MultiTherm
YOUR HEAT TRANSFER NEEDS ARE OUR ONLY CONCERN

Data Required for Selection of a Shell & Tube Heat Exchanger

ASME: ___yes/no_____ Date: _____
TEMA class: _C / B / R / Not Required Type: _____
Applicable codes: _____ (CRN / ABS / PED and etc) (Straight tube/Fixed and etc)

		Hot side	Cold side
		Tube/shell	Tube/shell
1	Inlet pressure (psig)		
2	Fluid Circulated (eg. Water, steam, oil ISO VG 68)		
3	Flow rate (GPM or lb/hr)		
4	Temperature in/out (°F)	/	/
5	Heat load (Btu/hr)		
6	Allowable pressure drop (psi)		
7	Fouling factor		
Fluid Physical Properties: (only required for unusual fluids)			
8	Specific Gravity		
9	Specific Heat (BTU/lb-°F)		
10	Viscosity (cP)	@ °F	@ °F
11	Thermal Conductivity (BTU/hr-°F-ft^2/ft)		

MATERIALS OF CONSTRUCTION REQUIRED

Shell:	
Baffles:	
Tubes:	
Tubesheets:	
Bonnets/Channels:	
Gaskets:	Compressed Fiber (standard)
Plate & Frame:	304 / 316 / Titanium
Brazed plate	Copper / Nickel

SELECTION RESTRICTIONS (Optional)

Min. Tube Diameter: 1/4, 3/8, 1/2, 5/8, 3/4, 1”
No. of Tubeside Passes: _____
Must Bundle be Removable: _____
Are Lo-Fin Tubes Allowable: _____
Max. Overall Length: _____ ft.
Are Flanged Conns Req’d: _____
Are U-tubes Allowed: _____

Special Requirements/Notes:

Friendly note: Q_{hot} must equal Q_{cold}

$$Q_{hot} = \dot{m}_{hot} \times Cp_{hot} \times \Delta T_{hot}$$

$$Q_{cold} = \dot{m}_{cold} \times Cp_{cold} \times \Delta T_{cold}$$

Where $\dot{m}$ is mass flow rate; Cp **is specific** heat; and ΔT is temperature difference