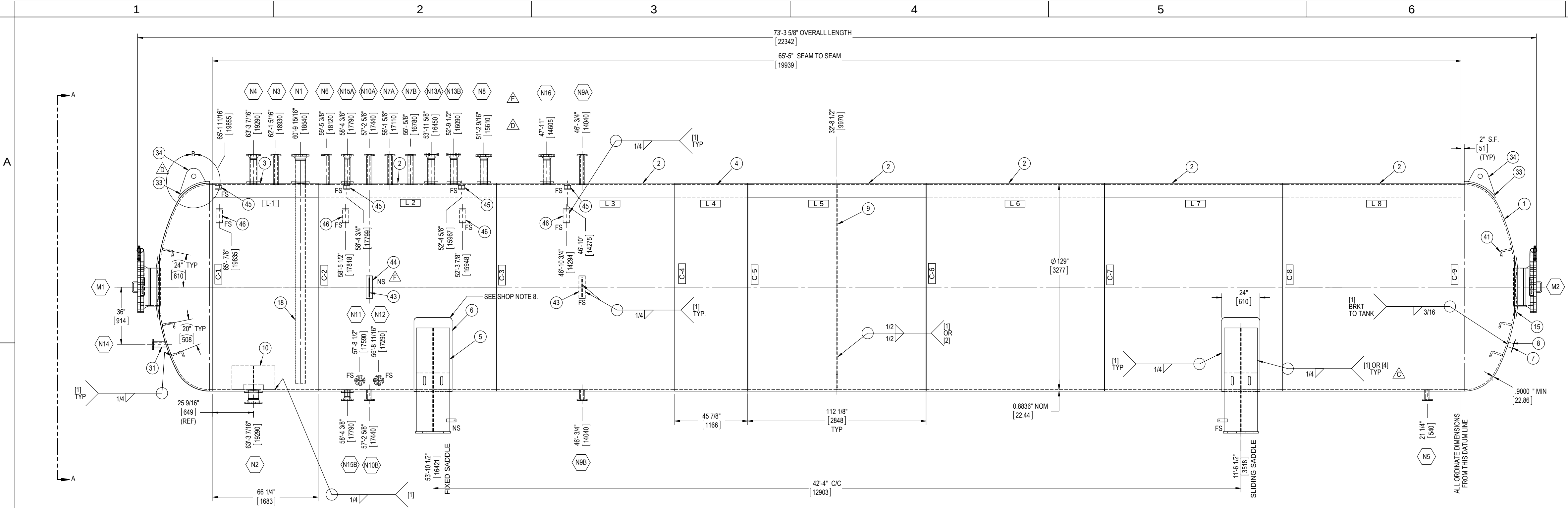




SHOP NOTES:

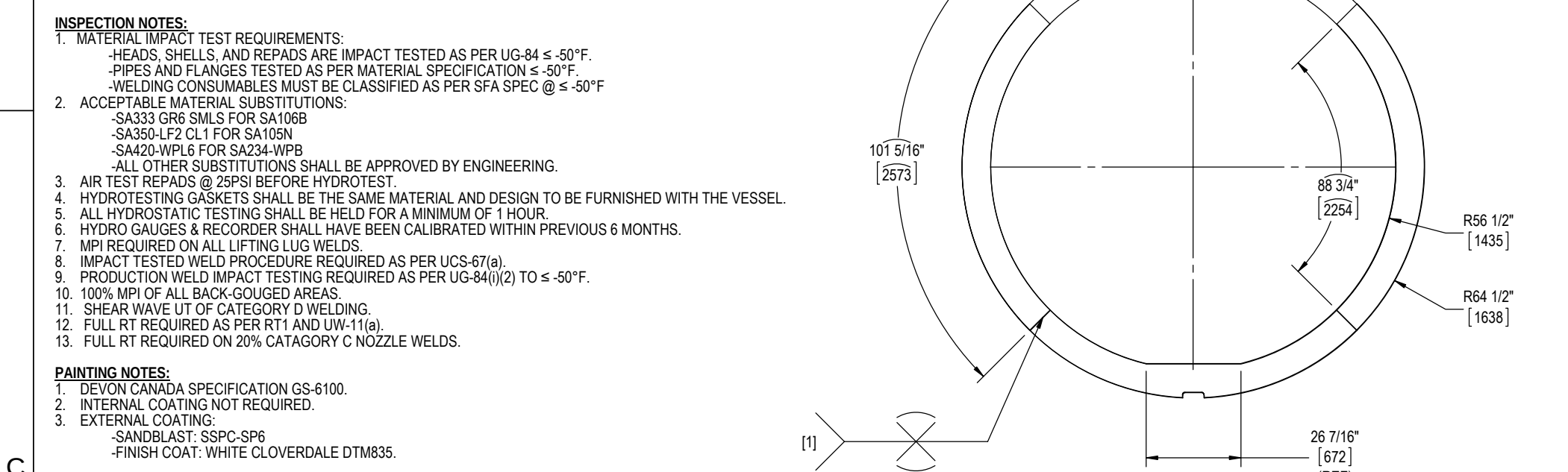
1. AT BOLTING, MARK A REFERENCE LINE 2" FROM HEAD SEAM EDGES.
2. FOR TACK WELDING USE WPS [1].
3. FLANGE BOLT HOLES SHALL STRADDLE NATURAL VESSEL CENTRE LINES. EXCEPT AS NOTED.
