely used to mitigate the vibrations of cable-stayed bridges and of many other cable

OPGW Vibration Damper Conductor Accessories

Explore AFL OPGW Vibration Damper Conductor Accessories. Compare specifications, compatibility and

Development of a Cable Damper – A Tailor-made Design

The basic idea of the cable damper is the tailor-made design approach which considers the individual requirements

Spiral Vibration Damper for ADSS Cable | AFL Global

Spiral Vibration Dampers have a helically formed damping section sized for interplay of damper and cable to provide the

OPGW Vibration Damper Placement Guide | PDF | Applied And

The document discusses vibration damper installation guidelines for overhead power and ground wire (OPGW) cables. It provides

Cable Vibration Control with a TMD-MR Damper System:

Experimental results show good vibration reduction effects of the TMD-MR system. The present study focuses on a

Modern means for protecting conductors, earth wires, and optical-fiber ...

A general description of phenomena of vibration of phase conductors and earth wires appearing in overhead transmission lines (OL)

Inertial mass damper for mitigating cable vibration

These results are further validated through analysis of the cable responses due to the distributed sinusoidal excitation.

SVD Series Spiral Vibration Dampers

The document discusses AFL's SVD and AVD Series Spiral Vibration Dampers, which are designed to eliminate damage caused by

Full Paper_Cable Damper

Apart from the frequently very high costs for these vibration dampers other disadvantages like energy demand for active and semi

Cable vibration control with internal and external dampers: Theoretical ...

issipation capacity of the internal dampers is insignificant for multimode vibration control of the cable. Therefore, in the premise of

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High power fiber optic transport cables are currently protected with Kevlar reinforced plastic jacketing and flexible metal armored

(PDF) Cable vibration control with internal and external dampers ...

For vibration control of stay cables in cable-stayed bridges, viscous dampers are frequently used, and they are

Dampers for fibre optic cable | SAPREM

This damper is especially designed for installation with ADSS fibre optic cables, improving the performance of the conventional

Reliability-Based Design Optimization for OPGW Cable Damper Systems

This paper explores the application of Reliability-Based Design Optimization (RBDO) techniques to enhance the performance of

Optimal design of viscous dampers for multi-mode vibration control of ...

Viscous dampers have been widely used for mitigating rain-wind-induced vibration of bridge stay cables. Designing a

Optimal design of transverse dampers incorporating inherent stiffness ...

Wire rope dampers, proven promising in cable vibration control, were taken as a case study. Extensive cyclic loading

SPIRAL VIBRATION DAMPERS

The Hubbell spiral vibration damper (SVD) reduces Aeolian vibration on ADSS cable, Conductor, and Shield Wire/OPGW. Aeolian

Standard Series according to DIN 3015, Part 1

Discover standard clamps from STAUFF for pipes, tubes, hoses and cables. Vibration-damping, modular and available in many

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The bladder may isolate the optical fiber in a periodic fashion. The temperature of the material inside the bladder may vary axially

Experimental validation of the design formulas for vibration control of ...

Transversely installing the dampers on the stay cable has been widely adopted to control its excessive vibration.

AVD Series Spiral Vibration Dampers

Each damper is marked with the conductor range and color coded to indicate the cable diameter size range. Line design,

AVD Series Spiral Vibration Dampers

AVD Series Spiral Vibration Dampers AFL's AVD Series Spiral Vibration Dampers are designed to eliminate the damage caused by

Stockbridge Damper

The VORTX Vibration Damper responds to wind-induced line vibration that is characterized by high-frequency, low-amplitude motion

Experimental validation of the design formulas for vibration control of ...

This paper presents the influence of damper parameters on the attainable damping ratio of the sagged cable-damper

Vibration Dampers Conductor Accessories | Specs | AFL Global

Vibration Dampers - Conductor vibration induces a relative motion between the clamp and the inertia weights which causes flexure of

AVD Series Spiral Vibration Dampers | AFL Global

AFL's AVD Series Spiral Vibration Dampers are designed to eliminate the damage caused by Aeolian vibration and reduce overall

Contact Us

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