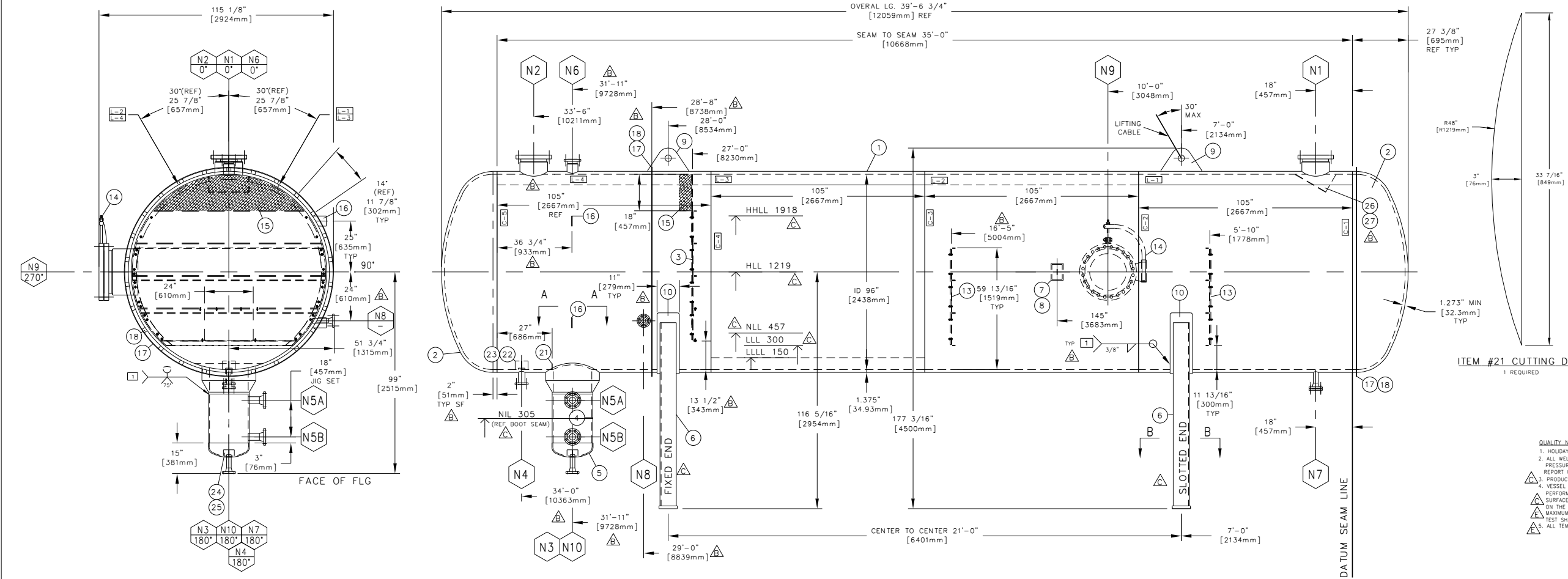




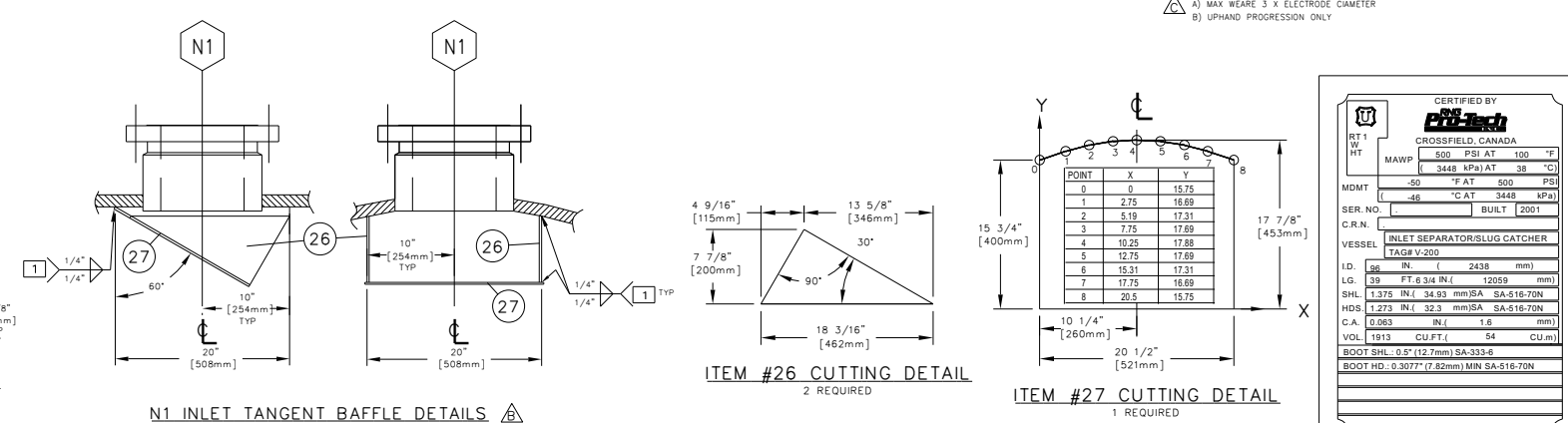
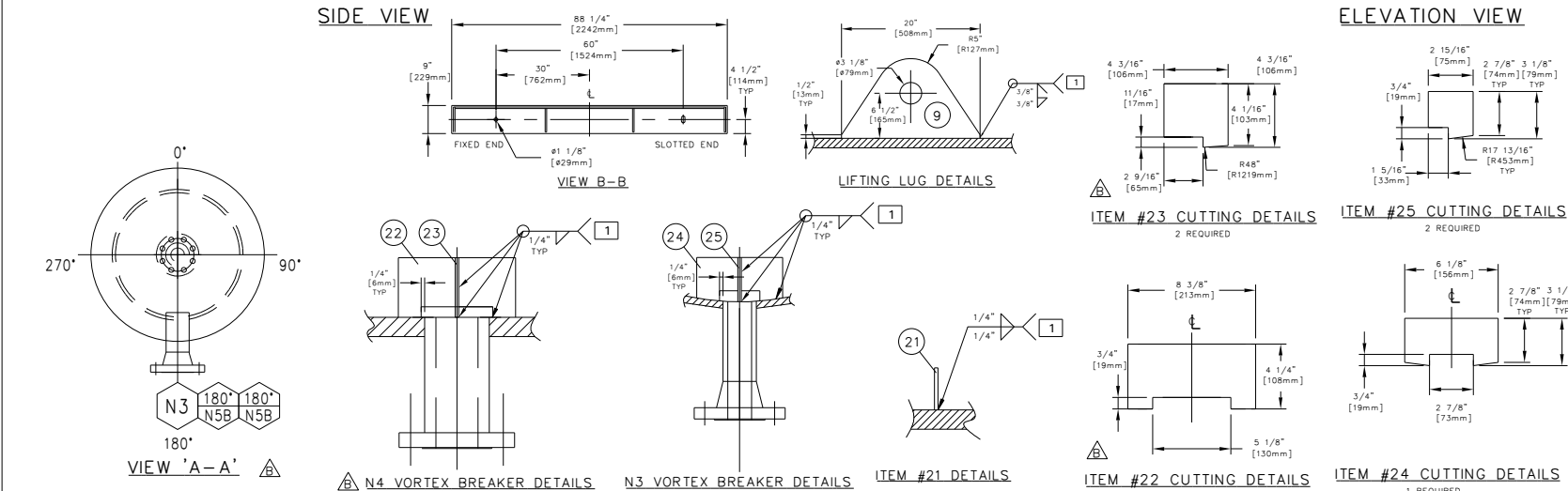
ITEM	LOCATION	PART NO	QTY	UM	DESCRIPTION	
1	SHELL	62807	89.52	F2	PL 1.375" SA516-70N IMP -50F	4 PCS 8" 9" x 25"
2	HEADS	67130	2	EA	HD 2.15E 96X101.273MM 25F SA516-70N IMP -50F	
3	BAFFLE	67131	1	EA	BAFFLES DETAILS ITEM #1	DWG 2001-087
4	FLANGE SHELL	67132	24.0	N	FLG 20T SMLS SCH 30 SA333-GR6	1 PCS 8" 9" x 25"
5	ROOT HEAD	67133	1	EA	HD 2.15E 20"OD X 0.3077" MN SF SA-516-70N IMP -50F	DWG 2001-086
6	SADDLES	67126	2	EA	SADDLES DETAILS	DWG 2001-0565
7	NAME PL	61103	1	EA	PL DATA UNITS MET/IMP EXTENDED VERS	DWG 9104-1
8	NAME PL	61104	1	EA	BRKT STD. DATA PL. EXTENDED VERS.	DWG 9104-3
9	LIFF LUG	62807	3.72	F2	PL 1.375" SA516-70N -50F IMP	1 DWG 2" 1/2" x 2"
10	WEAR PAD	62855	17.4	F2	PL 500 SA516-70N 2 PCS 11" x 9" 5-3/4" ROLLED TO 98 3/4"	1 DWG 2001-087
11						
12						
13	BAFFLE	67131	0	EA	BAFFLES DETAILS ITEM #2	DWG 2001-087
14	N9 DAVIT	56312	1	EA	DAVIT 18" CL300 SIDE	DWG 8306-30
