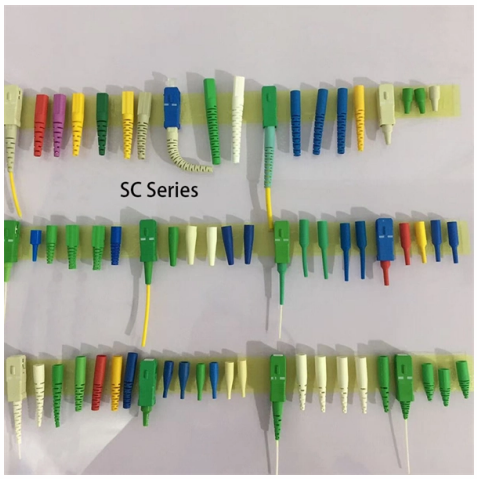
# Adicor Photonics Europe S.A.

# High-Temperature Resistant Downhole Testing Optical Cable




## Overview

Constructed with a three-layer, all-metal design, the High-Temperature Downhole Cable provides both an inner and outer layer of stainless-steel tubing to protect against temperatures exceeding 300ºC and a secondary layer of aluminum to inhibit hydrogen permeability and extend the. Constructed with a three-layer, all-metal design, the High-Temperature Downhole Cable provides both an inner and outer layer of stainless-steel tubing to protect against temperatures exceeding 300ºC and a secondary layer of aluminum to inhibit hydrogen permeability and extend the. In this study, a qualitative analysis was conducted on the structural materials utilized in two types of optical cables to identify these materials and assess the high-temperature tolerance and aging resistance properties of the optical fibers incorporated within. It was discovered that hydrogen. 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 strain sensing (DTS, DAS, and DSS)—all with one 1/4-in control line. These monitoring systems help. StrataJacTM is the first cable encapsulation designed exclusively to protect downhole cables by resisting the extreme impact energies and abrasion encountered during run-in, and high pressure, high velocity frac' jobs. World's best hydrogen-resistant, high-temperature fiber. The elevated temperatures, pressures, and harsh chemical environments present significant challenges for the long-term operation of these tools, especially when real-time data transmission to the surface. Alias: Double-Layer Downhole Fiber Cable, Tube-in-Tube High-Temp Cable, Hydrogen-Resistant PSC Fiber Cable, Pure Silica Core Oil Well Fiber, Alloy 825 Dual-Tube Sensing Cable, 1/4" Heavy Duty SST Fiber Cable, PDS (Permanent Downhole Sensing) Cable, Acid-Resistant Geothermal Cable.

## Article Content

Double-layer Seamless Steel Tube Optical Cable

The OFSCN® Double-Layer High-Temperature Downhole Fiber Optic Cable is engineered for the most demanding environments in oil and gas exploration, ultra-deep well monitoring, and

Hydrogen ingression of optical fiber cable in high pressure high ...

This paper proposed high temperature and high pressure hydrogen ingression testing load hydrogen environment by using downhole commonly used different fiber (including high

Hybrid Downhole Cable Fiber Optic Cable | Specs | AFL EMEA

Hybrid Downhole cable from AFL combines copper conductor and optical fibers within the same cable structure for simultaneous deployment. This construction is intended to withstand elevated

Fiber-optic technologies and methods for downhole monitoring

Equipment: optical fibers, sensor cables Deployment methods: permanent, temporary/wireline Applications, case studies Distributed temperature sensing (DTS) Borehole and formation

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

Long-term High Temperature High Pressure Cable for Geothermal

This study found that the cable can sustain temperatures reaching 300 °C with high parallel cable resistance once the binder has been baked out. Additionally, the cable was tested at 300 °C and

Harsh Environments fiber optic products | AFL Global

Harsh Environments fiber optic products delivers high-performance engineering, reliability and simplified deployment for critical network applications. Explore

How Fiber Optics Are Used in the Oil & Gas Industry

Our specialty optical fibers are designed to withstand the harsh and challenging conditions of the oil and gas industry. They are highly resistant to extreme

High pressure and high temperature optical spectroscopy cell using ...

Some described embodiments are suited for very high pressure and temperature environments (for example, 20 kpsi or greater at 175 degree C. or greater). Such conditions, for example, may be found

SPECIALTY AND HARSH ENVIRONMENT FIBER OPTIC CABLE

Customers around the world benefit from using AFL fiber optic cable and components for downhole sensing and subsea umbilicals. With its patented stainless steel tube technology, AFL can deliver

Experimental Study on the Characterization of Aging Resistance ...

The utilization of downhole optical cables has significantly enhanced the efficiency and reliability of oilfield production operations; however, the challenging high-temperature and high

Double-layer Seamless Steel Tube Optical Cable

2. Mechanical Structure & Physical Parameters of OFSCN® Double-Layer High-Temperature Downhole Fiber Optic Cable This cable is available in 316L Stainless Steel (Standard)

Downhole Logging

Wireline cables for downhole logging applications, delivering reliable power and data in high-pressure, high-temperature wells.

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 unique patented solution for oil and gas

Experimental Study on the Characterization of Aging Resistance ...

In this study, a qualitative analysis was conducted on the structural materials utilized in two types of optical cables to identify these materials and assess the high-temperature tolerance and aging

Downhole Cables

SPECIALTY TEC: HIGH TEMPERATURE > 150° C TEC - Tubing Encased Cable (TEC) is designed and manufactured to withstand the varying harsh environments found associated with the oil and gas

February 2025 Flashcards in Roshann KN''s MCQs: UPSC

Study February 2025 flashcards with questions like: Which of the following is not a common characteristic of Ultra-Processed Foods (UPFs)?

Traditional Downhole Cable | AFL EMEA

AFL''s Traditional Downhole Cable is designed to perform in the well and withstand elevated temperatures, high pressure and corrosive environments.

SPECIALTY FIBRE OPTIC CABLE

Traditional Downhole cable from AFL is designed to perform in the well and withstand elevated temperatures, high pressure and corrosive environments. The cable is customised to the customer''s

Experimental Study on the Characterization of Aging Resistance

In this paper, considering the downhole environmental conditions such as high temperature, high pressure, and hydrogen exposure, an environmental durability test involving high

Testing Optical Fiber: Undersea and Downhole

Silica-based optical fibers have been increasingly used for distributed temperature and acoustic sensing applications, in which temperatures and/or acoustic signals

Three-layer Seamless Steel Tube Optical Cable

The OFSCN® Triple-Layer Downhole High-Temperature Fiber Optic Cable is the flagship solution for extreme sensing environments. Featuring a "Tube-in-Tube-in-Tube" nested structure, it

Optical Fibre-Based Sensors for Oil and Gas Applications

Oil and gas (O& G) explorations moving into deeper zones for enhanced oil and gas recovery are causing serious safety concerns across the world. The sensing of critical multiple

Downhole fiber optic temperature-pressure innovative measuring system ...

Hence in this study, a cost-effective measurement technology based on fiber optic approach was developed. One effort was replacing the electronic method by optic method, and the

Brochure_Application_Well_Reservoir_Monitoring_2025-08_EN_A11

Single-ended design – no loop required High optical budget ensures outstanding measurement performance Resistant to hydrogen darkening of optical fibres in harsh downhole environments Laser

Hydrogen ingression of optical fiber cable in high pressure high ...

The performance of this fibre in high-temperature hydrogen tests is presented and this fibre is shown to be at least an order-of-magnitude more resistant to hydrogen deterioration than

## Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: https://adicor.eu
Email: info@adicor.eu
Phone: +33 6 48 37 92 15
Address: 12 Rue de la Paix, 75002 Paris, France

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