



ORIENTATION

GENERAL NOTES :

- VESSEL TO BE THOROUGHLY DRAINED & CLEANED WITH ALL OPENINGS PLUGGED BEFORE SHIPMENT.
- ALL BOLT HOLES TO STRADDLE NATURAL C'S UNLESS NOTED.
- EXPOSED INSIDE EDGES OF NOZZLES TO BE ROUNDED OR CHAMFERED.
- ALL DIMENSIONS ARE TO REFERENCE LINE UNLESS NOTED.
- MIN. DESIGN METAL TEMP. -40 DEG. F @ 1415 PSIG
- RUSHTON REF. WELD PROCEDURE: R-4, R-5, R-8, R-14
- NOZZLES ARE IMPACT TEST EXEMPT PER UCS-66(g)
- VESSEL CALCS. HAVE CONSIDERED ALL APPLICABLE LOADINGS PER UG-22
- CIRC./LONG. SEAMS USE WELD DETAIL "S7"
- BOTTOM & CHIMNEY COILS INTERNAL & EXTERNAL PRESSURES ARE EQUAL (TO CONTAIN GLYCOL "NON EXPANDABLE" LIQUID).  
TOTAL C.A. = 0.197"  
DESIGN PRESSURE= 1415 PSIG @ -40/150 °F  
HYDROTEST (NEW & COLD): 2123 PSIG.
- CORR. ALLOW. FOR NOZ. (≥ NPS 3) "N1", "N2", "N7", "N9" & "N12" = 0.250"  
CORR. ALLOW. FOR NOZ. (≤ NPS 2) "N3", "N4", "N5", "N6A/B", "N8A/B", "N10", "N11", "N13A/B", "N14A/B", "N15A/B", "N16A/B", "N17", "N18A-I", "N19", "N20", "N21" = 0.197"
- HEADS, SHELL, & REPADS ARE IMPACT TESTED @ 15/12 FT-LBS MIN. @ -40°F
- PRODUCTION IMPACT TEST REQ'D PER UG-84 (i) MIN. 15/12 FT-LBS @ -40°F
- ROOT BEAD TO BE GMAW USING ER70S2 WIRE ONLY.
- ALL ATTACHMENT WELDS OF INTERNALS TO SHELL SHALL BE FULL PEN.
- RUN ON/OFF TABS MUST BE OF THE SAME "P" NO. AS MATERIALS BEING WELDED.
- FUSED SAW FLUX SHALL NOT BE GROUND & REUSED
- NICKEL CONTENT OF WELDING CONSUMABLES SHALL NOT EXCEED 0.80%
- FULL MT OR PT OF (2) CAT. "D" NOZZLE WELDS NPS 4 BEFORE REPAD INSTALLATION

MATERIAL NOTES :

- ALL VESSEL SHELLS/HEADS PLATES HEAT & PRODUCT ANALYSES TO MEET SA-20 REQUIREMENTS
- SULPHUR CONTENT OF PLATES TO BE 0.010% - 0.020%
- HEADS/SHELL PLATE SHALL HAVE THE FF. MAX. VALUES:  
C: 0.24%  
Mn: 1.20%  
P: 0.015%  
S: 0.003%
- Ni + Cu + Cr + Mo + V: 0.50%  
CE: 0.43%, WHERE:  
 $CE = \frac{\%C + \%Mn + \%Cr + \%Mo + \%V + \%Ni + \%Cu}{5}$
- BHNS ≤ 200
- FOR PIPE, FITTINGS & FLGS.  
C: 0.23%  
Cu + Ni + Cr + Mo + V: 0.60%
- ALL MATERIALS TO MEET NACE MR0175 REQUIREMENTS

ITEM NO.	NO. REQ'D	SIZE	RATING	SERVICE	WELDING DETAIL	WELD SIZE			INT. PROJ. "D"
						"A"	"B"	"C"	
N1	1	4"	CL 600	INLET	F1, N4	3/8"	5/8"	1 1/2"	
N2	1	4"	CL 600	OUTLET	F1, N3	3/8"	1/2"		
N3	1	2"	CL 600	DRAIN	F1, N1, S7	3/8"			GROUND FLUSH
N4	1	2"	CL 600	OUT (H2O)	F1, N1	3/8"			FLUSH
N5	1	2"	CL 600	OUT (COND.)	F1, N1	3/8"			FLUSH
N6	2	2"	CL 600	LC (COND.)	F1, N1	3/8"			FLUSH
N7	1	4"	CL 600	ANODE/INSP.	F1, N3	3/8"	5/8"		FLUSH
N8	2	2"	CL 600	LC (H2O)	F1, N1	3/8"			FLUSH
N9	1	3"	CL 600	HLSD	F1, N3	3/8"	5/8"		FLUSH
N10	1	2"	CL 600	TI	F1, N1	3/8"			
N11	1	2"	CL 600	PI	F1, N1	3/8"			
N12	1	4"	CL 600	INSP.	F1, N3	3/8"	5/8"		
N13	2	1"	CL 600	BTM. COIL	F1, N2	3/8"			SEE DETAIL
N14	2	1"	CL 600	CHIMNEY COIL	F1, N2	3/8"			SEE DETAIL
N15	2	2"	CL 600	LG (H2O)	F1, N1	3/8"			FLUSH
N16	2	2"	CL 600	LG (COND.)	F1, N1	3/8"			FLUSH
N17	1	2"	CL 600	GLYCOL OUTLET	F1, N1	3/8"			FLUSH
N18	9	2"	CL 600	TRAY DRAIN	F1, N1	3/8"			FLUSH
N19	1	2"	CL 600	GLYCOL INLET	F1, N1	3/8"			
N20	1	2"	CL 600	PSV	F1, N1	3/8"			
N21	1	2"	CL 600	EQUALIZER	F1, N1	3/8"			

