

RIVO MULTITRADE OPTICAL SYSTEMS

East Africa Pipeline Temperature Measurement Optical Cable System Manufacturer



Overview

WORLD-MOST-INNOVATIVE-080525-DS EACOP has been designed to meet or exceed international best practices and technical standards. These standards ensure that.

Key Takeaways

Key manufacturers for pipeline temperature monitoring in East Africa include Yokogawa, AP Sensing, FEBUS Optics, and East African Cables, offering distributed fiber optic sensing solutions. Distributed Temperature Sensing (DTS) Technology

DTS systems use optical fibers as continuous temperature sensors, providing real-time temperature profiles along pipelines. These systems rely on Raman or Brillouin optical scattering to measure temperature at multiple points along the fiber, often over distances exceeding 50 km, making them ideal for long pipelines. The technology allows early detection of leaks, hot spots, or structural anomalies, enhancing safety and operational efficiency.

Key Manufacturers and Solutions

- Yokogawa (DTSX3000): Offers distributed temperature sensing over distances up to 50 km using Raman scattering. The system provides high-resolution temperature profiles for pipelines, storage tanks, and power cables, enabling preventive maintenance and leak detection.



- **AP Sensing:** Provides DTS systems using Raman-OTDR and Brillouin-OTDR technologies. Their solutions offer precise, real-time temperature monitoring along pipelines, with spatial resolution down to one meter and coverage over dozens of kilometers. AP Sensing also integrates Distributed Acoustic Sensing (DAS) for enhanced monitoring .
 - **FEBUS Optics (FOPipe):** Specializes in pipeline integrity monitoring with distributed fiber optic sensing. Their systems detect leaks, intrusions, and operational events in real time, providing precise location alerts and supporting both onshore and offshore pipelines .
 - **East African Cables (EAC):** While primarily a cable manufacturer, EAC produces fiber optic cables and accessories suitable for DTS deployment in East Africa. They have manufacturing facilities in Kenya, Tanzania, and the DRC, and a distribution network across Uganda, Rwanda, Burundi, South Sudan, and Ethiopia .
- Applications in East Africa

These systems are particularly relevant for oil, gas, and water pipelines in East Africa, where long-distance monitoring is critical. DTS solutions help:

- Detect leaks or temperature anomalies early
- Monitor pipeline integrity and prevent failures
- Optimize maintenance and reduce operational costs
- Ensure compliance with safety and environmental standards

Summary

For East African pipeline projects, Yokogawa, AP Sensing, and FEBUS Optics provide advanced DTS solutions with proven long-distance monitoring capabilities, while East African Cables supplies the necessary fiber optic infrastructure locally. Selecting a system depends on pipeline length, resolution requirements, and integration with existing monitoring systems.

Article Content

Uganda Pipeline Temperature Measurement Optical Cable System

We manufacture optical fiber-based monitoring equipment for distributed measurement, also known as linear measurement, of

THE WORLD'S MOST INNOVATIVE AND SMART PIPELINE SYSTEM

EACOP integrates advanced fibre optic technology along the entire length of the pipeline. These cables serve multiple purposes,

Sensorlines | Distributed Fiber Optic Sensing Technology

Sensorlines delivers cutting-edge Distributed Acoustic, Temperature, and Strain Sensing systems that protect global infrastructure —

Flow, level, liquid analysis, optical analysis, pressure, temperature ...

All the advantages of our new Micropilot FMR10B, FMR20B and FMR30B for Water, Wastewater & Waste, Mining, Minerals and

Overview – EACOP – East African Crude Oil Pipeline

The fibre-optic cable will allow all data from the pipeline to be transmitted to 24/7 manned control rooms located at each end of the

Pipeline

Omnisens Lynx transforms a fiber optic cable into a continuous, real time monitoring system at minimal extra cost. This technique

DTSX3000 Distributed Temperature Sensor | Yokogawa Middle East

DTSX measures temperature distribution over the length of an optical fiber cable using the fiber itself as the sensing element and it is

EACOP Unveils 897-Mile Heated Oil Pipeline with Advanced

Due to pump its first crude oil in 2025, the EACOP integrates a sophisticated fiber-optic network for continuous online

Oil Pipeline Distributed Temperature Sensing (DTS) System: Top 10 ...

Optical fiber distributed temperature sensing (DTS) is widely regarded as the most advanced and reliable technology

Enhancing Pipeline Monitoring with Fiber Optic Sensing Technology

In the ever-evolving landscape of infrastructure management, ensuring the safety and integrity of pipelines is

A comprehensive survey on pipeline monitoring technologies ...

Modern monitoring systems involve technologies that provide real-time pipeline data collection. These technologies include fiber

Fiber Optic Temperature Control for Jafurah Project Sulfur Pipelines

Overall, the skin effect heating system with fiber optic temperature sensing technology represents a significant advancement in

Distributed Temperature Sensing (DTS) System

With their ability to measure temperature along the entire length of the optical fiber, accuracy, reliability, and scalability, DTS systems

Fiber Optic Temperature Sensor, Distributed Temperature Sensing System ...

Our Distributed Temperature Sensing (DTS) Solution Our fiber optic temperature system provides continuous, real-time temperature

Leakage detection using fiber optics distributed temperature

The present paper presents and discusses the possibility to actively and automatically monitor leakages using distributed fiber optics

Fiber Optic Temperature Sensing and Measurement

Learn how Luna OBR systems measure fiber optic latency and length with picosecond accuracy for high-speed networks,

Pipeline Integrity Monitoring and Leak Detection | SLB

Pipeline integrity monitoring systems SLB's pipeline integrity monitoring systems—part of the Optiq™ fiber-optic solutions

Distributed Temperature Sensing (DTS) Systems | Optromix

Distributed temperature sensing (DTS) systems are optoelectronic devices which measure temperatures by means of optical fibers

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

