


DPH FOCUS		AIR COOLED EXCHANGER SPECIFICATION (SI)				CLIENT NAME	
DPH Focus		JOB NO.		LOCATION:			
		9971					
REV	DESCRIPTION	DATE	BY	CHK'D	APPR'D	TAG NO.	PO NO.:
A	ISSUE FOR BID	Jan. 25, 2008	SJ	KJK		E-5975 A/B/C	9971-4001
B	RE-ISSUED FOR BID	Feb. 13, 2008	CA	KJK		SERVICE: Process Glycol Cooler	
0	ISSUED FOR PURCHASE	May 12, 2008	CA	DB			
1	ISSUED FOR PURCHASE	Jul 18, 2008	SJ	DB			
2	RE-ISSUED FOR PURCHASE	Oct 10, 2008	SJ	TS			
	AS BUILT	Sep 28, 2009	SJ				
NO. UNITS: 3 X 100%		TYPE: FORCED DRAFT		BAY WIDTH / LENGTH, m		1.80 / 1.52	
SQ. m PER UNIT (BARE/FIN 9.3 / 199.6)		BAYS PER UNIT: ONE		BUNDLES PER BAY:		ONE	
MANUFACTURER/MODEL: Exchanger Industries 1M5.92 6 4 1							
PERFORMANCE OF ONE (1) UNIT							
OPERATING CONDITIONS:		TUBE SIDE			AIR SIDE		
FLUID CIRCULATED:		60 WT % TEG			FLOW, kg/h 30,391 ALT., m 673		
TOTAL FLOW - kg/h:		14,181	14,181	TEMP., deg C: IN 35.0 OUT 75.37			
		INLET	OUTLET	MIN. TEMP., deg C -40		STATIC P, kPa	
VAPOUR - kg/h				MECHANICAL EQUIPMENT			
LIQUID - kg/h		14,181	14,181	FAN MFR/MODEL		MOORE 5419 B4A4 (NOTE 3)	
STEAM - kg/h							
FLUID COND. - kg/h				NO. PER BAY		1 DIAMETER, m 1.22	
WATER - kg/h							
TOTAL - kg/h		14,181	14,181	NO. BLADES		4 MATERIAL AL	
DENSITY Vapour/Liquid kg/m ³		/ 993	1,017	KW/FAN		1.22 HUB MATERIAL	
MOLECULAR WEIGHT - Liquid				RPM		547 AUTO/MAN PITCH MANUAL	
- Vapour				PITCH MIN/MAX W/AIR FAIL			
THERMAL COND. (V/L) - W/m-K		/ 0.32	/ 0.33	DRIVER NO.			
LATENT HEAT - kJ/kg				MFR		TECO TYPE	
VISCOSITY - Liquid - cP		0.49	0.72	KW EACH		2.24 RPM 1750	
- Vapour - cP				VOLTS/PH/Hz		600/3/60 ENCL. TEFC	
SPEC. HEAT Liquid kJ/kg-°C		3.65	3.55	VAR. SPEED		YES 2 SPEED	
Vapour kJ/kg-°C							
OPERATING TEMP. - deg C		143.0	121.0	SPEED REDUCER TYPE		V-BELT	
DEW POINT TEMP. - deg C							
OPERATING PRESSURE - kPa (ga)		1227.0	1220	MFR		MODEL	
ATMOS. PRESSURE - kPa (abs)		93.0	93.0	AGMA RATING		RATIO	
PRESSURE DROP - kPa		ALLOW: 70 (NOTE 6)	CALC: 7.3	SUPPORT TYPE			
FLUID VELOCITY - m/s		0.82 / 0.75					
FOUL. FACTOR (TEMA) m ² C/W		0.000352					
HEAT EXCHANGED DUTY - kW		315.0		TRANS. RATE (W/m ² Deg C) (BARE/FINS)		-/ 23.0	
LMTD (CORR./UNCORR.) - deg C		-/ 76.38		CLEAN		623.7	
HEAT RELEASE CURVE		LINEAR		SERVICE		492.6	
CONSTRUCTION							
TUBE DESIGN PRESS. kPa(ga)		2300 @ -45 / 204 °C		TUBES (per bundle)			
TEST PRESSURE kPa(ga)				PER CODE			
SOUR SERVICE NO		CORR./EROS. DUE TO		MATERIAL SA-179		TYPE	
WIND LOAD, km/h NOTE 4		MOUNTED (PR/GRADE)		O.D. mm 25.4 mm		THK. BWG 13 MIN	
CODE ASME SEC VIII DIV 1		PROV. OF ALBERTA		No. 66		LENGTH, m 1.829	
STAMP YES		TEMA CLASS R API 661		PITCH 76.2 mm (Transverse)			
OTHER SPECS: NOTE 5				FIN TYPE EMBEDDED		MATERIAL AL	
TUBE BUNDLE (PER BAY)				FIN O.D., mm 57.15		THK., mm 0.41	
SIZE, m 1.45 x 2.13		NO. ONE		FIN PITCH, NO./cm 3.94			
NO. TUBE ROWS 4		FRAME		ACCESSORIES			
ARR'T: 1 PARALLEL BUNDLES		IN SERIES		BUG SCREEN YES		HAIL SCREEN YES	
1 PARALLEL BAYS		IN SERIES		AUTO LOUVRES NO		FAIL N/A	
HEADER				MANUAL LOUVRES TOP		WINTERIZE NO	
TYPE BOX		CORR. ALLOW., mm 1.6		TEMP. CONTROLLERS NO		GALVANIZE NO	
MATERIAL: HEADER SA-516-70N		PLUGS SA-350-LF2 CL 1		RECIRCULATION TYPE NONE			
PIPE SA-333-6 FLANGES SA-350-LF2 CL 1		GASKETS C1010 / C1020		VIBRATION TRANSMITTER YES		FAN GUARD YES	
NO. OF PASSES 4		SLOPE YES		HEAT COIL NO			
PG / TG YES		SR YES					
CONN. NO. SIZE RATING FACING				SELF DRAINING		HANDRAIL YES	
N1 INLET 1 3" 300# RFLWN				TOP/BTM ACCESS BTM		LADDER YES	
N2 OUTLET 1 3" 300# RFLWN				PREP SP-10 PRIME		WALKWAY YES	
N3A/B VENT/DRAIN 4 2" 300# RFLWN				WT. kg: SHIP HYDRO		FINISH NOTE 8	
N4A/B 2 2" 300# RFLWN				BUNDLE			
N5A/B PI CON 2 2" 300# RFLWN							
NOTES:							
1. Deleted.							
2. Provide 10% excess area, calculated by increasing the tubeside flow and overall duty by 10%. Incremental area should be based on increasing tube length.							
3. Fans should be capable of providing 120% of required air flow for normal operation. A minimum of two (2) fans shall be installed.							
4. 1/100, 0.44 kPa, 26 m/s.							
5. The following specs shall apply:							
TR-50-SPC-00-003-01							
TR-43-SPC-00-002-01							
TR-46-SPC-00-004-01							
TR-43-SPC-00-019-01							
6. Allowable pressure drop is for fouled condition.							
7. Fan deck height (height from grade to underside of fan) shall be 80% of fan diameter or 2132 mm, whichever is greater. (Requirement Waived) 							
8. Primer shall be Epoxy Zinc Rich; Finish shall be 2 Coats Silicone Acrylic.							