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A LUNA— company

OptaSense Secures the Delivery of Energy Supplies to Europe

Monitoring the 1,850km Trans-Anatolian Natural Gas Pipeline

Project Overview

Running from Azerbaijan to Europe, the Trans Anatolian Natural Gas Pipeline (TANAP) is one of the most important projects of long-term strategic energy cooperation between Turkey and Azerbaijan. It forms a central part of the Southern Gas Corridor, connecting the giant Shah Deniz gas field in Azerbaijan to Turkey and onwards to Europe.

The 1,850-km pipeline begins in the Turkish Posof district of Ardahan, runs through 20 provinces, 67 districts and 600 villages, and reaches Europe at the Greek border in the Ipsala district of Edirne, delivering natural gas to Europe via Trans-Adriatic Pipeline (TAP) on the border of Turkey and Greece.

Completed in 2018, the TANAP project

represented major strategic importance for the region, enabling the first Azerbaijani gas exports into Europe while strengthening Turkey's role as a regional energy hub. Given its importance, it is vital the pipeline's security is assured at all times and at all points without incident or disruption.

Solution Deployment

Looking for a pipeline monitoring solution that addressed their needs for continuous, real-time security, TANAP awarded a US$35 million contract to OptaSense, working in partnership with international communications and security systems provider Optilan, to deliver the world's largest fiber distributed sensing project.

Deploying unique Distributed Acoustic Sensing (DAS) technology, OptaSense Fiber Optic Pipeline Monitoring provided leak detection and security monitoring for

Background:
- Trans-Anatolian Natural Gas Pipeline
- 1,850km of pipeline
- Running from Azerbaijan through Georgia and Turkey, to Europe

Solution:
- OptaSense Fiber Optic Pipeline Monitoring
  - Leak detection
  - Security monitoring
    - Third-party intrusion
    - Right of way
    - Perimeter security for in-line facilities

Value Delivered:
- A single pipeline monitoring solution that delivers multiple detector applications using a single fiber:
  - Four-mode leak detection (temperature, acoustics, ground strain and pressure)
  - External interference and damage prevention monitoring
  - Lower installation costs
  - Real-time, 24/7 peace of mind and security

more than 1,850km of pipeline, including perimeter security for all facilities.

TANAP solutions include pipeline leak detection, third party intrusion and other security functionality, all delivered via a single fiber-optic cable that 'listens' to the pipeline to provide detailed data on its status. Changes feed to an interrogator unit in real time, enabling any issues or threats to be identified and addressed early to maintain the highest levels of pipeline integrity.

The system has provided the customer security and peace of mind. This is, by definition, delivers revenue assurance. OptaSense has been involved with TANAP from its early stages to help ensure security is efficient and that the pipeline remains operational 365 days a year.

OptaSense is the trusted partner for DAS solutions worldwide, supporting customers in more than 50 countries and more than 37,000km of assets under contract.

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To learn how the OptaSense Perimeter Monitoring Solution can protect your critical assets, contact an OptaSense representative.

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