

# TEADIT<sup>®</sup> 2235 – Steam Valves CASE HISTORY

## INDUSTRIAL SEGMENT

Petrochemical

### APPLICATION

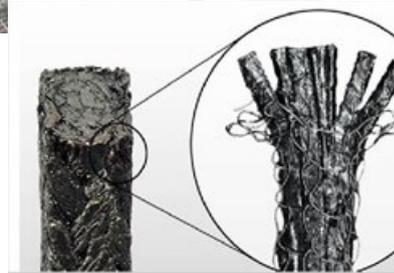
**Media:** Superheated Steam

**Temp:** >570°F (300°C)



## Equipment

Valves



## SCENARIO

A major petrochemical plant was having problems with high temperature, superheated steam leaking from valve stems throughout the facility. The high quantity of leaks from their superheated steam valves had many different consequences for the customer. Leakage of such high temperature steam posed a significant safety risk for all those on site and the leakage was also negatively influencing the quality of the process. In addition, the steam leakage was causing extremely high maintenance costs due to down time. Steam valves can prove to be a challenging application to create an effective, long term seal. Steam service requires a material that can withstand high temperatures for an extended period without degradation, and valves require a packing material that is robust and pressure resistant without damaging the valve stem.

## SOLUTION

After analyzing the application, it was determined that the use of higher temperature and pressure resistant packing style was necessary and Teadit recommended utilizing packing style TEADIT<sup>®</sup> 2235. This style of packing was specifically designed for use in superheated steam valve applications and is manufactured with a high temperature grade of graphite and an Inconel wire jacket reinforcement on each filament. This combination of materials and advanced construction creates a packing that is mechanically stable and exceptionally resistant to heat and pressure, providing leakage control and high integrity in steam service.

## **CUSTOMER GAINS**

The customer partnered with Teadit to perform a test of the packing on 384 (30x 14"-16" and 354x ½"-4") steam valves throughout the plant to demonstrate the effectiveness of Teadit's product. The TEADIT® 2235 provided excellent results in the test and demonstrated the superior quality of TEADIT® 2235 compared to other steam service valve stem packings in the industry. The great success of the test resulted in a cost savings to the customer due to decreased maintenance costs and product loss of \$545,000, therefore the customer specified TEADIT® 2235 in the remaining 1136 steam valves throughout the plant. The change in specification to standardize with TEADIT® 2235 throughout the facility for all steam valves has led to an annual savings for the customer of \$2.2M. The customer has now been using the TEADIT® 2235 packing in all their steam valves for 8+ years with great success. Due to Teadit's superior sealing solution, not only was the customer able to significantly reduce maintenance costs, but they were also able to improve the quality of the process and eliminate safety hazards due to leakage.