N14A	2	FLG - 1" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	2	PCS NECK - 1" SCH XXH SML'S PIPE	SA-333-GR6
	2	ELBOW- 1" CL 6000 SW x 90° LR	SA-350-LF2 CL1
	1	COIL-1" SCH. XXH SML'S PIPE x 40'-0" LG	SA-333-GR6
N15A	2	FLG - 2" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	2	PCS NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
N16A	2	FLG - 2" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	2	PCS NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
N17	1	FLG - 2" CL 600 RFWN SCH XXH	SA-350-LF2 CL1
	1	PC NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
N18A	9	FLG - 2" CL 600 RFWN SCH XXH	SA-350-LF2 CL1
	9	PCS NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
	9	BLD. FLG - 2" CL 600 RF	SA-350-LF2 CL1
	9	GSK'T - 1/8" THK. FLEX. x 2" CL 600 RF	316 SS
	72	STUDS - 5/8"ø x 4 1/4" LG c/w 2 NUTS EACH	SA-183-B7M SA-184-29M
N19	1	FLG - 2" CL 600 RFWN SCH XXH	SA-350-LF2 CL1
	1	PC NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
	1	ELL- 2" SCH 160 x 90° LR	SA-234-WPB
	1	PC PIPE - 2" SCH 160 SML'S	SA-106B
N20/N21	2	FLG - 2" CL 600 RFWN SCH XXH	SA-350-LF2 CL1
	2	PCS NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
	1	PC VENT PIPE- 1" SCH XXH SML'S	SA-106B

