CONTROTRACE®

INNOVATIVE HEATING FOR TANKS & VESSELS

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AMETEK®

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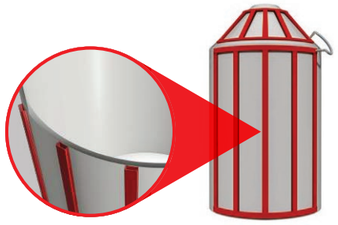
CSI AMETEK®

At CSI, we pride ourselves on helping clients find the best heating solution for their application. For 40+ years, CSI has been supplying ControTrace® heating systems to solve critical heating applications.

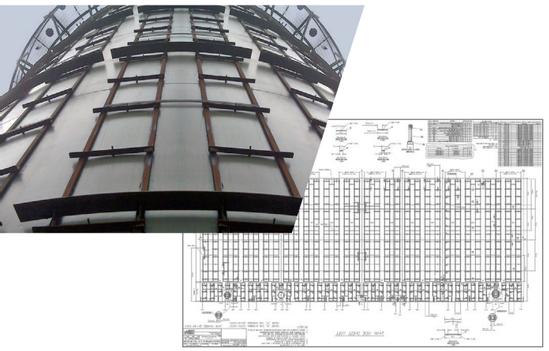
CONTROTRACE®

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.



FEATURES

- Robust construction, 2-3x thicker than typical tracing, ASME SA-178 Grade A Boiler Tube
- External heating system allows for easy maintenance & no cross-contamination risk
- Conductive heat transfer path from the heating medium through the wall into the process with the aid of Heat Transfer Compound (HTC)
- Contoured to fit the tank/vessel diameter
- Panel configuration on tank/vessel



HEATING ADVANTAGES

- Engineered for predictable heating performance backed with a thermal guarantee
- Robust construction (material 2x thicker than typical panel coil)
- Stainless Steel is available for aggressive environments
- Pressure rated in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII, Div.1
- Even heat distribution
- Easy installation/field modification
- No cross-contamination concerns
- Low maintenance costs – external accessibility
- Global field support resources for install support

Both the shape and element density of each ControTrace panel is specifically engineered to each application resulting in unrivalled temperature uniformity and an ability to precisely control the vessel wall temperature.

CONTROTRACE OFFERS IMPROVED PERFORMANCE OVER TRADITIONAL COILS & PANELS

PROBLEMS WITH INTERNAL COILS

- Uneven distribution of heating and accumulation of process on internal tank surfaces
- Accessibility issues for maintenance
- Risk of cross contamination with process
- Coil corrosion which requires expensive and time-consuming repair

PROBLEMS WITH PANEL COILS

- Not customizable to accommodate nozzle/tank protrusions or heating of nozzles
- Panel design utilizes long seam welds of thin material susceptible to corrosion and failure
- Gaps between panels leave large swaths of unheated tank surface
- Large distance between panels reduces opportunities for heating fluid circuit optimization
- Can't maintain uniform vessel wall temperature

CONTROTRACE ON TANKS

In some applications (e.g. molten sulfur), tank corrosion can occur because an internal steam coil is not able to maintain the tank shell and roof temperature.

With ControTrace, the external heating system maintains both the process temperature and the shell/roof wall temperature, preventing corrosion and allowing for easy access to the heating system for maintenance.

CONTROTRACE ON VESSELS

The same principle applies with vessels. External ControTrace heating prevents processes from condensing/freezing on the internal vessel walls.

Additionally, ControTrace can be design/fabricated to conform to any vessel geometry such as bottom cones, vessel heads, and around nozzles. Bolt-on ControHeat jackets can also be supplied to effectively heat nozzles. Using the vessel fabrication drawings, CSI custom designs the heating system for each application. Panels are delivered ready to bolt on to the equipment.