



# APPLICATION SHEET

## APPLICATION

Coker Charge Pump Protection

## LOCATION

Major US Gulf Coast Refinery

## PROCESS

Coker  
Charge Pumps Bypass Lines for Control Valve Stations

## PROBLEM

Refinery was concerned with operational challenges around the Coker Charge Pump Lines. If these lines encounter any issues, including plugging/solidification, they lose Coker feed and must curtail or shut down production resulting in lost revenue. Another potential issue is the loss of/damage to the Coker Charge Pumps resulting in costly extended, unscheduled shutdowns.

## SOLUTION

By putting in the Bypass Lines and Control Valve Stations, the operator ensured the protection of the Coker Charge Pumps, eliminated interruptions to the Coker Charge/Feed Operation, and avoided any unplanned shutdowns or loss of the pumps/production.

The existing lines which are 10" and 12" in size already had ControTrace® installed and were performing very well. In addition to the piping protection, ControHeat jackets were provided for the valves in the Control Valve Station. CSI also provided temperature gauges on each tracing circuit allowing the operator to verify temperature and maintain operational reliability of the Coker Charge Pump Bypass System.

## PRODUCT

ControTrace®

[Contact Us to Learn More](#)

ControTrace bolt-on heating elements have been the preferred steam tracing solutions for heating pipe, tanks, and vessels since 1980. These thermal solutions are a cost-effective alternative to fully jacketed piping and, in comparison to steam tracing, offer greater heating capacities and reliability. These heating elements also prevent cross-contamination between the heating medium and the process. Today, over five hundred miles of ControTrace heat tracing elements are in service in plants and refineries around the globe.

The basic configuration of a ControTrace heat tracing element is a 2-in. by 1-in. rectangular tube formed of SA178 Grade A boiler tubing. One of the 2-in. sides is contoured to closely fit the outside diameter of the pipe or vessel onto which it will be placed. The standard wall thickness is 1/8 in., ensuring ample robustness and pressure-containing capability. The system can be rated for various pressure/temperature scenarios. Individual elements are fabricated to specific lengths. The ends of the tubing are closed (seal welded), and inlet and outlet connections are added to enable heating medium transfer. When multiple elements are required, these are most often joined together in a panel configuration to minimize the number of inlet/outlet connections. ControTrace is secured to the pipe or vessel with high-strength banding (no welding is required).

ControTrace Advantages:

- Seamless tie-in to existing system
- Complete system coverage – pipe, valve, component heating
- Thermal system to ensure process temperature
- Refinery can avoid shutting down Coker Charge/Feed and avoid damaging Charge Feed Pumps
- Refinery Operations can constantly monitor system temperatures for proper operation and reliability



Bolt-on Jacketing for Pumps

**AMETEK®**  
THERMAL PROCESS MANAGEMENT