15	DEMISTER	67134	1	EA	MESH MIST ELIM 144 KG/M3 152mm THK 316-S SS REMOVABLE	
16	BRIQLE CLIPS	62855	0.52	F2	PL 500 SA516-70N	2 PCS 5" 6-7/8"
17	INS SUPP	51463	53.8	FT	BAR RND 1/4" SA 36 2 PCS 26" 11" LG ROLLED TO 102 1/4"	
18	INS SUPP	67146	1.7	F2	PL 250 SA 516-70N	52 PCS 1-3/4" x 3"
19						
20						
21	LIQ WIER	67146	0.9	F2	PL 250 SA 516-70N	1 PCS 4" x 3"
22	N4 VORTEX	67146	0.2	F2	PL 250 SA 516-70N	1 PCS 4-1/4" x 4-3/16"
23	N4 VORTEX	67146	0.2	F2	PL 250 SA 516-70N	2 PCS 4-3/16" x 4-3/16"
24	N3 VORTEX	67146	0.12	F2	PL 250 SA 516-70N	1 PCS 3-1/8" x 6-1/16"
25	N3 VORTEX	67146	0.12	F2	PL 250 SA 516-70N	2 PCS 3" x 3-1/16"
26	N2 BAFFLE	67146	2.0	F2	PL 250 SA 516-70N	2 PCS 7-7/8" x 18-1/16"
27	N2 BAFFLE	67146	2.5	F2	PL 250 SA 516-70N	1 PCS 17-7/8" x 20-1/16"
28						
29	N1 & N2	67139	2	EA	FLG 10 CL300 RFHB X 12" SA350-LF2	
30	N3	56112	0.5	FT	PIPE 2" SCH160 SMLS SA 333-GR6	1 PCS 5-3/4" x 1"
31	N3, N7 & N8	56103	3	EA	FLG 2 CL300 RFWN SMLS SA350-LF2	
32	N4	67166	1	EA	FLG 3 CL300 RFWN X 12" LG SA350-LF2	
33	NSA & B	67144	1.0	FT	PIPE 3" XM SMLS SA333-GR6	2 PCS 6-1/8" x 1"