4. ALL INTERNAL NOZZLE PROJECTIONS SHALL BE MEASURED ALONG SHORTEST SIDE UNLESS NOTED OTHERWISE.
5. FLANGE GASKET SURFACES SHALL BE PROTECTED FROM WELD SPATTER.
6. ALL INSIDE CONNECTIONS SHALL BE ROUNDED TO 18" RADIUS MIN.
7. CONTOUR PADS SHALL HAVE 1" MINIMUM RADIUS ON CORNERS.
8. SADDLE CONTOUR PADS SHALL BE COMPLETELY WELDED TO VESSEL PRIOR TO SADDLE INSTALLATION.
9. ALL NOZZLE REPAIRS SHALL HAVE A 1/4" NPT WEEP HOLE 3/4" FROM OUTER EDGE, AT LOWEST POINT OF PAD.
10. ALL PADS AND BRACKETS SHALL BE ATTACHED WITH CONTINUOUS FILLET WELDS UNO (1/4" FOR EXTERNAL, 3/8" FOR INTERNAL).

INSPECTION NOTES:

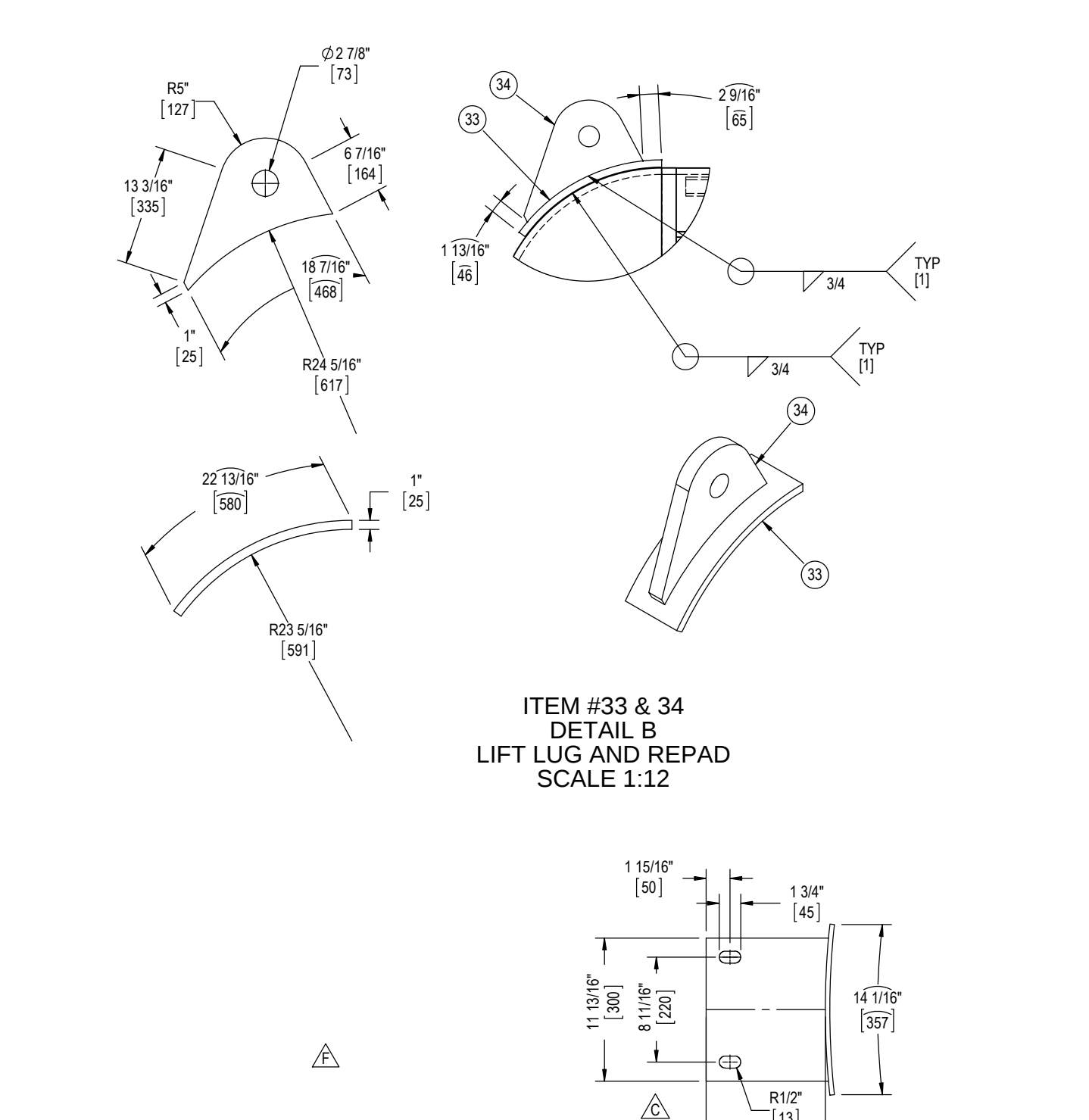
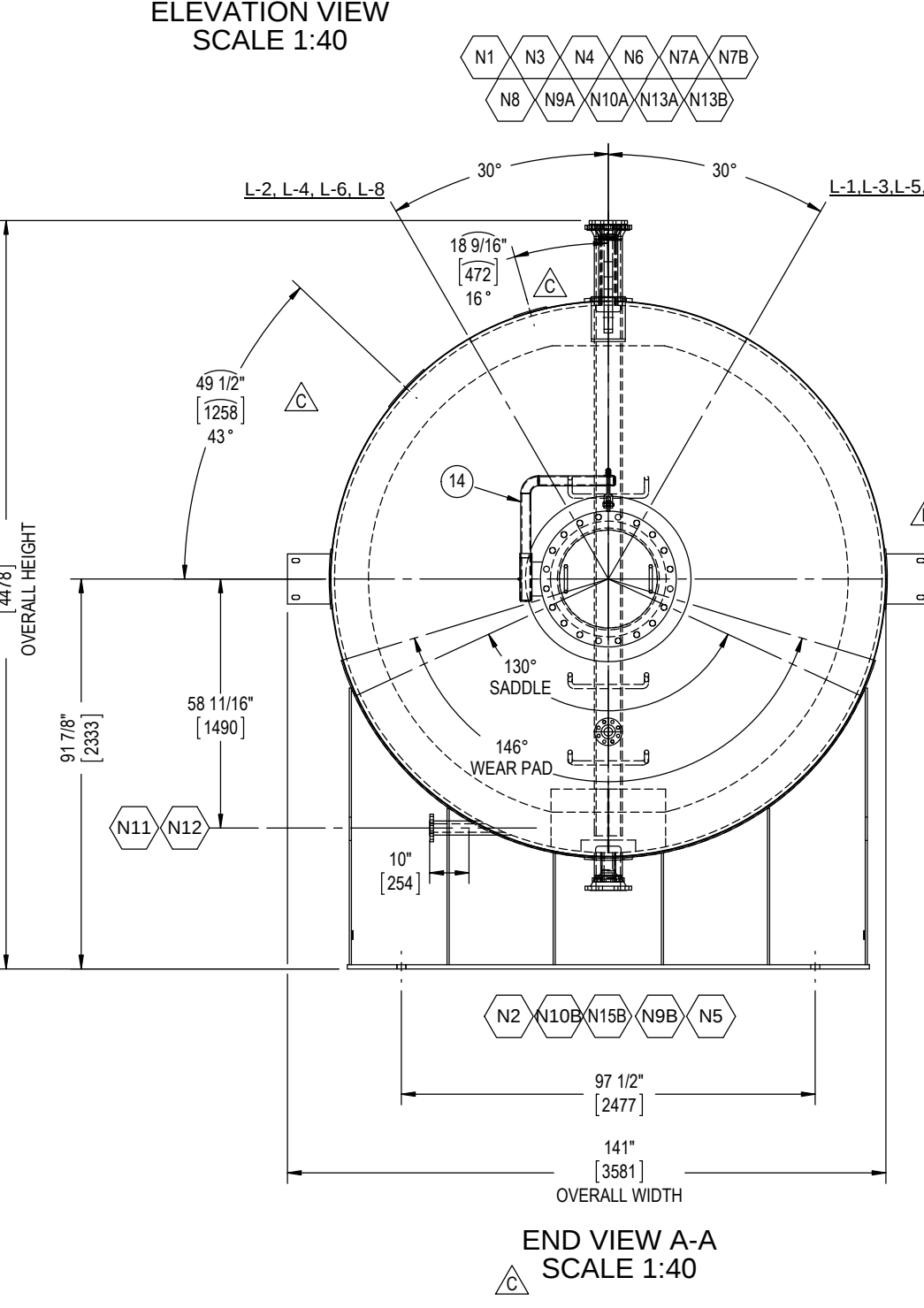
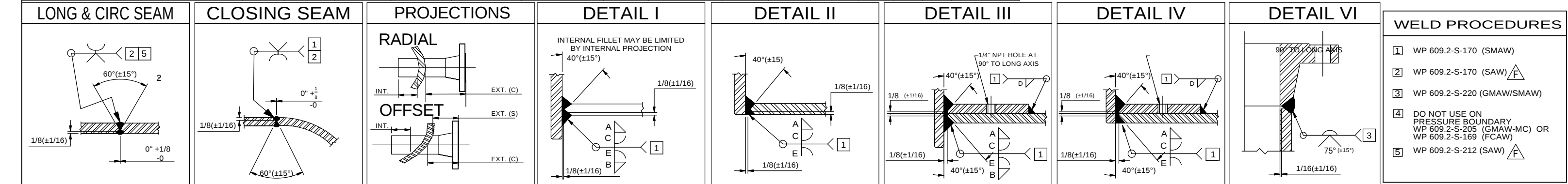
1. MATERIAL IMPACT TEST REQUIREMENTS:
 - HEADS, SHELLS, AND REPAIRS ARE IMPACT TESTED AS PER UG-84 ≤ -50°F.
 - PIPES AND FLANGES TESTED AS PER MATERIAL SPECIFICATION ≤ -50°F.
