CUSTOMER SUCCESS STORY

WHY IT MATTERS

Built for the cold. A vessel in extreme cold must protect its process from freezing during extended subzero conditions. Building insulation and freeze protection in the shop reduces field work at a remote site where labor and access are costly.

Scale. At 54 feet and 116,000 pounds, this vessel required heavy-lift handling, large-diameter rolling and welding, and shipping planning from the start.

Built for uptime. The sandjet system lets the operator remove sand while the vessel stays in service. At remote cold-climate sites, where shutdowns and site access are costly, that design choice protects production.

Engineered for extreme conditions. Building to an operator's specification for extreme-cold service is a credential that carries into other remote and harsh-environment work.





BUILT FOR EXTREMES

How TransTech Fabrication engineered and built vessels designed for medium-to-high-pressure service in harsh conditions

THE CHALLENGE

The operator needed a separator that could handle sand-laden production fluids in extreme cold.

Production equipment in this environment operates through extended periods of extreme cold. Water and hydrocarbon liquids can freeze or thicken in nozzles, drains, and instrument lines, and an unprotected vessel loses process heat quickly. Cold-weather protection has to be designed in from the start, not added in the field.

The process stream introduced a second challenge. Produced fluids from the operator's wells carry formation sand, so the vessel had to separate sand along with gas, oil, and water. If left in place, sand settles at the bottom of the shell, takes up working volume, and disrupts liquid-level control. Without a way to remove it in service, operators face shutdowns for manual cleanout.

The vessel also had to reach a remote destination. Equipment destined for remote cold-climate sites travels long distances with limited transport windows, so it must arrive complete and ready to set up.

THE SOLUTION

TransTech Fabrication built a 54-foot horizontal interstage separator for medium-pressure production service, including a sandjet system for in-service sand removal. TransTech Fabrication can serve operators needing medium- to high-pressure vessels for harsh-environment service.

The vessel separates gas, oil, water, and sand at an intermediate pressure stage. It sits between the high-pressure and low-pressure separators in the production train.

TransTech Fabrication installed a sandjet system sourced from a specialty internals supplier. The system uses headers fitted with fluidization and transport nozzles along the bottom of the vessel. Pressurized water stirs up settled sand and directs it to drain nozzles, allowing operators to clear sand without opening the vessel. Header position and nozzle angle are set to reach all settled sand while protecting the shell from erosion.

TransTech Fabrication built cold-weather protection into the vessel during fabrication, including insulation to hold process temperature and guard against freezing. The finished vessel weighs approximately 116,000 pounds and measures 13 feet 8 inches wide and 14 feet 2 inches high overall. TransTech Fabrication can fabricate vessels up to 200,000 pounds.

> *This project shows TransTech Fabrication can deliver large, code-built pressure vessels for extreme-cold production service and other harsh environments.*

WORK WITH TRANSTECH FABRICATION

TransTech Fabrication builds tanks, pressure vessels, and columns to customer specification. Our process design team helps customers engineer and fabricate solutions for extreme environments and demanding operating conditions. To discuss a separator or pressure vessel project, contact the TransTech Fabrication team.

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