

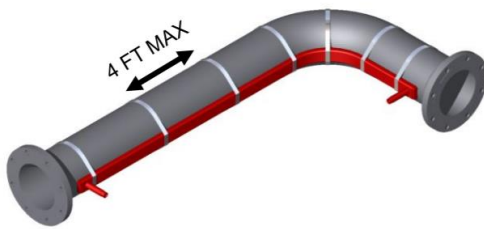
CONTRO TRACING (*ControTrace®*)

Technical Notes

ControTrace® is the proprietary item from CSI Heat (Control Southeast Inc., USA)

This is an unique tracing design system in place of conventional steam tracing using tubes/pipes.

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 onto which it will be placed. The standard wall thickness is 1/8 in., ensuring ample robustness and pressure-containing capability. 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). Before banding, a thin layer of heat transfer compound is spread onto the surface that will be in contact with the pipe or vessel.



During operation, the heating medium (typically steam or heating fluid) flows through the heating element and transfers its heat through the heat transfer compound and into the pipe/vessel wall and into the process. The number of heating elements required depends upon the design objective and the design conditions. Most ControTrace® applications are designed to maintain a process temperature (to keep liquid flowing) or a minimum pipe wall temperature (to prevent vapor condensation). CSI utilizes finite-difference computer modeling to simulate and predict temperature profiles and heat transfer rates based upon process, ambient, piping, and insulation conditions. The computer model has been corroborated time and again with empirical field data.

Usage and implementation of ControTrace® is recommended for specific critical piping by Licensor for the “SRU” project of IOCL-Paradip Refinery. The piping lines requiring this ControTrace® is identified as “CT” on the line numbering in P&IDs / Line list.

CONTRACTOR to provide this proprietary tracing system from ‘CSI Heat’ vendor for the indicated lines in P&ID to suit the operating condition of the fluids as per Line list .

For more details, refer:

<https://www.csiheat.com/whatwedo/industrialtracingandheatingsolutions/controtrace>