



APPLICATION SHEET

APPLICATION

SO₂ Off-Gas Vapor Line

LOCATION

Benicia, CA

PROCESS

SO₂ vapor piping system (off-gas from a Cansolv SO₂ scrubbing unit) that travels about 1000 feet before interacting with compressors that are in-line with the vapor stream.

PROBLEM

Compressor fouling due to water condensation from within the vapor system. The entrained water vapor within the unheated system sometimes mixed with the SO₂ stream and condensed within the pipe creating liquid droplets. Fouling occurred when these droplets entered the condenser. The fouling led to a maintenance event requiring the compressors to be taken out of service and sent offsite, internationally, for repairs. The issues also required the client to have a standby compressor available for use when the unit that experienced fouling was off-line for the repairs. Each repair event cost the company \$500K twice per year, on average.

SOLUTION

The solution to the compressor fouling came from the installation of a TraceBOOST® steam tracing system to heat the line and prevent condensing of the water vapor. This was not a typical application for TraceBOOST technology since the process did not need to be heated nor insulated under normal operating circumstances. TraceBOOST proved to be equally reliable and effective when the primary objective was to minimize condensation build up in a system. This reliability led to a huge savings and the benefit of continual operations. No additional fouling episodes have occurred since the installation of the TraceBOOST system.

PRODUCT

TraceBOOST® Enhanced Tube Tracing

TraceBOOST maximizes heat transfer from conventional tube tracing and is an ideal application anywhere multiple tube tracings are used. TraceBOOST provides heating for freeze protection of liquid process and temperature maintenance of process gas and will result in fewer required tracing circuits to maintain process temperature, fewer steam traps and fewer supply/condensate return manifolds.

The TraceBOOST system with coiled tubing also reduces capital maintenance cost by eliminating potential leak points at frequent tube unions. Maximizes heat transfer from conventional tube tracing, transforming it from convective to conductive heat transfer and increasing the efficiency by 5-10X.

TraceBOOST Advantages:

- Reduced Capital Cost (Typically 30-70%)
- Reduced Installation Time
- Increased Energy Efficiency
- Reduced Annual Operating Cost
- Increased System Reliability



TraceBOOST Closeup

AMETEK®
THERMAL PROCESS MANAGEMENT