



2	12/15/10	GF				SHIFTLUGS UNLOADED TO SHELL & REMOVED FROM HOLD				0	
1	12/03/10	GF	RC	RC		NOZZLE N8 REMOVED FROM HOLD, ITEMS #49 & 50 ADDED TO NOZZLE SCHEDULE				0	
0	10/25/10	GF	LJ	RC		ISSUED FOR FABRICATION				0	
54	09/14/10	MD	LJ	RC		ISSUED FOR SHELL AND HEADS ONLY				0	
REV	DATE	BY	CHKD	APP		DESCRIPTION				CALC. REV.	
REVISION HISTORY											
DESIGN DATA											
CODE: ASME SECTION VIII, DIV. 1, 2007 EDITION, 09 AD.						PARAGRAPH:		UW-12(h)			
IMPACT TEST EXEMPTION PER						SEE NOTE N1		"U" STAMP REQUIRED YES			
C.R.N. - FROM DWG.						RD-9265-03		SERIAL No. 9265-03			
NAT'L BOARD No. N/A								CYCLIC DESIGN NO			
DESIGN FACTOR 3.5						MAWP		HYDRO TEST			
INTERNAL PRESSURE PSI/kPa.						75 517		98 676			
EXTERNAL PRESSURE PSI/kPa.						-		-			
TEMPERATURE °F/C						302 150		60 16			
M.D.M.T. °F/C						-20 -29		-			
MAWP LIMITED BY DESIGN											
CORROSION ALLOWANCE INCH/mm						0.0625/1.6		RT-3 SPOT			
LONG JOINT EFFICIENCY						0.85		CIRC. JOINT EFFICIENCY 0.85			
P.W.H.T. PER UCS-56						NONE		TOTAL VOLUME 2,126 Cu.F/60 Cu.M			
SHIPPING WEIGHT 32,000 Lbs./14,515 Kgs.								OIL VOLUME -			
HYDRO TEST WEIGHT 164,900 Lbs./74,797 Kgs.								WATER VOLUME -			
MATERIAL						THICKNESS		TYPE			
SHELL SA51670N						0.3750"/9.5mm		ROLLED PL			
HEAD SA51670N						0.5000"/12.7mm MIN.		ASME 2:1 SE			
HEAD SA51670N						0.3125"/7.9mm MIN.		ASME 2:1 SE			
WELD PROCEDURES 327.2						SOURCE DRAWING		D-9265-03			
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NATCO											
CALGARY						CANADA					
TITLE						CRUDE EMULSION TREATER (TAG: V-2020)					
						96" (2438mm) O.D. x 40'-0" (12192mm) S/S					
CUSTOMER						KOCH EXPLORATION CANADA LP c/o SPEC ENGINEERING					
LOCATION						PROJECT DESIGNER: GF		DRAWING NUMBER: 160		DATE: 07/08/10	
LSD: SE 14-060-03 WAM						PROJECT MANAGER: RC		DRAWING BY: GF		SCALE: 1:24	
CUST. REF. NO.						LIMITS REQ.		DRAFTING NUMBER		REV	
09501.6.001						1		D-9265-03		2	
CONTRACT NO.						PRCD. CODE		SHT. 1 OF 3			
UT											

ELEVATION

MATERIAL NOTES:

M1. MATERIAL & FORMING SHALL MEET THE REQUIREMENTS OF ASME SECT. VIII, DIV.1, 2007 ED, 2009 ADD & ASME SECT. 2, PART A, 2007 ED, 2009 ADD.

M2. FLANGES SHALL BE IN ACCORDANCE WITH ASME B16.5, NPT SHALL BE IN ACCORDANCE WITH B1.20.1-1983.

M3. ACCEPTABLE MATERIAL SUBSTITUTIONS: SA-106-B REPLACE WITH SA-333-GR6, SA-105-N REPLACE WITH SA-350-LF2 CL1, SA-234-WPB REPLACE WITH SA-420-WPL6.

M4. MTR'S ARE REQUIRED FOR ALL MATERIAL.

NDE NOTES:

N1. THE VESSEL IS IMPACT TEST EXEMPT PER UCS-66(a)(g) & UG-20(f)(1)-5.

N2. REINFORCING PADS SHALL BE TESTED IN ACCORDANCE WITH ASME SECT. VIII, DIV. 1 PARA. UW-15(d) USING COMPRESSED AIR & SOAP SUDS.

FABRICATION NOTES:

F1. UNLESS OTHERWISE NOTED ALL BOLT HOLES SHALL STRADDLE THE NATURAL CENTERLINES OF THE VESSEL.

F2. ALL INTERNAL & EXTERNAL WELD SIZE & TYPE SHALL BE AS NOTED ON THE FABRICATION DRAWINGS.

F3. TACK & ATTACHMENT WELDING WPS: 15MP1A REV.1.

F4. CARBON TO STAINLESS STEEL WELDING WPS: 15MP1PBA REV.0.

F5. SURFACE PREP. & PAINTING - SEE SCHEDULE: 9265-90.

F6. INTERNAL COATING - NONE.

F7. INSULATION (2" THICK) - SEE SCHEDULE: 9265-92.

F8. PRIOR TO SHIPPING, ALL FLANGE FACES SHALL BE FITTED WITH TEMPORARY PROTECTIVE COVERS, ALL THREADED CONNECTIONS SHALL BE FITTED WITH FULLY TIGHTENED STEEL PLUGS.

F9. VESSEL VERTICAL LIFT ANGLE = 90.

F10. NOZZLE M1 REPAD IS SPLIT (IN ANY DIRECTION) J.E. = 0.9.

F11. NOZZLE M2 REPAD IS SPLIT (PERPENDICULAR TO THE VESSEL LONG AXIS) J.E. = 1.0.

CIRC. SEAMS		LONG SEAMS		REINFORCED NOZZLES THRU SHELL OR HEAD	NOZZLE/CPLG. THRU SHELL OR HEAD	REINFORCED NOZZLES FLUSH SHELL OR HEAD	NOZZLE/CPLG. FLUSH SHELL OR HEAD				
1		2		3		4		5		6	
1/8" (± 1/8") a= 60° (± 15°) h= 1/16" (± 1/16")	2GMSMSAP1A REV.1 DC	1/8" (± 1/8") a= 60° (± 15°) h= 1/16" (± 1/16")	2GMSMSAP1A REV.1 DC	1/8" (± 1/8") a= 60° (± 15°) h= 1/8" (± 1/8")	1/8" (± 1/8") a= 40° (± 15°) h= 1/8" (± 1/8")	1/8" (± 1/8") a= 40° (± 15°) h= 1/16" (± 1/16")	1/8" (± 1/8") a= 40° (± 15°) h= 1/16" (± 1/16")				
WPS		WPS		WPS	15MP1A REV.1	WPS	15MP1A REV.1				
NDE	RT-3	NDE	RT-3	NDE		NDE					