34	NSA & B	62847	2	EA	FLG 3 CL300 RFWN XH BORE SA350-LF2	
35	N6	67140	1	EA	FLG 3 CL300 RFHB X 12" SA350-LF2	
36	N7	56112	0.6	FT	PIPE 2" SCH160 SMLS SA 333-GR6	1 PCS 6-5/8" x 1"
37	N7	58776	1	EA	FLG BLND 2 CL300 RF SA 350-LF2	
38	N7	64497	8	EA	STUD 5/8NC X 3-1/2 LG SA193-B7M	
39	N7	58668	16	EA	NUT HEX 5/8" NC SA 194-2HM	
40	N7	58742	1	EA	GASKET 2 CL300 SPRWND 304SS W/GRPH FILL	
41	N8	56112	0.72	FT	PIPE 2" SCH160 SMLS SA 333-GR6	1 PCS 8-1/4" x 1"
42	N9	67141	1	EA	FLG 18 CL300 RFHB X 18" SA350-LF2	
43	N9	63029	1	EA	FLG BLND 18 CL300 RF SA350-LF2	
44	N9	65516	24	EA	STUD 1-1/4NC X 8LG SA193B7M	
45	N9	60864	48	EA	NUT HEX 1-1/4" 8TPI SA194-2HM	
46	N9	67143	1	EA	GASKET 2 CL300 SPRWND 304SS W/GRPH FILL	
47	N10	67144	1	EA	FORGING WELD NECK 19" ID X 3.75 WALL SA-350-LF2	DWG 2001-087
48						
49						
50						

QUALITY NOTES:

- HOLIDAY TESTING IS REQ'D ON THE INTERNAL COATING.
- ALL WELDS JOINING NON PRESSURE RETAINING COMPONENTS TO PRESSURE RETAINING COMPONENTS SHALL BE 100% WP. REPORT USING RRG-NDE-001.
