

The logo for RADPOL PIPES features a stylized red flame icon to the left of the text. The word "RADPOL" is in a large, bold, white sans-serif font, and "PIPES" is in a smaller, white sans-serif font directly below it. The background of the entire image is a photograph of an industrial site at sunset, with a tall metal tower structure in the center and various pipes and equipment in the foreground.

RADPOL PIPES

Case Study

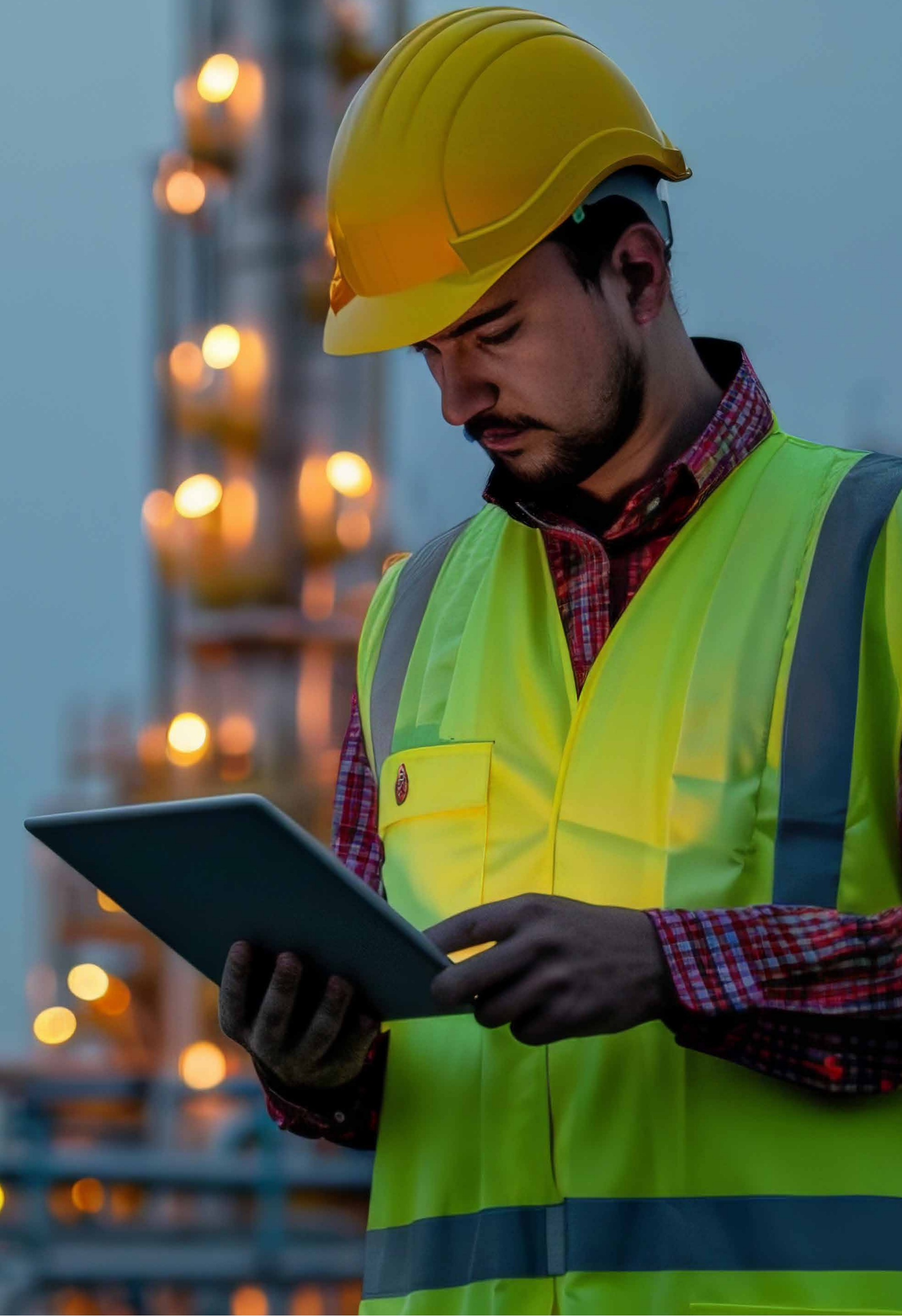
Construction of a Pre-insulated Pipeline for Crude Oil Transmission

Introduction

A new crude oil production facility was developed in Kamień Mały, western Poland, based on three wells: KM-1k, KM-11k, and KM-12k.

