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EVAPORATOR DESIGN QUESTIONNAIRE

Please supply as much information as possible.
 Thermal Kinetics will supply typical values based
 on experience when missing data is encountered.
 Inquiry Date: _____

Your reference: _____
 Thermal Kinetics quotation required by: _____
 Price Basis: _____ Order of Magnitude _____ Budget _____ Firm _____
 Approximate installation date: _____

Company	
Address	
Telephone	Contact
Fax	Position
E-mail	Department

Test facilities are available for determining physical properties of process fluids and if needed pilot testing can be arranged.

PROCESS LIQUIDS			
Solution to be concentrated:			
Scaling Tendency?		If so, what type?	
Will solute crystallize?		Send solubility data If this is the case.	
Is solution corrosive?		Describe:	
Is feed being concentrated now?		By what method?	
Preferred materials of construction (CS, 316L, etc.):			
PHYSICAL PROPERTIES		Feed	Concentrate
Total solids content		%	%
Specific Gravity			
Viscosity		cps at °F	cps at °F
Specific Heat in Btu/lb °F			
Boiling point elevation		°F	°F
Are quart samples available?			
EVAPORATOR DUTY			
Feed rate	lb/hr	Feed temperature	°F
Operating time:	hrs/day	Turn-down required:	% design capacity
Is concentrate cooled?	Temp: °F	Maximum processing temp:	°F
UTILITIES			
• Steam pressure available:		psig	• Accounted cost per 1000 pounds:
• Cooling water available:		@ °F	• Source:
• Is cooling tower required?			• Pressure:
• Electricity: 3φ/ V/ Hz or 1φ/ V/ Hz			• Max. wet bulb temp. °F
			• Average cost/kWh:
PUMPING DELIVERY HEADS			
Product pump:	ft	Cooling water return pump:	ft
Steam condensate pump:	ft	Process condensate pump(s):	ft
INSTRUMENTATION AND CONTROLS			
Local control panel required?		Preferred model controllers:	
PLC to be used?		Preferred model PLC:	
Tie into existing DCS or PLC?		Comments?	
SITE			
Location:		Altitude above sea level:	
Headroom available:		Space available: (send sketch)	
PROCESS PIPING			
Sanitary: Bevel Seat Tri-clamp Other _____		Industrial: 150# ANSI Flg NPT Other _____	
Pumps: Block valves In-line Spares		Control Valves: Block and bypass valves	
Cleaning: Manual Clean-in-place system		Comments:	