- PRODUCTION IPAD TESTING REQ'D AS PER WP-80.4.
- VELOCITY SHALL BE MEASURED MICRO HARDNESS TESTED AFTER PWHT.
- PERFORM BM-HAZ-WM-HAZ-BM ON INTERNAL/EXTERNAL SURFACES FOR ONE CIRC. ONE LONG AND ONE ON THE CAT 'C' AND 'D' OF ONE NOZZLE.
- MAXIMUM ACCEPTABLE HARDNESS FOR P1 MATERIALS: HY 210
- TEST SHALL BE PERFORMED BY CSG LEVEL II OR III TECHNICIAN
- ALL TEMPORARY WELDS AND REPAIRS SHALL BE MP/D AFTER GRINDING

SHIP NOTES:

- SHELL PLATES SHALL BE TRIMMED SQUARE TO WITHIN $1/32"$, REDUCE SHELL PLATE WIDTH IF NECESSARY.
- ALL INTERNAL CORNERS AND JOINTS TO BE ROUNDED TO $1/4"$ RADIUS MINIMUM OR CHAMFERED $1/16"$ RADIUS MINIMUM.
- BOLT HOLES TO STRADDLE NATURAL C.G. ACCEPT AS NOTED.
- ALL FLANGES, GASKET VESSELS TO BE COMPLETELY DRAINED AND DRIED PRIOR TO COVERING AND PROTECTING ALL OPENINGS. PLUG ALL WEEL HOLES IN REPAIRS WITH GREASE.
- ALL COATED CORNERS AND EDGES TO BE BROKEN PRIOR TO COATING.
- SERVICE STUDS, NUTS AND GASKET NOT TO BE USED FOR HYDROTEST.
- TOLERANCE ON NOZZLE EXTERNAL & INTERNAL PROJECTION TO BE $\pm 1/8"$ (± 0.13").
- BOLT THREADS TO BE COATED WITH LUBRICANT PRIOR TO ASSEMBLY.
- SHIPPING WITH $1/8"$ THK. GASKETED STEEL COVER.
- FOR ALL SADDLES WEAR PLATES $1/4"$ DIA VENT HOLE IS REQ'D.
- FOR WELDING NOTE:
 - MAX WEARE 3 X ELECTRODE CHAMFER
 - UPHARD PROGRESSION ONLY



E	YM	01/10/29	.	QUALITY NOTE #4 REVISED, NOTE #5 ADDED
D	YM	01/10/04	.	WELD PROCEDURE REVISED
C	YM	01/09/20	.	REVISED AS MARKED
B	YM	01/09/17	.	REVISED AS MARKED
A	YM	01/09/05	.	ISSUED FOR CUSTOMER APPROVAL
O	YM	01/08/30	.	PRELIMINARY RELEASE FOR CUSTOMER SITE LAYOUT ONLY
NO	BY	DATE	CHKD	REVISIONS

WELD PROCEDURES ☐ 609.2-PES-44 (SMAW) (SAW) ☐ 609.2-S- () ☐ 609.2-PES-38 (SMAW) (SAW) ☐ 609.2-S- () ☐ 609.2-S- ()	UNSPECIFIED TOLERANCES FRACTIONS: $\pm 1/8"$ DECIMALS: 0.00 ± 0.01 0.00 ± 0.005 ANGLES: $\pm 0'30'$	THIS DRAWING OF A CONFIDENTIAL NATURE IS THE EXCLUSIVE PROPERTY OF RNG PRO-TECH INC. AND MAY NOT BE REPRODUCED USED OR DISCLOSED WITHOUT WRITTEN PERMISSION OF THE OWNER.