BILL OF MATERIALS			MATERIAL SPEC.
ITEM NO.	QTY REQ'D	DESCRIPTIONS	
1	1	SHELL - 24" OD x 1.125" THK PLATE	SA-516-70N
2	2	HEADS - 24" OD x 1.0625" MIN. x 2:1 SE c/w 2" SF x 1.125" NOM.	SA-516-70N
3	1	SKIRT - 24" OD x 0.375" THK PLATE	SA-516-70N
4	1	BASE PLATE - 32" OD x 1" PLATE x 19" ID	SA-516-70N
5	1	PC FLOAT SHIELD - 1/2" PLATE	SA-516-70N
6	1	INLET DEFLECTOR- 4" SCH. 160 x 90° LR	SA-234-WPB
7	1	NAME PLATE BRK'T - 3/16" THK PLATE	SA-516-70N
8	1	MISTEX - 21 3/4" OD x 6" THK x 9#/cu ft	316L SS
	2	SUPT RINGS - 21 5/8" OD x 1/2" PLATE x 18 5/8" ID	SA-350-LF2 CL1
	2	XPM - 21 5/8" OD (HEAVY)	SA-350-LF2 CL1
9	1	CHIMNEY TRAY - 21 5/8" OD x 1/2" PLATE	SA-516-70N
10	8	TRAY - 21 5/8" OD x 1/2" PLATE	SA-516-70N
11	1	CHIMNEY PIPE - 4" SCH 160	SA-53B
12	4	CAP SUP'T - 1" x 3/8" FB	SA-516-70N
13	1	CHIMNEY CAP - 8" OD x 3/8" PL	SA-516-70N
14	1	SUPT RING - 2" F.B. x 1/2" THK. x 21 5/8" DIA.	SA-516-70N
15	1	CHIM. DOWNCOMBER - 3" SCH 160	SA-53B
16	7	DOWNCOMBERS - 3" SCH 160	SA-53B
17	136	RISERS - 2" SCH XXH	SA-53B
18	136	BUBBLE CAPS - 3" DIA	304 SS
19	6	PIPE SUP'T CLIP: 4" x 6" x 3/16" THK. PLATE	SA-516-70N
20	1	MISTEX - 21 3/4" OD x 6" THK x 9#/cu ft	316L SS
	2	SUPT RINGS - 21 5/8" OD x 1/2" PLATE x 18 5/8" ID	SA-350-LF2 CL1
	2	XPM - 21 5/8" OD (HEAVY)	SA-350-LF2 CL1
21	2	LIFT LUG - 1" PLATE x 4" x 6"	SA-516-70N
22	6PC'S	COIL SUP'T - 1/2" THK PLATE	SA-516-70N
23	3	VORTEX BRK'R - 2" x 1/2" THK. FB	SA-516-70N
24	1	REIN. RING - 12" SCH. STD ERW PIPE	SA-53B
N1	1	FLG - 4" CL 600 RFWN SCH XXH	SA-350-LF2 CL1
	1	PC NECK - 4" SCH XXH SML'S PIPE	SA-333-GR6
	1	REPAD - 8 1/2" OD x 3/4" THK x 4 5/8" ID	SA-516-70N
	1	ELBOW- 4" SCH XXH x 45° LR	SA-420-WPL6
N2	1	FLG - 4" CL 600 RFWN SCH XXH	SA-350-LF2 CL1
	1	PC NECK - 4" SCH XXH SML'S PIPE	SA-333-GR6
N3	1	FLG - 2" CL 600 RFWN SCH XXH	SA-350-LF2 CL1
	2	PC'S NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
	1	ELBOW- 2" SCH XXH x 90° LR	SA-420-WPL6
N4/N5	2	FLG - 2" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	2	PCS NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
N6A	2	FLG - 2" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	2	PCS NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
N7/N11	2	FLG - 4" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	2	PCS NECK - 4" SCH XXH SML'S PIPE	SA-333-GR6
	2	REPAD - 8 1/2" OD x 3/4" THK x 4 5/8" ID	SA-516-70N
	2	BLD. FLG - 4" CL 600 RF	SA-350-LF2 CL1
	2	GSK'T - 1/8" THK. FLEX. x 4" CL 600 RF	316 SS
	16	STUDS - 7/8"ø x 5 3/4" LG c/w 2 NUTS EACH	SA-183-B7M SA-184-29M
N8A	2	FLG - 2" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	2	PC'S NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
N9	1	FLG - 3" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	1	PC NECK - 3" SCH XXH SML'S PIPE	SA-333-GR6
	1	REPAD - 7 1/2" OD x 3/4" THK x 3 5/8" ID	SA-516-70N
N10/N11	2	FLG - 2" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	2	PC'S NECK - 2" SCH XXH SML'S PIPE	SA-333-GR6
N13A	2	FLG - 1" CL 600 RFWN SCH. XXH	SA-350-LF2 CL1
	2	PCS NECK - 1" SCH XXH SML'S PIPE	SA-333-GR6
	2	ELBOW- 1" CL 6000 SW x 90° LR	SA-350-LF2 CL1
	1	COIL-1" SCH. XXH SML'S PIPE x 40'-0" LG.	SA-333-GR6

SPECIFICATIONS

VESSEL TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE ASME CODE SECTION VIII, DIVISION 1, PARA UW 11(a), 2007 EDITION.

CODE STAMP REQ'D. AB, BC, SK, C.R.N. C.A.-SHELL 0.250" HEAD 0.250"

DESIGN PRESSURE 1415 PSIG @ -40/150 °F WEIGHT EMPTY 12,800 LBS

WORKING PRESSURE @ WEIGHT FLOODED 18,400 LBS

RADIOGRAPHY (RT-1) NOZZ. BW. LONG 100% CIRC. 100% VOLUME 88 ft<sup>3</sup>

STRESS RELIEVE 67.5 MIN. @ 1150 °F HYDRO TEST 2123 PSIG "NEW & COLD"

HEAD SPEC. SA-516-70N (1.0625" MIN) 1.125" NOM

SHELL SPEC. SA-516-70N (1.125" NOM)

PAINT SEE PIPING PLAN

( 1 ) REQ'D  
TIME CARD  
C-3026-C

REV	DESCRIPTION	DATE	BY
1	NOZZ. "N13 A/B" & N14A/B WERE @ 315"; "N6A/B" WERE @ 180"; NOZZ. "N6B" WAS @ 2'-2"	11/28/08	Y.P.

**RUSHTON**  
GAS & OIL EQUIPMENT (1991) LTD.

CUSTOMER: NEXEN INC.		LOCATION: b-16-1/94-0-8
c/o TRI-OCEAN ENGINEERING LTD.		P.O.# 4500105121
<b>GLYCOL CONTACTOR</b>		
24" OD x 28'-0" s/s x 1415 PSIG x -40/150 °F + 1/4" C.A.		
DATE: 11/10/08	DRN BY: Y.P.	SCALE: 3/4":1'-0"
CHKD BY:	APPRD BY:	DWG NO: C-3026-A