 - WELDING CONSUMABLES MUST BE CLASSIFIED AS PER SFA SPEC @ ≤ -50°F.
2. ACCEPTABLE MATERIAL SUBSTITUTIONS:
 - SA333 GR6 SMLS FOR SA106B
 - SA350-LF2 CL1 FOR SA106B
 - SA420-WPL6 FOR SA234-WPB
 - ALL OTHER SUBSTITUTIONS SHALL BE APPROVED BY ENGINEERING.
3. AIR TEST REPAIRS @ 25PSI BEFORE HYDROTEST.
4. HYDROTESTING GASKETS SHALL BE THE SAME MATERIAL AND DESIGN TO BE FURNISHED WITH THE VESSEL.
5. ALL HYDROSTATIC TESTING SHALL BE HELD FOR A MINIMUM OF 1 HOUR.
6. HYDRO GAUGES & RECORDER SHALL HAVE BEEN CALIBRATED WITHIN PREVIOUS 6 MONTHS.
7. MPI REQUIRED ON ALL LIFTING LUG WELDS.
8. IMPACT TESTED WELD PROCEDURE REQUIRED AS PER UCS-67(a).
9. PRODUCTION WELD IMPACT TESTING REQUIRED AS PER UG-84(a)(2) TO ≤ -50°F.
10. 100% MPI OF ALL BACK-GROUGED AREAS.
11. SHEAR WAVE LOT OF CATEGORY D WELDING.
12. FULL RT REQUIRED AS PER RT1 AND UW-11(a).
13. FULL RT REQUIRED ON 20% CATEGORY C NOZZLE WELDS.

PAINTING NOTES:

1. DEVON CANADA SPECIFICATION GS-6100.
2. INTERNAL COATING NOT REQUIRED.
3. EXTERNAL COATING:
 - SANDBLAST: SSPC-SP6
 - FINISH COAT: WHITE CLOVERDALE DTM835.



REV	NOZZLE MARK#	SERVICE	No REQD	SIZE	RATING	TYPE	BORE	EXTERNAL PROJ		MIN INTERNAL PROJ.	REINFORCING PAD		WELD DETAIL	WELD SIZES				
								FROM	TO		THK	OD		A	B	C	D	E
	M1	MANWAY w/BLIND & DAVIT	1	24"	CL150	RFWN	XH	10"	C	0"	1.00	39.0	IV.C	3/8		FULL	9/16	FULL
	M2	MANWAY w/BLIND & DAVIT	1	24"	CL150	RFWN	XH	10"	C	0"	1.00	39.0	IV.VI	3/8		FULL	9/16	FULL
	N1	INLET	1	6"	CL150	RFWN	XH	18"	C	128"	0.875	11.25	III.VI	3/8	7/16	FULL	9/16	FULL
	N2	OUTLET w/VORTEX BREAKER	1	6"	CL150	RFWN	XH	8"	C	FLUSH	0.875	11.25	III.VI	3/8		FULL	9/16	FULL
	N3	VAPOUR BALANCE LINE	1	2"	CL300	RFLWN	3.31"OD X 0.66"	18"	C	0"	0.875	8-1/2	II.VI	3/8		FULL		FULL
E	N4	VAPOUR OUTLET	1	4"	CL150	RFWN	XH	18"	C	0"	0.875	8-1/2	IV.VI	5/16		FULL	9/16	FULL
	N5	DRAIN	1	2"	CL300	RFLWN	3.31"OD X 0.66"	6"	C	FLUSH			II.VI	3/8		FULL		FULL
	N6	PRESSURE INDICATOR	1	2"	CL300	RFLWN	3.31"OD X 0.66"	18"	C	0"			II.VI	3/8		FULL		FULL
D	N7A/B	PRESSURE TRANSMITTER	2	2"	CL300	RFLWN	3.31"OD X 0.66"	18"	C	0"			II.VI	3/8		FULL		FULL
