Swiss High-Temperature Temperature Measurement Optical Cable Tender

Overview

Optical Fiber Sensors for High-Temperature Monitoring: This paper will review the development of fiber-optic high-temperature sensors over the last Tempera.

Key Takeaways

Fiber-optic high-temperature sensors and distributed sensing cables in Switzerland enable precise, continuous temperature monitoring in extreme environments, with tender opportunities available for procurement.High-Temperature Fiber-Optic Sensors

Fiber-optic sensors are increasingly used for high-temperature measurement due to their compact size, immunity to electromagnetic interference, and ability to operate in harsh environments . For example, the TS2 fiber-optic temperature probe by Optocon AG is designed for power transformers and bus bars, featuring a GaAs-crystal sensor tip and PTFE jacket. It can measure temperatures from -200°C to +300°C, resist corrosive environments, and maintain accuracy over several meters of sensor cable . Other fiber-optic technologies include distributed temperature sensing (DTS) systems, which allow continuous temperature monitoring along the length of a cable, detecting thermal anomalies in pipelines, power cables, and industrial installations. DTS systems can measure temperatures with 1°C accuracy and 0.1°C resolution, over distances up to 10 km, and operate in ambient conditions from -10°C to +50°C .

Specialty Optical Cables for High-Temperature Applications

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Companies like Solifos AG provide specialty fiber-optic sensing cables capable of measuring temperature, strain, acoustic signals, and pressure. These cables function as passive sensors, enabling reliable measurements in extreme environments, including temperatures up to 600°C. The cables are suitable for mission-critical applications where traditional sensors may fail, and they support distributed fiber-optic sensing (DFOS) for seamless monitoring across large structures .

Swiss Tender Opportunities

For companies interested in procurement or project participation, GlobalTenders lists Swiss cable tenders, including high-temperature and specialty optical cables. The platform aggregates tenders from Swiss official websites, municipal portals, and industry publications, providing opportunities for suppliers to bid on contracts for power substations, industrial installations, and infrastructure projects .

Key Considerations for Tender Participation
• Temperature range and sensor material: Ensure the fiber-optic cable can withstand the required high temperatures (up to 600°C for extreme applications).

• Distributed sensing capability: DTS or DFOS systems allow continuous monitoring over long distances.

• Environmental resistance: Cables should resist electromagnetic interference, corrosion, and mechanical stress.

• Integration and communication: Check compatibility with existing control systems (RS485, RS232, RJ45).

• Tender compliance: Review Swiss tender requirements, including technical specifications, certifications, and local regulations. By combining high-performance fiber-optic sensors with Swiss tender opportunities, organizations can implement reliable high-temperature monitoring solutions for critical infrastructure and industrial applications.

Article Content

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Temperature measurement products

Our measuring system of the "EasyWireTemp" series allows precise as well as non-contact temperature measurement on wire,

Tenders

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The Swiss ILO only publishes tenders requiring high-tech capabilities and where a reasonable commercial opportunity

Fibre optic measurements | Services | Solexperts AG

A fibre optic cable can be integrated into a structure during the construction or during remediation

Optical Temperature Measurement, Sensor Products

Our Products Temperature Transmitters CSA/UL/Marine certified fiber optic temperature transmitters for

Optical Fiber Sensors for High-Temperature Monitoring: A Review

This paper reviews the sensing principle, structural design, and temperature measurement performance of fiber-optic high

Power Cable Monitoring for Overheating

The DTSX distributed optical fiber temperature sensor is a solution for monitoring abnormal cable temperatures and cable tunnel

COMEM Group

Our fiber optic sensors use a Gallium Arsenide (GaAs) crystal at the fiber tip, making them ideal for highly

Internal temperature measurement and conductor temperature

Four cases of cable temperature rising experiments under the laying environments of duct and water were carried out.

Fiber Optic Sensor | Distributed Temperature Sensing

Discover our comprehensive range of Distributed Temperature Sensing (DTS) systems, designed to

Fiber Optic Temperature Sensors: Types, Working & Applications

Fiber optic temperature sensors offer superior performance compared to these techniques, thanks to their numerous benefits. This

Distributed Fiber Optic Temperature Sensor

What is a Distributed Fiber Optic Temperature Sensor? Yokogawa''s DTSX product family is engineered with a variety of fiber optic

Optical fiber assemblies for high temperature environments

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For this type of application, we offer silica/sapphire assemblies for parts located in your high-temperature

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The Ultimate Selection Guide for Fiber Optical Sensor for Temperature ...

For example, in the power system, areas near high-voltage cables or electrical equipment have strong

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Fiber Optic Temperature Sensing: Revolutionizing Monitoring

However, traditional temperature sensors often have limitations, hindering the ability to obtain a comprehensive understanding of

Discover Strain and Temperature Risks in Fiber Cables

Advances in Fiber Optic Cable Characterization Help Network Operators Protect Their Networks VIAVI OTDRs allow technicians all

What are Fiber Optic Temperature Sensors and their Uses?

Circuit Breaker Condition Monitoring: By using advanced optical temperature sensors, companies can preempt faults with early

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DiTemp Ordinary Temperature Sensing Cable

The Ordinary Temperature Sensing cable is a small fiber optic cable, armored with stainless steel loose tube gel filled, stainless steel

Application of Distributed Optical Fiber Temperature Measurement in ...

This paper studies a distributed optical fiber temperature measurement system using smart cables, which combines fiber Bragg

High Temperature Fiber Optics

High temp fiber optics are used where the temperature is too hot for plastic fibers. Popular use in thermal process applications.

Temperature measurement using optical fibers

Introduction Fiber optic temperature measurement has been in use for decades1.The most prevalent methods are fluorescent and

High-temperature fibers | WEINERT Industries AG

Singlemode and multimode fibers for data communications or light transmission at high temperatures For use in higher temperature

A distributed optical fiber sensor for temperature detection in power ...

In this study, an optical fiber and distributed temperature sensing (DTS) method have been used to obtain the

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Fiber Optic Infrared Temperature Measurement

The OS4000 series high speed industrial fiber optic infrared transmitters measure temperature ranges from 200 to 1600ºC (392 to

IIoT-Based Applications for Sensing Temperature with Optical Fiber

By using the fiber itself as the sensing element, distributed temperature sensing measures the temperature distribution over the

Distributed Temperature Sensing (DTS) | AP Sensing

Distributed Temperature Sensing (DTS) systems provide temperature information for accurate thermal monitoring, fire detection, and

Progress Toward Sapphire Optical Fiber Sensors for High-Temperature ...

High-temperature measurements are of significant importance in various harsh-environment engineering fields, such

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