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DESIGN DATA - ENGLISH (METRIC) UNITS			
ASME SEC. VIII DIV 1, 1998 EDITION, 2000 ADDENDA		SYMBOL UW12 (a)	
MAWP INT: 500psi (3448kPa) @ 100°F (38°C)		DIAMETER 96.00" ID (2438mm)	
MAP INT: 529psi (3647kPa) @ 70 °F (21°C)		LENGTH O/A 39' 6-3/4" (12059mm)	
DESIGN TEMP. - INT: 100°F (38°C)		CAPACITY: 1913ft ³ /3 (54 m ³ /3)	
MDMT: -50°F @ 500psi (-46°C @ 3448kPa)		HEAD TYPE: 2:1 ELLIPSOIDAL	
		HEAD MATERIAL: SA-516-70N IMP -50F 1.273 "/MIN(32.3 mm)	
		HEAD CORROSION ALLOWANCE: 0.063 " (1.6 mm)	
XRAY SHELL LONG:FULL UW-11(A) CIRC:FULL UW-11(A)		SHELL MATERIAL: SA-516-70N IMP -50F	
XRAY HEAD LONG: SWLS CIRC:FULL UW-11(A)		SHELL THICKNESS: 1.3750 " (34.93 mm)	
JOINT EFF. - HEAD: 1.00 SHELL: 1.00		SHELL CORROSION ALLOWANCE: 0.063 " (1.6 mm)	
STRESS RELIEVED: 90 MINUTES @ 1100 MIN		BOOT HEAD TYPE: 2:1 ELLIPSOIDAL	
HYDRO TEST NEW & COLD: 688psi(4744kPa)		BOOT HEAD MATERIAL: SA-516-70N IMP -50F	
LIMITED BY: HEADS		BOOT HEAD THICKNESS: 0.3077 "/MIN(7.82 mm)	
EST. SHIPPING WEIGHT: 67300lb(30600kg)		BOOT HEAD CORROSION ALLOWANCE: 0.063 " (1.6 mm)	
EST. SILLING WEIGHT: 192600lb(87400kg)		BOOT SHELL MATERIAL: SA-333-6	
		BOOT SHELL THICKNESS: 0.5 " (12.7 mm)	
		BOOT SHELL CORROSION ALLOWANCE: 0.063 " (1.6 mm)	
SANDBLAST: EXTERNAL: SSPC-SP6		STUDS: SA-193-87M	
INTERNAL: SSPC-SP5 BOOT & 305 mm BOTTOM OF VESSEL		NUTS: SA-194-27M	
PRIMER: EXTERNAL: CLOVAPRIM 21 (2-2.5 MILS DFT, 1 COAT)		MW GASKETS: 304SS SPIRAL WOUND, GRAPHITE FILLED	
INTERNAL: BOOT & 305 mm BOTTOM OF VESSEL EC376 F-15 (15-20 MILS DFT, 2 COATS)		FLANGES: SA-350-LF2 PIPE: SA-333-6	
INSULATION: BY CUSTOMER		SUPPORT MTL: SA-516-70N/SA-36/44W	
		REINFORCING MTL: SA-516-70N	
CRN .		REG DRAWING .	

NOZZLE SCHEDULE			Note: All dimension are in English units																												
			NOZZLE							FLANGE				REINFORCING PAD				NOZZLE STYLE			WELD										
MARK	IDENTIFIER	SIZE	DESCRIPTION	ID	OD	ORIENT	NECK MAT'L	I	N	T	SIZE	TYPE	CLASS	FLG MAT'L	MATERIAL	PAD THICK.	PAD DIA	I	N	T	THICK	EXT. PROJ.	INT. PROJ.	DETAIL	A	B	C	D	E		REMARKS
N1	INLET	N/A	9.56 ID X 2.03 WALL	9.56	13.62	0	SA 350 LF2	N	N	N	10	HB	300	SA350LF2	N/A	0.0000	0.00	--	--	--	2.030	8.00	0.00	II	0.357	--	FULL	--	--	SET FLUSH	TEM(S) #29
N10	BOOT FORGING	N/A	19 ID X 3.75 WALL	19.00	26.50	180	SA 350 LF2	N	N	N/A	--	N/A	N/A	N/A	N/A	0.0000	0.00	--	--	--	3.750	10.00	0.00	II	0.375	--	FULL	--	--	GR FLUSH	TEM(S) #47
N2	GAS OUTLET	N/A	9.56 ID X 2.03 WALL	9.56	13.62	0	SA 350 LF2	N	N	N	10	HB	300	SA350LF2	N/A	0.0000	0.00	--	--	--	2.030	8.00	0.00	II	0.357	--	FULL	--	--	SET FLUSH	TEM(S) #29
