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CHEVRON LUMMUS GLOBAL

FIRIED HEATER DATA SHEET		PAGE 1 OF 17				
		NO.	DATE	BY	CHK'D	APPR
PROJ. NO.	201204719	TAG NO.	F-10703			
REQ. NO.		P.O. NO.		SUP.		
1	FOR THAI OIL PUBLIC COMPANY LIMITED	UNIT	RHCU (UNIT 10700) W/INTEGRATED HCU-3 (UNIT 10600)			
2	SITE SRIRACHA, THAILAND	SERIAL NO.				
3	SERVICE VACUUM TOWER FEED FURNACE	NO. REQUIRED	ONE			
4	MANUFACTURER	REFERENCE				
5	TYPE OF HEATER NOTE 28	* TOTAL HEATER ABSORBED DUTY, MW 21.39 NOTE 1,3				
PROCESS DESIGN CONDITIONS (Note 6)						
7	* OPERATING CASE NOTE 1	DESIGN		CASE 1 SOR		
8	HEATER SECTION	RADIANT / CONVECTION	RADIANT	RADIANT / CONVECTION	RADIANT	CONVECTION
9	SERVICE	VR HOS BOTTOMS	DAO HOS BOTTOMS	VR HOS BOTTOMS	DAO HOS BOTTOMS	
10	HEAT ABSORPTION, MW NOTE 1, 2, 3, 4	18.35	3.04	14.12	2.34	NOTE 3,4
11	* FLOW RATE, kg/hr NOTE 2	540,360	112,677	415,662	86,675	
12	* FLOW RATE, m3/hr					
13	* PRESSURE DROP, ALLOWABLE (CLEAN/FOULED), bar NOTE 22, 25	8.96 /	8.96 /			
14	* PRESSURE DROP, CALCULATED (CLEAN/FOULED), bar NOTE 22, 25					
15	* AVG. RAD. SECT. FLUX DENSITY, ALLOW., W/m2 NOTE 5			25,200		
16	* AVG. RAD. SECT. FLUX DENSITY, CALC., W/m2					
17	* MAX RAD. SECT. FLUX DENSITY W/m2					
18	* CONV. SECT. FLUX DENSITY (BARE TUBE), W/m2					
19	* VELOCITY LIMITATION, m/s					
20	* PROCESS FLUID MASS VELOCITY, kg/h m ²			80% OF SONIC		
21	* MAXIMUM ALLOW./CALC. INSIDE FILM TEMP, °C NOTE 18			454		
22	* FOULING FACTOR, m ² C/W NOTE 12					
23	* COKING ALLOWANCE, mm NOTE 25	5	5	5	5	
24	INLET CONDITIONS:					
25	* TEMPERATURE, °C	354	361	354	361	
26	* PRESSURE, bar(g)	8.2	8.2	8.2	8.2	
27	* LIQUID FLOW, kg/hr	537,191	111,944	413,224	86,111	
28	* VAPOR FLOW, kg/hr	3,169	734	2,438	564	
29	* LIQUID DENSITY, kg/m ³	800.8	772.6	800.8	772.6	
30	* VAPOR MOLECULAR WEIGHT	25.1	27.7	25.1	27.7	
31	* VISCOSITY, (LIQUID / VAPOR), cP	0.523 / 0.021	0.496 / 0.021	0.523 / 0.021	0.496 / 0.021	
32	* SPECIFIC HEAT, (LIQUID / VAPOR), kJ/kg°C	2.889 / 2.261	2.989 / 2.315	2.889 / 2.261	2.989 / 2.315	
33	* THERMAL CONDUCTIVITY, (LIQUID / VAPOR), W/m°C	0.065 / 0.048	0.062 / 0.049	0.065 / 0.048	0.062 / 0.049	
34	OUTLET CONDITIONS:					
35	* TEMPERATURE, °C	378	378	378	378	
36	* PRESSURE, bar(g)	-0.75	-0.75	-0.75	-0.75	
37	* LIQUID FLOW, kg/hr	403,177	86,393	310,136	66,456	
38	* VAPOR FLOW, kg/hr	137,183	26,285	105,525	20,219	
39	* LIQUID DENSITY, kg/m ³	808.1	777.8	808.1	777.8	
40	* VAPOR MOLECULAR WEIGHT	248.3	246.1	248.3	246.1	
41	* VISCOSITY, (LIQUID / VAPOR), cP	0.63 / 0.011	0.633 / 0.011	0.63 / 0.011	0.633 / 0.011	
42	* SPECIFIC HEAT, (LIQUID / VAPOR), kJ/kg°C	2.927 / 2.659	3.027 / 2.688	2.927 / 2.659	3.027 / 2.688	
43	* THERMAL CONDUCTIVITY, (LIQUID / VAPOR), W/m°C	0.061 / 0.034	0.06 / 0.035	0.061 / 0.034	0.06 / 0.035	
44	REMARKS AND SPECIAL REQUIREMENTS:					
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54	FORM NO. LGH SDAT 04 3140-01.068 REV. 1 3/97	SHT 1 OF 17	DOC. NO. BA-150416			Rev.

