

Portuguese downhole temperature measurement optical cable manufacturer



Overview

The revolutionary 2P Squared technology of DAS provides a true linear measurement of dynamic fiber length changes caused by strain from acoustic/vibration signals or temperature fluctuations.

Key Takeaways

Portugal hosts several fiber optic cable manufacturers that could supply optical cables for downhole temperature measurement, including Fibersail, CABLOTEC, and Altice Labs.

Key Portuguese Manufacturers

Fibersail: Specializes in fiber optic technology with FBG sensors and advanced shape sensing systems. Their expertise in real-time monitoring and robust fiber optic solutions makes them potentially suitable for downhole temperature sensing applications.

CABLOTE

C Cablagens e Sistemas Lda.: Provides custom connectivity solutions across industries, including telecommunications. Their experience in prototyping and developing specialized fiber optic cables could be adapted for harsh downhole environments. **Altice Labs:** Focuses on Optical Distribution Networks and structured cabling products.

While primarily telecom-oriented, their advanced fiber optic manufacturing capabilities may support high-performance downhole cable requirements.

Fast

Fiber: The largest fiber optic wholesale operator in Portugal, offering point-to-point dark fiber and FTTH solutions. Their infrastructure expertise could support custom fiber optic cable projects for industrial monitoring. Other notable companies: G9Telecom, FACTOR D, CriticalConnects, and Jorsat provide various fiber optic solutions, including pre-connectorized and ruggedized cables, which may be adapted for downhole sensing applications.

Considerations for Downhole Applications

Downhole temperature measurement requires high-temperature tolerance, chemical resistance, and mechanical robustness. Global solutions like AP Sensing, GEO PSI, and Fibercore provide specialized downhole fiber optic cables designed for Distributed Temperature Sensing (DTS) and Distributed Acoustic Sensing (DAS), which can be permanently installed behind casing or strapped to production tubing. Portuguese manufacturers with experience in FBG sensors or ruggedized fiber systems could collaborate with these global providers to supply cables suitable for downhole deployment.

Recommendation

For a Portuguese-based solution, Fibersail and CABLOTEC are the most promising candidates due to their experience with fiber optic sensing and custom cable development. Engaging with these companies for customized downhole optical cables could meet the requirements for high-temperature, high-pressure, and chemically aggressive well environments. Additionally, consulting with global downhole fiber optic specialists like AP Sensing or Fibercore can ensure compatibility with DTS systems and long-term reliability.

Article Content

Brochure_Application_Well_Reservoir_Monitoring_2025-08_EN_A11

The revolutionary 2P Squared technology of DAS provides a true linear measurement of dynamic fiber length changes caused by strain from acoustic/vibration signals or temperature fluctuations.

Innovative World Class Downhole Fiber Optics

Since 2008, SageRider has become a leader in this field of optical sensing systems. Due to SageRider's broad knowledge base in both fiber optic sensing technology and oilfield services, we are well suited

Optiq Fiber-Optic Solutions | SLB

For permanent deployment, the hybrid fiber-optic electrical cable of Optiq solutions is installed within the completion string or behind tubing. It can also be installed across the sandface for both wet and dry

Technologies| Precise Downhole Solutions

Precise manufactures annealed TEC Cable for a variety of applications including downhole, surface, and pipeline applications to name a few. Our experienced staff will help with the material selection, sizing

Permanent fiber-optic cable

Permanent downhole fiber-optic cables are critical infrastructure in wellbore monitoring systems, ensuring reliable transmission of data for applications such as distributed temperature, acoustic, and

Downhole Fiber Optic Cable | Fibercore

Fibercore offers a range of designs for downhole fiber optic cable to meet the specific requirements of your oil or gas well. These types of cables are permanently installed either cemented in behind the

Fiber optics

Fiber optics solutions from Baker Hughes give you detailed, real-time data on the condition and performance of your downhole artificial lift tools—data you can use to make informed decisions to

How Fiber Optics Are Used in the Oil & Gas Industry | Fibercore

DAS and DVS technology uses optical fibers to monitor and analyze acoustic signals generated by downhole activities, such as hydraulic fracturing, drilling and production. DTS technology uses optical

Distributed Temperature Sensing (DTS) | AP Sensing

The intensity ratio between both signals depends on the local temperature and is used to calculate the temperature along the optical fiber. AP Sensing uses Raman-OTDR technology with tremendously

High-Temperature Downhole Cable

High-Temperature Downhole Cable As the leading supplier of downhole fiber optic cable used in the oil and gas industry, AFL provides the largest portfolio of downhole products on the market. AFL's

Downhole fiber optic temperature-pressure innovative measuring

In this study, fiber optic Bragg grating (FBG) measurement technology is utilized applied in an attempt to replace more expensive electronic sensors and to obtain more accurate downhole

Downhole Fiber Optic Cable | Fibercore

The optical fibers can be used to sense temperature and listen to well bore activities along the entire length of the cable and can be used for telemetry to point fiber

Fiber optic pressure and temperature monitoring system for downhole ...

A Pressure and temperature (P&T) monitoring system based on fiber Bragg grating (FBG) and extrinsic Fabry-Perot interferometer (EFPI) for downhole application is designed and

Downhole Technology Solutions | Prysmian

Prysmian has a unique and wide range of Downhole Technology cables, protection systems, control lines, flatpack and services. Find out more!

MWD Cables - High-Reliability Measurement While Drilling Cable ...

MWD Cables: The Critical Link in Downhole Measurement Systems In the unforgiving environments of oil and gas drilling, the performance of every component is paramount. Measurement While Drilling

Downhole Gauges | GEO PSI Real-Time Downhole

Downhole Gauges - Each downhole gauge is made of the highest quality components available. They measure downhole pressure, temperature, etc...

Real-time monitoring of pressure and temperature of oil well using a ...

Abstract A carbon-coated and bellow-packaged optical fiber sensor for high pressure and high temperature monitoring in downhole applications is developed and successfully field-applied in

Distributed fiber-optic temperature monitoring in boreholes of a ...

Abstract Monitoring the in-situ temperature is key for the characterization of a seasonal geothermal energy storage. Distributed fiber-optic temperature sensing (DTS) systems provide

Contact Us

Continue your research online:

Website: <https://cjcconsultants.co.za>

Technical inquiry: <https://cjcconsultants.co.za/contact.html>

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

