

Article Overview

OPGW cables must be carefully handled, stored, and installed using proper tensioning, support, and protective measures to ensure mechanical integrity and optical performance.

Handling and Transportation

OPGW drums should always be transported vertically with cable ends secured to prevent slackening, and the wooden lagging or protective staves must remain intact until installation . Drums must not be tipped, thrown, or rolled uncontrollably, and lifting devices should be used to unload them safely . On-site, drums can be moved only in the direction opposite to the cable unwinding, following the arrow marked on the drum . Storage should be on flat, solid surfaces with good drainage, and drums should remain upright to prevent deformation or damage .

Installation Preparation

Before stringing, the installation team must prepare:

- o Tensioning equipment: pullers, tensioners, anti-twisting counterweights, swivels, and pulley-blocks .
- o Safety equipment: helmets, safety belts, earth wires, electroscopes, warning signs, and protective nets .
- o Cable inspection: check for damage, verify optical attenuation using OTDR at 1550 nm, and confirm the number and type of accessories . The tension pay-off method is generally adopted, maintaining sufficient tension to keep the cable suspended and avoid abrasion on the ground . The installation plan should include route layout, tower positions, splice locations, and mechanical parameters of the OPGW cable .

Fixing and Stringing

- o OPGW cables are installed on high-voltage transmission towers, typically above 110 kV lines, serving both grounding and communication purposes .
- o Minimum bending radius must be observed at all times to prevent fiber damage .
- o Cable supports, clamps, and hardware must be compatible with the OPGW design, and stringing should follow approved methods only .
- o Splice positions are determined based on maximum cable length, tower access, and obstacles along the route .

Safety and Standards

Installation must comply with local accident prevention regulations, as well as standards such as DIN 48 207, EN 50182, ANSI/IEEE 524-1980, and ITU-T L.151 recommendations for optical ground wire installation .



OPGW Optical Cable Fixing

Special care is required to protect the optical fibers from mechanical stress, moisture, and environmental damage during the entire process .

Summary

Proper OPGW fixing requires:

- o Careful handling and vertical transport of drums.
- o Inspection and testing before installation.
- o Use of appropriate tensioning and stringing equipment.
- o Observance of bending radius and mechanical limits.
- o Compliance with safety regulations and international standards. Following these requirements ensures both the mechanical reliability of the cable and the integrity of the optical fibers for communication purposes.

OPGW was developed as a communication pathway on transmission lines. It also offers

We manufacture a wide range of hardware fittings for OPGW Optical Ground Wire, including Suspension and Tension Assemblies,

For cables constructed with an un-stranded stainless steel tube in the center of the cable or single layer cables, an anti-rotational

For these reasons, optical fibres are widely installed with high-voltage power lines. There are several types of cable and installation

OPGW What Is OPGW? An optical fiber composite overhead ground wire (OPGW) is a new type of ground cable used in the high

OPGW is mainly applied in communication line of newly constructed high voltage transmit electricity system with 35 KV or above, or

OPGW Hardware Fittings The OPGW Hardware Fittings are instrument used for surge protection of communication and transmission

Installation Preparation of OPGW 2.1 Establishment of OPGW installation and engineering 2.2 Preparation of installation tools 2.3

OPGW cable is usually custom-designed to best match the optical, electrical, mechanical, quality, and cost requirements of each

I. General Rules This manual is formulated in accordance with IEEE 1138 - 2008 and IEEE 524 - 1992, etc.
OPGW

1. General Information The installation of OPGW/OPPC with incorporated optical fibers is subject to the accident prevention

Discover how to install OPGW fiber optic cable for reliable communication. Follow this step-by-step guide to ensure efficient and

Zhongtian Hitachi Fiber Optic Cable Co., Ltd. (ZHC) offers OPGW installation services including supervision, splicing,

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