
	
	Project No.	
	Document No.	A44-01-PRO-DAS-06

Datasheet for Lean Amine Air Cooler

EA-4401 / EA-5401

AS-BUILT

0	11-08-2015	AS-BUILT	WJH	ZY	SQ	GJF
0	23-04-2014	Approved	WJH	ZY	SQ	GJF
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Rev.	Date	Description	Prepared by	Checked by	Reviewed by	Approved by

					Document No.		A44-01-PRO-DAS-06		
	Doc. Name	Datasheet for Lean Amine Air Cooler			Unit	44/54	Sheet	1 of 1	
Client: OIL & GAS DEVELOPMENT COMPANY LTD.					Unit: 44 (Train-1)/54 (Train-2)				
Plant: Amine Sweetening Plant					No. of Unit: 2				
Req. No.:					Order No.:				
Bid:					Job No. : 165-4				
Bid Dwg. No.:					Model No.:				
1	Equipment Tag No.	EA-4401 / EA-5401		Manufacturer		Sichuan Jianyang Air Cooler Manufacturing Co., Ltd.			
2	Type forced draft	Bay Width/Length, ft. 19.685x28.796		Sq. ft/Unit (Bare) 15988.9		(Finned) 366756.3			
3	Bays per Unit 4	Bundles per Bay 2		Service	1				
4	PERFORMANCE OF ONE UNIT								
5	Operating Conditions		TUBE SIDE			AIR SIDE			
6	Fluid Circulated		Hydrocarbon			Flow, lb/hr 5291006		ALTITUDE., ft 69	
7			Lean Amine			Des. Temp., °F: In 118		Out 140.52	
8	Total Flow	lb/hr	674500 ×1.1			Ambient Temp, °F 36~118		Static Press., psi 0.034	
9	Vapor (In/Out)	lb/hr	0	0		Air flow Rate/FAN, ACFM 163176.5			
10	Liquid	lb/hr	674500 ×1.1		674500 ×1.1		MECHANICAL EQUIPMENT		
11	Steam	lb/hr	0		0		Fan Manufacturer/Model Cofimco/3600-4-24L/45UT		
12	Water	lb/hr	0		0		No. per Bay 2 Diameter, ft 11.811		
13	Density (Vapor/Liquid)	lb/ft3		62.57		63.77	No. Blades 4 Material aluminum alloy		
14	Mol. Wt., (Vapor/Liquid)			29.17		29.17	HP/Fan 32.18 Hub Material forged CS + Galvanized		
15	Thermal Cond. (Vapor/Liquid)	Btu/hr-ft-°F		0.233		0.221	RPM 300 Auto/Man Pitch 2.02		
16	Latent Heat (Vapor/Liquid)	Btu/lb					Pitch Min./Max. W/Air Fail		
17	Viscosity (Vapor/Liquid)	cP		1.335		2.5	Driver Model No. M2JA 225M6A BP /M2JA 225M6A		
18	Specific Heat (Vapor/Liquid)	Btu/lb-°F		0.88		0.85	Manufacture ABB Type		
19	Operating Temperature	°F	174.6		130		HP Each 40.23 RPM 980		
20	Dew Point Temperature	°F						Volts/pH/Hz 400/3/50 Enclosure IP55 EX d IIBT4	
21	Bubble Point Temperature	°F						Variable Speed Yes 2 Speed	
22	Operating Pressure	psig	50				Fan Noise Level (Allow/Calc) dB(A)@ft 85/82.1db(a)@1m		
23	Fluid Velocity	ft/s	2.66			Speed Reducer Type			
24	Pressure Drop Allowable	psi	5			Manufactur Model			
25	Pressure Drop Calculated	psi	4.14			HP Rating Speed Ratio			
26	Atmospheric Pressure	psia	14.52			Support Type			
27	Fauling Factor	hr-ft2- F/Btu	0.002			Service Factor Frame			
28	Heat Exchanged	MMBtu/hr	26.02 × 1.1			Insulation F			
29	EMTD	°F	20.94						
30	Heat Release Curve						Clean	Dirty	Service
31						Bare Tube	113.36		85.48
32						Finned Tube	4.94	3.79	3.73
33	CONSTRUCTION								
34	Tube Design Pressure, psig 75		Tube Bundle Size (ft) 9.449x28.796			TUBES (per Bundle)			
35	Test Pressure, psig 97.5		Tube Rows 6			Material: Carbon Steel			
36	Design Temp.,°F 200					OD, inch 1		Thk., inch 0.1181	
37	Source Service		Corr./Eros. Due to			No. 276		Length, inch 326.77	
38	Wind Velocity, mph 100 (max.)		Mounted(PR/Grade)			Pitch (in) 2.4016 / 2.1139			
39	Design Code (ASME Sec VIII Div) YES		Prov. Of			Fin Type L-type tension		Thk., inch 0.0157	
40	Code Symbol Req'd. YES, U-Stamped		TEMA Class N/A			Fin OD, inch 2.2441		Material Aluminum 3003	
41	Other Specs.		API 661 YES			Fin Pitch, No./inc 11.02			
42	Seismic Zone 2A of Uniform Building Code- UBC-1997		Top/Btm. Access						
43	TUBE BUNDLE (per Bay)					ACCESSORIES			
44	Size, ft 9.449x28.796		No. 2			Bug Screens Yes		Hail Screens No	
45	No. Tube Rows 6		Frame			Auto Louvres --		Turbulators No	
46						Manual Louvres Yes		Winterize No	
47	HEADER					Temp. Controllers		Galvanizing	
48	Type Plug		Corr. Allowance (in) 3 mm			Recirculation Type		Handrail Yes	
49	Material CS + Galvanized		Plugs			Vibration Switch Yes		Fan Guard Yes	
50	Pipe		Nozzles			Steam Coil Self No		Ladders/Walkways Yes	
51	Gaskets		Slope (in/ft)			Draining Top/Btm Yes		Primer Yes	
52	No. Passes 6		Stress Relief/Radiography Area contact with amine.			Access Primer Yes		Finish	
53	Stock thickness (in)		Tube Hole			Shipping Area 19.685x28.796 ft ² (per Bay)			
54	Slope					Total Shipping(lb) 291596.6		Bundle wt. (lb) 18099	
55	STRUCTURE				NOTES				
56	CS + Galvanized or Sand Blast + Coated (as per Tender Spec. 165-4-SPM-058, Rev.2)				1- Vibration switch on motor is to stop motor on high high vibration.				
57	NOZZLE SCHEDULE				2- Full Radiography and Joint Efficiency of 100 % is required.				
58	Mark	Size	Rating	Facing	Service	3- The selection of fans has been optimized by the manufacturer.			
59	IN	8"	150#	RF	Lean Amine				
60	OUT	8"	150#	RF	Lean Amine				