

TEMA Heat Exchanger Specification Sheet



1	Job No.	
2 Customer:	PO No.	
3 Address:	Proposal No.	
4 Plant Location:	Date: Rev.	
5 Service of Unit:	Item No.	
6 Size: / mm TEMA Type: Hor./Vert: Connected in: parallel series		
7 Surf/unit(eff.): m ² Shells/unit Surf/shell (eff.) m ²		
PERFORMANCE OF ONE UNIT		
9 Fluid Allocation:	Shell Side	
	Tube Side	
	Inlet Outlet Inlet Outlet	
10 Fluid Name:		
12 Fluid Quantity, Total: kg/hr		
13 Vapor: kg/hr		
14 Liquid: kg/hr		
15 Steam: kg/hr		
16 Water: kg/hr		
17 Noncondensable: kg/hr		
18 Temperature: °C		
19 Density (Vapor / Liquid): kg/m ³ / / / /		
20 Viscosity (Vapor / Liquid): mPa·s / / / /		
21 Specific Heat (Vapor / Liquid): kJ/(kg·°C) / / / /		
22 Thermal Conductivity: W/(m·°C) / / / /		
23 Latent Heat: kJ/kg @ °C @ @		
24 Inlet Pressure (abs): kPa(abs)		
25 Velocity: m/s		
26 Pressure Drop, allowable/calculated: kPa / /		
27 Fouling Resistance (Min.): (m ² ·°C)/kW		
28 Average Film Coefficient: W/(m ² ·°C)		
29 Heat exchanged: kW Mean Temperature Difference (MTD) °C		
30 Transfer Rate, Required: Fouled: Clean: W/(m ² ·°C)		
CONSTRUCTION OF ONE SHELL		
32	Shell Side	
	Tube Side	
33 Design Internal/External/Test pressure: kPa(g) / / / /		
34 Design Temperature / MDMT: °C / /		
35 Number of passes:		
36 Corrosion allowance: mm		
37 Future Machining Allowance (Tubesheet, Flange, Cover): mm		
38 Minimum Radiography:		
39 Special Service (Lethal, Sour, etc.):		
40 Post-weld Heat Treatment (PWHT) required:		
41 Connections:	In	
42 Number/Size/Rating	Out	
43 Type and Facing	Intermediate	
	Vent	
	Drain	
	Other	
EXCHANGER CONFIGURATION PER SHELL		
49 Number of Tubes:	Tube OD (mm):	Tube thk. (mm): (BWG):
50 Tube type (plain/finned/other):	Tube Pitch (mm):	Tube min. or avg. wall:
51 Tube Length (m):	Tube Layout:	◄-30 ▲60 ▣90 ◇45
52 Tube to Tubesheet Joint:	Shell Diameter (mm): ID/OD:	Girth Flange Type:
53 Cross Baffle Type:	Number of Cross Baffles:	Baffle Spacing (mm):
54 Baffle Cut (% of Dia.)	Vert. or Horiz. Cut:	Inlet Spacing (mm):
55 Long. Baffle Seal Type:	Tube Support Type:	U-bend Support Type:
56 Expansion Joint Req. (Y/N):	Expansion Joint Type:	Bypass Seal Type:
57 Impingement Protection Req. (Y/N):	Impng. Protection Type:	Sets of Spare Gaskets req'd:
58 Support Type:	Number of Supports:	
59 ρV ² Inlet Nozzle (kg/(m·s ²)):	ρV ² Bundle Ent. (kg/(m·s ²)):	ρV ² Bundle Exit (kg/(m·s ²)):
60 Total Weight/Shell Empty (kg):	Full of Water (kg):	Bundle Weight (kg):
61 Remarks:		
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5	Item No.						
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7	EXCHANGER SKETCH						
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28	DESIGN AND CODE REQUIREMENTS						
29 Design Code:	Code Stamp Required:	Calculate MAWP (Y/N):					
30 TEMA Class (R, C, B):	Customer Inspection (Y/N):	Cyclic Service (Y/N):					
31 Baseline UT (Y/N):	Baseline Eddy Current (Y/N):						
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33	DESIGN, OPERATING, AND UPSET CONDITIONS (if applicable)						
34		Shell Side	Shell	Tube Side	Tubes		
35	Design	Fluid Temperature	Pressure	Mean Metal	Fluid Temperature	Pressure	Mean Metal
36	Condition/Case	In (°C)	Out (°C)	Temp. (°C)	In (°C)	Out (°C)	Temp. (°C)
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44	MATERIALS						
45	Tubes:	Shell Side			Tube Side		
46	Stationary Tubesheet:	Shell:			Channel or Bonnet:		
47	Floating Tubesheet:	Shell Cover/Head:			Channel Cover/Head:		
48	Floating Head Cover:	Girth Flanges:			Girth Flanges:		
49	Cross Baffles:	Gaskets:			Gaskets:		
50	Long. Baffle:	Nozzle Flanges:			Nozzle Flanges:		
51	Tie Rods and Spacers:	Nozzle Necks:			Nozzle Necks:		
52	Supports:	Expansion Joint:					
53	Insulation Type/Thk:						
54	External Bolting:						
55	Internal Bolting:						
56	Paint Requirements:						
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58	Other Requirements and Applicable Specifications:						
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