N3	WATER DRAIN		2SCH 160	1.69	2.38	0	SA 333 6	N	N	N	2	WN	300	SA350LF2	N/A	0.0000	0.00	--	--	--	0.344	SHOWN	0.00	II , VI	0.375	--	FULL	--	--	GR FLUSH	TEM(S) #30, 31
N4	CONDENSATE OUTLET		3 ID X 0.81 WALL	3.00	4.62	180	SA 350 LF2	N	N	N	3	LWN	300	SA350LF2	N/A	0.0000	0.00	--	--	--	0.810	8.00	0.00	II	0.375	--	FULL	--	--	GR FLUSH	TEM(S) #32
N5A	BRIDLE (BOOT)		3SCH 80 (XH)	2.90	3.50	0	SA 333 6	N	N	N	3	WN	300	SA350LF2	N/A	0.0000	0.00	--	--	--	0.300	8.00	0.50	I , VI	0.500	--	FULL	--	--	--	TEM(S) #33, 34
N5B	BRIDLE (BOOT)		3SCH 80 (XH)	2.90	3.50	0	SA 333 6	N	N	N	3	WN	300	SA350LF2	N/A	0.0000	0.00	--	--	--	0.300	8.00	0.50	I , VI	0.500	--	FULL	--	--	--	TEM(S) #33, 34
N6	BRIDLE (SHELL)	N/A	2.9 ID X 1.24 WALL	2.90	5.38	0	SA 350 LF2	N	N	N	3	HB	300	SA350LF2	N/A	0.0000	0.00	--	--	--	1.240	6.00	0.00	II	0.375	--	FULL	--	--	SET FLUSH	TEM(S) #35
N7	DRAIN C/W BLIND		2SCH 160	1.69	2.38	180	SA 333 6	N	N	N	2	WN	300	SA350LF2	N/A	0.0000	0.00	--	--	--	0.344	8.00	0.00	II , VI	0.375	--	FULL	--	--	GR FLUSH	TEM(S) #36-40
N8	LIQUID RETURN		2SCH 160	1.69	2.38	--	SA 333 6	N	N	N	2	WN	300	SA350LF2	N/A	0.0000	0.00	--	--	--	0.344	SHOWN	0.00	II , VI	0.375	--	FULL	--	--	SET FLUSH	TEM(S) #41
N9	MANWAY	N/A	18 ID X 2.375 WALL	18.00	22.15	270	SA 350 LF2	N	N	N	18	HB	300	SA350LF2	N/A	0.0000	0.00	--	--	--	2.375	12.00	2.00	I	0.375	0.375	FULL	--	--	--	TEM(S) #42-46

LONG/CIRC SEAM		CLOSING SEAM		PROJECTIONS		SOCKET WELD		DETAIL I		DETAIL II		DETAIL III		DETAIL IV		DETAIL V		DETAIL VI		DETAIL VII		DETAIL VIII		INTERNAL: BOOT & 305 mm BOTTOM OF VESSEL EC376 F=15 (15-20 MILS DFT, 2 COATS) INSULATION: BY CUSTOMER CRN . FLANGES: SA-350-LF2 PIPE: SA-333-6 SUPPORT MTL: SA-516-70N/SA-36/44W REINFORCING MTL: SA-516-70N REG DRAWING .	
WP 609.2 PES-44		WP 609.2 PES-44		RADIAL EXT. INT. OFFSET EXT. INT.		USE WHEN RISER REQ'D 1/16" SEAL PASS		INTERNAL FILLET MAY BE LIMITED BY INTERNAL PROJECTION A C B 1		FOR SET FLUSH NOZZLES, MAX INTERNAL FILLET = A A C B 1		INTERNAL FILLET MAY BE LIMITED BY INTERNAL PROJECTION 1/4" NPT HOLE AT 90° TO LONG AXIS A C B 1		FOR SET FLUSH NOZZLES, MAX INTERNAL FILLET = A 1/4" NPT HOLE AT 90° TO LONG AXIS A C B 1		INTERNAL FILLET MAY BE LIMITED BY INTERNAL PROJECTION 1/4" NPT HOLE AT 90° TO LONG AXIS A C B 1		INTERNAL FILLET MAY BE LIMITED BY INTERNAL PROJECTION 1/4" NPT HOLE AT 90° TO LONG AXIS A C B 1		INTERNAL FILLET MAY BE LIMITED BY INTERNAL PROJECTION 1/4" NPT HOLE AT 90° TO LONG AXIS A C B 1		INTERNAL FILLET MAY BE LIMITED BY INTERNAL PROJECTION 1/4" NPT HOLE AT 90° TO LONG AXIS A C B 1		INLET SEPARATOR/SLUG CATCHER TAG# V-200, HUSKY ENERGY INC GALLOWAY LSD 12-05-54-20 W5M	
DR. YM		DATE 2001/08/30		PROJ. P.O. 31-0132		DRAWING No. 2001-0864D		REV E		MAINT'D		DATE		SCALE		P/N - 16400401									

