

DATA SHEET				FEED WATER HEATER			
Customer	Hyundai Heavy Industries Co. Ltd			Spec. No.			
M/O No.				Service of Unit	HP FW Heater #6		
Project	Shuqaiq Steam Power Plant			Item No.	01LCD10AC001,02LCD10AC001,03LCD10AC001,04LCD10AC001		
Size (Type) : 2450 O.D x 12577.6 O.A TYPE : U-TUBE				Position : HORIZONTAL			
Surface per Unit		2,920.9 m ² EFF.	3137.4 m ² Total	No. of Unit		ONE	
PERFORMANCE OF ONE UNIT							
		Shell Side		Tube Side			
Fluid Circulated		Steam Drains		Feed Water			
Total Fluid Entering	kg/hr	97,160.0 / 519,270.0		2,324,600.0			
Inlet Enthalpy	kJ/kg	3056.1 / 914.5		778.4			
Outlet Enthalpy	kJ/kg	785.1		902.2			
Inlet Temperature	°C	312.8 (210.04 SAT.)		179.9			
Outlet Temperature	°C	184.9		208.5			
Operating Pressure	Bar (A)	19.09		306.2			
Number of Passes	Per Shell	THREE ZONES		TWO			
Velocity	m/sec			2.42 (At 194.2 °C)			
Pressure Drop (Actual/Allowable) kg/cm ²		(A) 0.1 / - (C) 0.11 / -		0.8 / 0.816			
	Heat Exchanged kcal/hr	Surface m ²	M T D °C	Transfer Rate kcal/hr.m ² °C	Baffle Spacing	Baffle Cut %	
(A) Desuperheating Section	4,206,408	184.7	51.6	441.4	364	17	
(B) Condensing Section	47,939,689	1,981.2	10.1	2,395.8	979	Full Support	
(C) Drain Cooling Section	16,590,285	755.0	11.9	1,846.5	368	28	
CONSTRUCTION OF ONE SHELL							
		Shell Side		Tube Side			
Design Pressure	Bar.G	24.0 & F.V		340			
Test Pressure	Bar.G	33		510			
Design Temperature	°C	240 (Skirt 360)		260			
Corrosion Allowance	mm	3.0		3.0			
Insulation Thickness	mm						
Tubes	SA688-TP304N No. 3392 U	OD 15.875 Th'k 2.498 Avg.	SETL 8644	Pitch	20.64		
Shell	SA516-70		I.D 2400	TH'K(S/T)	25		
Shell Cover	SA516-70 Weld to Shell		Shell Skirt	SA516-70			
Channel	SA350-LF2	Thickness 165	Channel Cover	SA350-LF2			
Tube Sheet	SA350-LF2+S.S OVERLAY	Thickness 715	Impingement Baffle	A240-304			
Support Plate	A283-C Air Baffle	A240-304	Segmental Baffles	A283-C			
Shrouds (A)	A283-C (C)	A283-C	Tube To Tubesheet Joint : WELDED				
Type Joints Shell Side	Welded		Tube Side	HEMI. HEAD			
Gasket - Shell	-		Channel	WELDED			
Connections :	Steam - Inlet DN400	Drain - Inlet DN450	Series	Weld End			
	Drain - Outlet DN450		Series	Weld End			
	Feed Water - Inlet ID 520	Outlet ID520	Series	Weld End			
Code Requirement	ASME SEC.VIII DIV.1 & HEI (8th Edition)						
Weight - Shell and Bundle	111100 kg		Full of Water	149300 kg			
Accessories :	Shell Safety Valve DN100 x DN150		Tube Side Relief Valve	DN 20 x DN 25			
	Shell Drain DN50 / DN25		Shell Gauge Glass	-			
Note :	1. nozzles Start-up Vent DN 25	Channel drain DN25					
	Operating Vent DN25	Chemical Cleaning DN80					
2. Reference Dwg. : S-04-LAD-M-08-V001-001							
3. Reference P&ID : S - 01 - LA_ - S - 20 - 001 - 003							