With an estimated daily output of approximately 60 tonnes, the site required a dedicated pipeline to transport the produced fluid to the Group Centre in Górzycza for further processing.

To meet the technical and operational demands, a modern pre-insulated pipeline system was deployed—ensuring thermal stability, mechanical durability, and long-term reliability under field conditions.



Challenge

The project posed several complex engineering and logistical challenges. It required maintaining the thermal integrity of crude oil over an extended transmission route, while also minimising heat loss and protecting the system against moisture ingress and soil-related stresses.

Ensuring long-term leak-tightness and mechanical durability across varying terrain conditions was critical. In addition, the pipeline needed to support advanced monitoring capabilities and be compatible with future smart infrastructure upgrades.

All components had to be fully integrated and technically consistent to ensure smooth, time-efficient installation and minimise the risk of operational downtime.

Solution

Radpol Pipes provided a fully integrated pre-insulated pipeline solution designed specifically for crude oil transport.

The system included:

- **SMLS L360NS steel pipes** with 3LPE coating, pre-insulated and enclosed in HDPE outer jackets
- **Dimensions:** 114.3×8.8 / DA 250 and 88.9×12.5 / DA 200
- **Integrated microducts for fibre optics** to support real-time diagnostics and data communication
- **Matching fittings and valves**, insulated to the same technical standard
- **Heat-shrinkable, cross-linked joints** (1120 mm), featuring a dual-seal system for long-term leak prevention and mechanical stability

All components were manufactured under a unified technological standard to guarantee seamless compatibility and ease of installation.



Execution

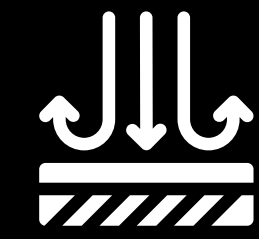
The pipeline was delivered as a fully engineered, turnkey system. It's configuration was precisely tailored to the site's topography and operational requirements.

All components – including pipes, fittings and joints – were supplied as a fully compatible, plug-and-play solution, enabling seamless installation on site. Standardised system elements ensured a smooth and efficient construction process with minimal disruption.

Integrated microducts within the insulation layer allowed for the installation of fibre-optic lines, supporting real-time system monitoring, predictive maintenance, and future integration with smart infrastructure.

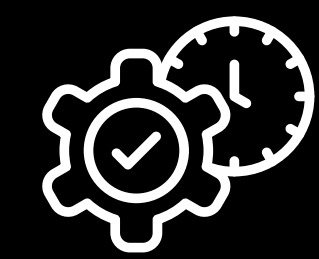


Benefits



Thermal efficiency

Reduced energy loss throughout the pipeline



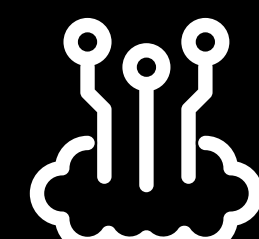
Faster, more reliable installation

Enabled by full system compatibility



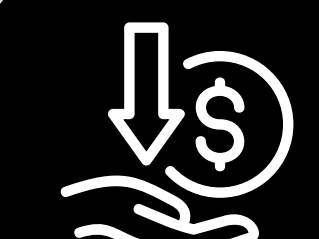
Long-term durability

Resistant to moisture ingress, mechanical stress, and soil movement



Smart-ready infrastructure

Fibre-optic support from day one



Lower lifetime costs

Reduced O&M and energy-related expenses



Full compliance

With industry standards for safety, performance, and sustainability

A photograph of an industrial site, likely an oil refinery or pipeline construction site, featuring large metal pipes, scaffolding, and a tall distillation column under a bright blue sky with a sun flare.

**TOP
QUALITY
IN EVERY
LAYER.**

Summary

The crude oil pipeline in Kamień Mały showcases the power of integrated design and advanced thermal technology in energy infrastructure.

With full system consistency, smart monitoring readiness, and engineered durability, the project stands as a benchmark for efficient and future-proof oil transmission systems.

Radpol Pipes provided not only pipework — but a complete infrastructure backbone tailored to the demands of a critical production site.

This case highlights how manufacturing excellence and system cohesion drive performance, reliability, and value in the oil sector.