

# PES

PRACTICAL ENGINEERING SOLUTIONS LLC

Concept + Design + Construction

## 24-3445 EXT N2 Pump Acid Gas Line

### Project Overview

Practical Engineering Solutions supported the design of a nitrogen supply line for an operating industrial facility, working in close coordination with the client's internal engineering team. PES was engaged to supplement in-house resources with focused engineering support, providing critical analysis to advance the design while maintaining alignment with plant standards and operational requirements.

### Engineering Approach

PES provided process calculations on the N2 injection lines to support nitrogen supply requirements, confirming design assumptions related to flow, pressure, and operating conditions. Pipe stress analysis was performed on the N2 injection piping to evaluate the proposed routing and support strategy, accounting for thermal expansion, loads, and interface points with existing plant infrastructure. PES also provided control data sheet review and approval for plant purchase.

Engineering efforts were closely coordinated with the LNG operator directly, including their Capital Projects management and their preferred civil engineering partner, to ensure seamless integration with existing standards, specifications, and project workflows.

### Execution & Delivery

By acting as a targeted extension of the client's engineering group, PES delivered timely, analysis-driven design support without adding unnecessary complexity or overhead. The project demonstrates PES's ability to integrate efficiently with owner-operator teams, providing practical engineering support that strengthens internal capabilities while reducing schedule and execution risk.

#### PES Deliverables:

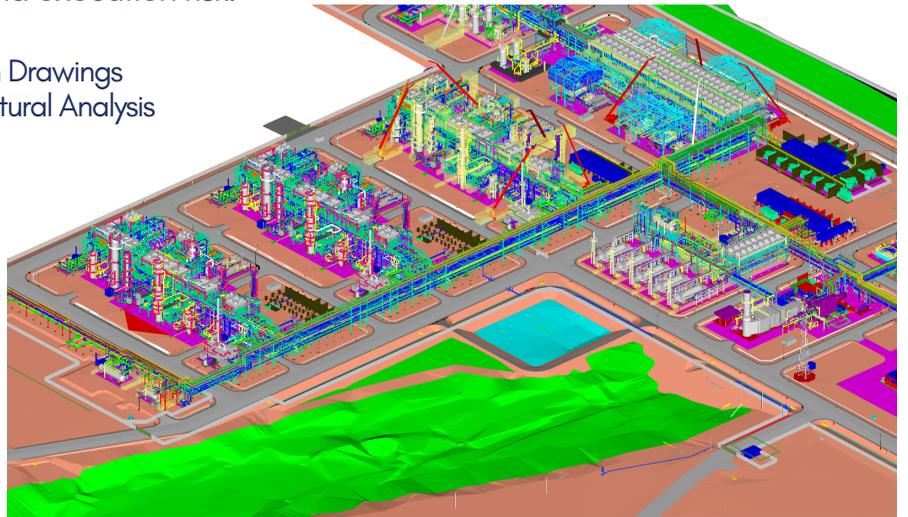
- GA Drawings; Piping & Structural Fabrication Drawings
- Process Calculations and Pipe Stress & Structural Analysis

#### Project Timeline:

- 12 Months

Estimated Total Installation Cost (TIC):  
\$3,000,000

The project was delivered on schedule and within the approved budget.



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