Heating System Evaluation - Tanks & Vessels

1 Client Information

Company: _____ Phone Number: _____

Contact Name: _____ Email: _____

2 Heating Medium Type

- ☐ Steam → Supply Pressure: _____
- ☐ Water/Glycol → Supply Temperature: _____
- ☐ Hot Oil
- ☐ Other: _____
  (if liquid provide supply temperature)

3 Process Information

Process Name: _____

Process Phase: ☐ Vapor ☐ Liquid Process Liquid Level: _____

4 Thermal Need/Objective

- ☐ Maintain Bulk Process Temperature
- ☐ Heat Exchanger
- ☐ Freeze Protection (winterization)
- ☐ Maintain Pipe Wall Temperature
- ☐ Melt-out
- ☐ CSI To Recommend

Required Maintenance Temperature: _____ Other Info: _____

5 Vessel & Tank Details

Is it acceptable for CSI to weld bosses/clips to tank or vessel? ☐ Tank/Vessel Material: _____

Diameter: _____ Tangent-to-tangent length/height: _____ Wall thickness: _____

Insulation type: _____ Insulation thickness: _____

Venting method: ☐ Single Vent ☐ Natural convection/multiple vents ☐ PVRV ☐ N2 Purge ☐ Ejector/blower driven ☐ Sealed ☐ Unknown

Vapor space exchange rate: _____ Flat bottom directly on ground/pad? ☐

Comments: _____

6 Vessel Only Details

Orientation: ☐ Vertical ☐ Horizontal

Left/bottom head style/shape: _____ Left/bottom head take-out: _____

Right/top head style/shape: _____ Right/top head take-out: _____

Support method (skirt; saddles; lugs; legs; other) _____

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7 Additional Process Information (Optional)

Minimum Acceptable Process Temperature: _____ Limited By: _____

Maximum Acceptable Process Temperature: _____ Limited By: _____

Process Properties:

Density: _____ Viscosity: _____

Thermal Conductivity: _____ Specifict Heat: _____

Volumetric Coefficient of Thermal Expansion: _____

Latent Heat of Fusion: _____

8 Additional Heating Medium Information (Optional)

Hot Oil Brand/Model: _____

Hot Oil Properties at Supply Temperature:

Density: _____ Viscosity: _____

Thermal Conductivity: _____ Specifict Heat: _____

Glycol Type: ☐ Ethylene Glycol ☐ Propylene Glycol ☐ Other: _____

Water/Glycol Mix Ratio: _____

Oil/Water/Glycol Operating Pressure - Supply Header: _____ Return Header: _____

Oil/Water/Glycol Maximum Available Flow Rate: _____

Steam Condensate Return Header Operating Pressure: _____

Steam Trap Style: _____

9 Equipment & Environment Information (Optional)

Reference material: (attach P&IDs, BOM, line list, PFDs, plant specifications, process simulation output, etc.)

Installation Country: _____ Installation City: _____

Installation Environment: ☐ Outdoors ☐ Indoors ☐ Covered

Ambient Temperature Minimum: _____ Temperature Maximum: _____

Special Material Requirements (standard ControTrace material is SA-178): _____

Special Design Requirements (standard ControTrace design P/T is 150 psi at 400°F): _____

Will the heating system be installed before or after the tank/vessel is installed?: _____

Additional Information: