Principle of Optical Cable Laying Turntable

Overview

CN105717591A The invention discloses an optical fiber laying method for laying a continuous long optical fiber to an optical fiber receiving tube of a mult.

Key Takeaways

An optical cable laying turntable is used to temporarily hold and manage the front end of a long optical fiber during staged installation, preventing tangling and ensuring smooth deployment.

Working Principle

In long-distance optical fiber installation, especially for multi-segment photoelectric hybrid cables, the fiber is often laid in sections because the air-blowing equipment can only handle a limited length at a time. The intermediate turntable serves as a temporary holding point for the fiber's front end after it exits a segment of the cable. The fiber is fixed onto the turntable, which allows the remaining fiber to be laid into the next segment without twisting, tangling, or damaging the fiber.

Operational StepsAir-Blown Fiber Laying: The optical fiber is first blown into the receiving tube of the initial cable segment using an air-blowing device.

Front-

End Fixation: Once the fiber exits the first segment, its front end is secured on the intermediate turntable. Sequential Deployment: The rest of the fiber is then laid into the next cable segment. The turntable ensures that the fiber remains untangled and properly aligned.

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Release and Continuation: After the fiber is successfully laid in the previous segment, the front end is released from the turntable, allowing the process to continue for subsequent segments.

Advantages

Prevents Tangling: By holding the fiber in a controlled manner, the turntable avoids twisting or overlapping.

Facilitates Long-

Distance Installation: Enables staged laying of fibers longer than the capacity of the air-blowing equipment. Improves Efficiency: Reduces manual handling and potential fiber damage during installation.

Supports Multi-

Segment Cables: Essential for hybrid cables where multiple fiber segments must be connected sequentially.

Summary

The optical cable laying turntable is a critical tool in modern fiber deployment, particularly for long or multi-segment cables. It acts as a temporary anchor point, ensuring smooth, untangled fiber installation while allowing the air-blown method to be applied efficiently over distances exceeding the equipment's single-pass capacity. This principle is widely applied in telecommunications and high-speed data network installations where fiber integrity and installation efficiency are paramount.

Article Content

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The invention discloses an optical fiber laying method for laying a continuous long optical fiber to an optical fiber receiving tube of a multi-segment photoelectric hybrid cable.

Optical fiber laying method and intermediate turntable for winding ...

The invention discloses an optical fiber laying method for laying a continuous long optical fiber to an optical fiber receiving tube of a multi-segment photoelectric hybrid cable.

Handbook Optical fibres, cables and systems

The simultaneous availability of compact sources and of low-loss optical fibres led to a worldwide effort for developing optical fibre communication systems. The real research phase of fibre-optic

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MARINE CABLE LAYING TURNTABLE

Sub-sea cable is manufactured in one of two ways. It is either laid in a stationary shipping basket or laid in a shipping basket placed on a turntable. If the cable is laid on a stationary basket, there is a twist

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This document provides guidelines for laying optical fibre cables, including detailed surveying the cable route, soil categorization, recommended pipe types for cable protection,

Turntable Cable Laying

Turntable Cable Laying Stemar Engineering heeft de complete engineering verzorgd voor de Turntable Cable Laying. Voor de ontwikkeling van de tafel is net als een platenspeler gekeken naar de juiste

Cable Lay and Cable Handling Systems

Using proven mechanical design philosophies in conjunction with state-of-the-art electronic drives and controls, Parkburn supplies rugged, reliable equipment for fast mobilisation and safe & simple operation.

Turntable Systems | Engineering | Brilex Technical

Turntable systems can provide an engineered solution for cable laying across waterways, particularly in the fiber optic transmission line sector. Turntables are

Nexans Electra: Next-gen cable laying vessel

Equipped with three turntables boasting a 13,500-tonne loading capacity, the CLV can handle even the most challenging cable laying projects. Its ability to lay up to

Cable Lay and Cable Handling Systems

From large, fully-synchronised Power Cable and Telecoms Fibre Optic back-deck lay and repair systems through to simple lightweight cable transporters, Parkburn

A Giant in Offshore Cable Installation

The vessel can install up to 10,700 tons of cable and is thereto equipped with a 7,400 ton capacity turntable above deck and a 5,000 ton capacity turntable below deck. “The exact scope of the project

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Modular Marine Cable Laying Turntables

As the world continues to look to alternative, renewable energy sources to power our cities, the offshore wind farm industry is utilizing untapped resources to power our communities and homes via subsea

MARINE CABLE LAYING TURNTABLES

MARINE CABLE LAYING TURNTABLES Portable turntables providing added flexibility and cost-savings. Vessels and barges with permanent turntables can only serve a single purpose, and must

Nexans Electra: Next-gen cable laying vessel

This cutting-edge, DP3 cable laying vessel features a split turntable on deck capable of holding up to 10,000t of cable, an under-deck turntable with a 3,500t cable

A Guideline for Laying of Cables and Installation of Sleeves

A Guideline for Laying of Cables and Installation of Sleeves Who is Draka Communications? Draka Communications - part of Draka Holding N.V. situated in Amsterdam - of-fers a variety of reliable

Submarine Cable Laying-up Machine

This vertical type Laying-up machine is used for laying-up large section and long length Submarine cables. Such as: • Submarine power cable, • Submarine

Turn Table

Rewinding / Winding Turn Table We offer a wide range of Submarine Cable Turntables designed to handle the heavy-duty demands of submarine cable

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