Oil Pipeline Monitoring Algeria

Overview

(P&GJ) — SONATRACH, Algeria's state-owned oil company, unveiled a groundbreaking smart oil and gas pipeline inspection solution developed in collaboration with Huawei at MWC Barcelona 2024. To meet the challenge presented in these remote environments, OptaSense delivers some of the longest fiber-optic-based pipeline monitoring systems ever deployed and offers reliable, 24/7 trusted detection in real time, with the flexibility to adapt to the operational challenges these projects. [Barcelona, Spain, February 28, 2024] At MWC Barcelona 2024, Sonatrach, the state-owned oil company of Algeria shared the achievements of the smart oil and gas pipeline fiber sensing inspection solution deployed with Huawei. The solution ensures high security, intelligence, and high efficiency of. This innovative solution integrates advanced fiber optic sensing technology to enhance pipeline security, intelligence, and operational efficiency. 4% increase in production from 2011 to 2021. For oil and gas exploration companies in the region, overcoming pipeline safety and efficiency issues has never been more crucial.

Article Content

Huawei Optical Fiber Sensing for Pipeline Inspection

In the oil and gas industry, pipeline inspection has always relied on costly and inefficient manual inspection. Plagued by safety concerns, given the inhospitable

Long-Range Pipeline Monitoring by Distributed Fiber Optic Sensing

Distributed fiber optic sensing presents unique features that have no match in conven-tional sensing techniques. The ability to measure temperatures and strain at thousands of points along a single

SONATRACH and Huawei Jointly Innovate a Smart Oil

As a key contributor in the oil industry of Algeria, SONATRACH runs about 43 oil and gas pipelines, accompanying with 14,000 km optical cables.

Sonatrach and Huawei Jointly Innovate a Smart Oil and Gas Pipeline ...

At MWC Barcelona 2024, Sonatrach, the state-owned oil company of Algeria shared the achievements of the smart oil and gas pipeline fiber sensing inspection solution jointly developed with Huawei.

Fiber Optic Sensors for Monitoring Pipe Bending Due to

Abstract This paper describes an installation of fiber optic sensors designed to measure pipe bending due to ground movement at three sites on a 16” gas transmission line.

Fiber optic sensing technology in underground pipeline health ...

As such, fiber optic sensing technology (FOST) has emerged as a promising tool for underground pipeline monitoring. This review article provides a comprehensive overview of FOST,

Multi-parameter CBM pipeline safety monitoring system based on optical ...

The multi-parameter detection approach by optical fiber sensing provides a new monitoring method for the safety prewaring of long-range CBM pipelines.

(PDF) Advancements in Optical Fiber Sensing Systems

Optical fiber sensing technology plays a pivotal role in modern monitoring systems, particularly in the realm of pipeline and railway safety

Distributed Fiber-Optic Sensors for Pipeline Inspection and Monitoring ...

The discussion encompasses various types of distributed fiber sensors, exploring their specific advantages they offer in terms of sensitivity, range, and resolution.

SONATRACH and Huawei launch smart fiber sensing

(UI) — SONATRACH, Algeria''s state-owned oil company, unveiled a groundbreaking smart oil and gas pipeline inspection solution developed in

A study for monitoring strain of oil and gas pipeline based on ...

In 2012, Jia et al. used the Brillouin scattering distributed optical fiber sensing technology to monitor oil and gas pipeline leakage and realized leakage identification by monitoring

How are Fibre Optic Sensors Used in Monitoring of

How are Fibre Optic Sensors Used in Monitoring of Pipelines? Pipelines are efficient, highly reliable and safe means of transportation of water,

Long-Distance Pipeline Intrusion Warning Based on ...

Mechanical construction activities along the pipeline have posed a serious threat to the safety of pipelines. In this paper, an intrusion warning ensemble model based on environmental embed-ding is

Fiber Optic Sensing Technologies for Underground

Recently, fiber optic sensing technologies have gained increasing attention for their ability to provide distributed, high-resolution, and real-time data

SONATRACH and Huawei Launch Smart Fiber Sensing

This innovative solution integrates advanced fiber optic sensing technology to enhance pipeline security, intelligence, and operational efficiency.

Fiber optic sensing technology in underground pipeline health ...

Traditional sensors have limitations in all-round and real-time monitoring, while fiber optic sensors offer several advantages, including large coverage, high sensitivity, long sensing distance,

Non-Intrusive Pipeline Flow Detection Based on

Abstract We demonstrate a non-intrusive dynamic monitoring method of oil well flow based on distributed optical fiber acoustic sensing (DAS) technology and the

Algeria Pipeline Monitoring Case Study | OptaSense

OptaSense deployed a fiber-optic pipeline monitoring system spanning 180 km in Algeria, utilizing flexible power sources to enable real-time leak detection and alerts.

Monitoring of pipelines subjected to interactive bending and dent using ...

This research represents a feasibility study on the monitoring of interactive effects of bending and dent in pipelines using distributed fiber optic sensors in a laboratory setting.

Long-Range Pipeline Monitoring by Distributed Fiber Optic Sensing

Distributed fiber-optic sensor systems based on Raman and Brillouin scattering [38, 39] have been used for thermal monitoring, by means of which, for example, pipeline leak detection can

Fiber-Optic Sensing Technologies for Underground Pipeline Monitoring

Abstract: Underground pipeline networks are essential for safely and efficiently transporting critical resources. Traditional sensing approaches are often limited in coverage and are susceptible to

Long-distance fiber optic sensing solutions for pipeline leakage ...

Furthermore pipeline owner/operators lay fiber optic cable parallel to transmission pipelines for telecommunication purposes and at minimum additional cost monitoring capabilities can

Microsoft Word

ABSTRACT Distributed fiber optic sensing presents unique features that have no match in conventional sensing techniques. The ability to measure temperatures and strain at thousands of points along a

Oil and gas in North Africa: How intelligent fibre sensing

Now, a partnership with Huawei, unveiled at this year''s Mobile World Congress (MWC) in Barcelona, is providing a new smart solution for oil and gas

OFFSHORE AND ONSHORE PIPELINE COMPREHENSIVE MONITORING WITH FIBER OPTIC ...

If necessary the fiber optic temperature monitoring system can be combined with fiber optic strain measurements in order to map in real-time bedform migration and to detect and localize pipeline ...

OptaSense Provides Flexible Solution for Pipeline Monitoring in Algeria

INPROTEC, an Italian-based company, with subsidiary offices in Algeria (INPROTEC Algérie) acting as the main automation supplier for this project, selected the OptaSense pipeline monitoring system to

Real-time Local Buckling Monitoring in Oil/gas Pipelines Using Fiber ...

This paper introduces an approach aimed at monitoring local buckling occurring in the compression bending area of pipeline sections. The proposed approach utilizes fiber Bragg gratings (FBGs) to

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