

- Do you have a difficult heat transfer application?
- What type of jacket will provide maximum heat transfer for your new reactor?
- How can you upgrade the heat transfer rate in your existing reactor?

De Dietrich Process Systems is equipped with heat transfer software that can create a complete simulation of your reactor process. We can simulate the vessel, its product, the jacket, and the heating or cooling media. We can also make a comparison between a conventional jacket and a HemiCoil®.

Our software program will provide a detailed report of all input parameters and output results, including heat transfer coefficients (at several locations and the overall), final temperature, heat transfer rate and pressure drop. A time-based output is also supplied, to show progression of heat transfer over time. The relationship is then graphed.

To take advantage of this service, simply complete the questionnaire and return it by email or fax to our Mountainside, NJ office. contact information is on the reverse side of this sheet.

Project Information

Budget: _____
 Timing: _____
 Quote Due Date: _____
 Order Date: _____
 Requested Delivery: _____

Customer Information

Company: _____
 Contact: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ Fax: _____
 Email: _____

Reactor Specifications

Manufacturer: _____
 Reactor Material of Construction: _____
 Stainless Steel Alloy: _____
 Other: _____
 Total Volume [gal]: _____
 Mixing Volume [gal]: _____
 Vessel Diameter [in]: _____
 Tangent to Tangent Dimension [in]: _____
 Agitator Type: _____
 Agitator Span [in]: _____

Agitator Speed [rpm]: _____
 Jacket design pressure [psig]: _____
 Jacket design Temperature [°F]: _____

Jacket Specifications

Jacket Type: Conventional HemiCoil®/Half-Pipe
 Number of Agitating Nozzles: _____
 Size of Agitating Nozzles: _____
 Size of Half Pipe: _____
 Number of Zones: _____

REACTOR OPERATING CONDITIONS

Vessel Contents

Initial Temperature [°F]: _____

Final Temperature [°F]: _____

Overall Process Range: _____

Product: _____

(Name a common chemical representative of your product or fill in the below specifications at two different reference temperatures)

Reference Temperature No. 1 [°F]: _____

Specific Gravity: _____

Specific Heat [Btu/lb-°F]: _____

Thermal Conductivity [Btu/ft-hr-°F]: _____

Viscosity [cP]: _____

Reference Temperature No. 2 [°F]: _____

Specific Gravity: _____

Specific Heat [Btu/lb-°F]: _____

Thermal Conductivity [Btu/ft-hr-°F]: _____

Viscosity [cP]: _____

Batch cycle time [hours]: _____

Cooling load [BTU/hr]: _____

Heating load [BTU/hr]: _____

Endothermic or exothermic reaction [Rate of Reaction]: _____

Typical batch conditions (Describe steps of process such as a typical heating and/or cooling operation): _____

Jacket Contents

Inlet Temperature [°F]: _____

Volume Flow Rate [gpm]: _____

(for liquid only)

Media: _____

(Name a common fluid representative of your heat transfer media or fill in the below specs at two different reference temperatures)

Reference Temperature No. 1 [°F]: _____

Specific Gravity: _____

Specific Heat [Btu/lb-°F]: _____

Thermal Conductivity [Btu/ft-hr-°F]: _____

Viscosity [cP]: _____

Reference Temperature No. 2 [°F]: _____

Specific Gravity: _____

Specific Heat [Btu/lb-°F]: _____

Thermal Conductivity [Btu/ft-hr-°F]: _____

Viscosity [cP]: _____

Return Completed Questionnaire

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