

Forging Method of Optical Cable Vibration Damper



Article Overview

Optical cable vibration dampers use forged steel counterweights combined with aluminum alloy clamps to absorb and dissipate wind-induced vibrations in OPGW and ADSS cables.

Materials and Components

Vibration dampers for optical cables typically consist of three main components:

- **Clamp:** Made of aluminum alloy, designed to match the thermal expansion of the conductor and provide secure attachment to the cable .
- **Messenger cable:** Usually galvanized steel wire, which connects the clamp to the counterweights .
- **Counterweights:** Manufactured from galvanized forged steel, these are the primary components produced via forging to ensure high strength, durability, and resistance to fatigue under repeated vibration . The forging process involves shaping steel under high pressure to achieve the desired mechanical properties, such as toughness and resistance to cracking, which is critical for the counterweights that absorb vibrational energy.

Structural Design and Function

Most optical cable vibration dampers adopt a Stockbridge or tuning fork type design, which allows them to generate multiple resonance frequencies (typically four) to co...

Article Content

ADSS/OPGW Optical Cable Vibration Damper

Overview Non-slip type Vibration Damper with armor rods Non-slip type vibration damper is composed of hammer and helical clip. It

Vibration Damper (4D Vibration Damper and Armor Rod)-YOFC

Because of the concentrated stress, vibration damper will cause some damages to the cable. The armor rods provide proper stress

OPGW Vibration Damper

Explore AFL OPGW Vibration Damper Conductor Accessories. Compare specifications, compatibility and options to support reliable

Spiral Vibration Damper for ADSS Cable

Spiral vibration dampers play a crucial role in ensuring the stability and longevity of ADSS cables, which

Spiral Vibration Dampers for ADSS Cables

Spiral Vibration Dampers is made of weather-resistant, non-corrosive plastic, dampers have a large, helically-formed damping

Spiral vibration damper,VS-02

Spiral vibration damper,VS-02 Spiral Vibration Dampers are designed to eliminate the damage caused by

Optimum design of viscous inerter damper targeting multi-mode vibration ...

Abstract Installation of transverse dampers near the cable-deck anchorage is a commonly used method for the

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the source and output are often remotely located—requiring the need for optical transport cables. the absolute optical power is

Optimal Design of a Passive SMA Damper to Control Multi ...

Methods The control of one vibration mode of a stay cable by optimized SMA damper parameters attached transversely to the cable

Vibration Damper for ADSS OPGW Cables

Clamp Type Vibration Damper for ADSS/OPGW cables, with tuning fork structure of Damper Weight, is validated by China Electric

Vibration mitigation of stay cables using ...

Previous numerical study has shown tremendous improvements in increasing the modal damping of bridge stay cables

Home-Feiboer Fiber Optic Cable

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

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

A scaled sagged stay cable has been built, and a small-size shear-mode viscoelastic damper has been developed.

Dampers for Stay Cables

Depending on the respective cable parameters, each cable is more or less prone to vibration. Longer cables are more likely to

Spiral Vibration Damper fiber optic cable fittings for optic fiber ...

Vibration Damper for electric power cable is divided into two types, including spiral vibration damper and 4D vibration damper. It can

Optimal Design of a Passive SMA Damper to Control Multi ...

Purpose This paper investigates the vibration control of a stay cable using passive superelastic shape memory alloys

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

Damping and tuning of inerter-based dampers for cable vibration ...

The effect of girder-cable coupling vibrations cannot be ignored in cable vibration control. This study focuses on the

CN115133488A

The invention relates to the technical field of optical cable vibration dampers, in particular to an optical cable vibration damper with a

How Do OPGW Cable Vibration Dampers Enhance... | ABPTEL

Conclusion OPGW cable vibration dampers are indispensable for mitigating the damaging effects of aeolian vibration

Vibration Mitigation of Sagged Cables Using a Viscous Inertial Mass ...

The connecting terminal is used to connect with cables, and the damper frame, as a fixed terminal, is usually connected to a support

(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

Full Paper_Cable Damper

The present paper describes the development process of a passive vibration damper based on polyurethane materials (type “rubber

4D Vibration Damper and Armor Rod

Vibration Damper for electric power cable is divided into two types, including spiral vibration damper and 4D vibration damper. It can

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

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)

Spiral Vibration Damper

Vibration Damper for electric power cable is divided into two types, including spiral vibration damper and 4D vibration damper. It can

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.

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Embodiments of a method and apparatus for controlling the mechanical stabilization of an optical fiber are disclosed. The method

Stockbridge Damper

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

ADSS Cable Vibration Dampers

ADSS Cable Vibration Dampers Vibration dampers are used to absorb aeolian vibrations of conductor of transmission lines, as well

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

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

The research on the cable-damper system can be traced back to the 1980s. Carne (1981) and Kovacs (1982) were among the first

A Comparative Study of Inertial Mass Dampers and Negative ...

Previous studies have demonstrated that two representative passive control devices, including inertial mass dampers

Cable Vibration Mitigation with a Tuned Viscous Mass Damper

Recent studies have demonstrated that the use of a tuned viscous mass damper (TVMD) is an effective approach for mitigating

Optimal design of transverse dampers incorporating inherent stiffness ...

Abstract This paper aims to develop an optimal design method for dampers incorporating inherent stiffness effects for

Optimum design of viscous inerter damper targeting multi-mode

Compared with other studies for cable vibration control with inerter-based dampers, the major contribution of this study

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