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SafeTrace ...Isolated Tracing System **This Customer's Steam Tracing of Choice!**

May 2002

One of the world's leading biochemical companies has a large process complex in central Illinois. As one of the largest ethanol producing facilities in the western hemisphere, their needs for heat tracing span everything from freeze protection of water lines to very high process temperature maintenance requirements.

Fundamental to the plant's processes are hundreds of fermentation vessels. Each vessel has numerous steam injection ports at close intervals around the circumference, each isolated by finned metal heat sinks. As technicians perform routine maintenance and calibration of various instruments, frequent burns used to occur when the stainless steel tubing was accidentally touched.

After a trial installation was evaluated, considerable amounts of SafeTrace were purchased. To date, this customer has installed over 30,000 feet of the product in their fermentation units alone. According to the facility operations superintendent, **"In addition to being more aesthetically pleasing over conventional tubing, the plant has virtually eliminated reportable lost time incidents in the areas where the SafeTrace product has been installed."** Additionally, the elimination of reportable injuries had had positive insurance ramifications with attractive reductions in rates.

Another benefit has been reduced downtime by not having to block steam tubing to the fermentation tanks during routine maintenance, measurably increasing productivity. Further, by simply reducing the fear of steam burns for plant personnel, their time to perform simple tasks has further increased efficiency.

Thermon's SafeTrace Isolated Tracing Systems was developed for predictably reduced heat transfer from steam tracing on process piping and vessels. The products are offered as:

- BTS-IT** (Bare Tracer Steam) tubing without glass insulation
- SLS-IT** (Single Layer System) tubing with a thin layer of insulation, and
- DLS-IT** (Double Layer System) tubing with a thicker layer of insulation

Product selection is based upon the desired maintain temperatures in consideration of all other design conditions: ambient temperature, available steam temperature and pressure, as well as the thermal insulation material and thickness. All these conditions impact the equilibrium temperature of the heated pipe, tank or instrumentation system.

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SafeTrace offers many advantages over conventional steam tracing practices:

- Easy installation (no spacer blocks are required, and SafeTrace can be applied with special adhesive tape instead of banding or tie-wire. See illustration, below.)
- Increased circuit lengths due to reduced heat transfer and less condensation. (This ties directly to lower installed costs with fewer manifolds and traps, and as highlighted in other case studies.)
- Increased personnel protection from exposure to bare steam tubing

All three varieties of SafeTrace are constructed with a “safety yellow” outer jacket that identifies the tubing as being potentially hazardous, thus reducing the likelihood that plant personnel will remove or cut into the tubing without further investigation. In addition, the jacketing makes the tubing “touch safe,” meaning that if personnel accidentally come into contact with the tubing, they won’t be burned as is most often the case in conventional steam tracing and tubing systems.

According to the superintendent of this ethanol plant, **“Any facility that has similar fermentation vessels or uses bare steam tubing would greatly benefit from the use of Thermon’s SafeTrace products”**.

Shouldn’t you consider SafeTrace for your plant? What about for your personnel?



Easy to Install with PF-1B Tape
-No tie wire or banding.



Expansion joints outside insulation
- No exposed fittings & no burn risk.

For additional information on SafeTrace or other Thermon products and services, contact your local Thermon representative office or call

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