E	N8	PSV	1	4"	CL300	RFWN	XH	18"	C	0"	0.875	8-1/2	IV.VI	5/16		FULL	9/16	FULL
	N9A	LEVEL GAUGE	1	2"	CL300	RFLWN	3.31"OD X 0.66"	18"	C	0"			II.VI	3/8		FULL		FULL
	N9B	LEVEL GAUGE	1	2"	CL300	RFLWN	3.31"OD X 0.66"	6"	C	0"			II.VI	3/8		FULL		FULL
	N10A	LIT	1	2"	CL300	RFLWN	3.31"OD X 0.66"	18"	C	0"			II.VI	3/8		FULL		FULL
	N10B	LIT	1	2"	CL300	RFLWN	3.31"OD X 0.66"	6"	C	0"			II.VI	3/8		FULL		FULL
	N11	TEMPERATURE INDICATOR	1	2"	CL300	RFLWN	3.31"OD X 0.66"	10"	C	0"			II.VI	3/8		FULL		FULL
	N12	TEMPERATURE TRANSMITTER	1	2"	CL300	RFLWN	3.31"OD X 0.66"	10"	C	0"			II.VI	3/8		FULL		FULL
	N13A/B	VENT	2	4"	CL150	RFWN	XH	18"	C	0.875	8-1/2	IV.VI	5/16		FULL	9/16	FULL	
	N14	UTILITY CONNECTION	1	2"	CL300	RFLWN	3.31"OD X 0.66"	6"	C	0"			II.VI	3/8		FULL		FULL
	N15A	LIT	1	3"	CL150	RFWN	XH	18"	C	0"	0.875	7-1/2	IV.VI	1/4		FULL	9/16	FULL
	N15B	LIT	1	3"	CL150	RFWN	XH	6"	C	0"	0.875	7-1/2	IV.VI	1/4		FULL	9/16	FULL
E	N16	PSV	1	4"	CL300	RFWN	XH	18"	C	0"	0.875	8-1/2	IV.VI	5/16		FULL	9/16	FULL



REV	ITEM NO.	LOCATION	ITEM ID	QTY	UOF M	DESCRIPTION	PC	COMMENT
	1	HEAD	74110	2.0	EA	HD 2:1SE 129"ID X .300"MN (1.007" NOM) SA516-70N IMP -50F	2	
B	2	SHELL	75381	6.0	EA	PL 8836" X 112.75" X 410" SA516-70N IMP -50F	6	112.143" LG
B	3	SHELL	75381	1.0	EA	PL 8836" X 112.75" X 410" SA516-70N IMP -50F	1	66-1/4" LG
B	4	SHELL	75381	1.0	EA	PL 8836" X 112.75" X 410" SA516-70N IMP -50F	1	45-7/8" LG
E	5	SADDLE	75278	1.0	PR	SADDLE DETAIL F1129" STORAGE VESSEL	1	DWG 13086D
	6	SADDLE WEAR PAD	59206	55.8	F2	PL 375" SA516-70N IMP -50F	2	24" X 168"
	7	DATA PLATE	69002	1.0	EA	PL DATA UNITS MET/IMP EXTENDED VERSION WITH MAEWP LINE	1	DWG 2005-0613A
	8	DATA PL	61104	1.0	EA	BRKT STD. DATA PL. EXTENDED VERS.	1	DWG 9104-3A
	9	VACUUM RING	59410	5.6	F2	PL 1.0" SA516-70N IMPACT -50F	1	SEE DETAIL
E	10	VORTEX BREAKER	59206	5.6	F2	PL 375" SA516-70N IMPACT -50F	1	SEE DETAIL
	11	M1, M2	60206	2.0	EA	FLG 24" CL150 RFWN XH BORE SA350-LF2 CL1	2	
	12	M1, M2	60207	2.0	EA	FLG BLIND 24" CL150 RF SA350-LF2 CL1	2	
	13	M1, M2	60212	1.0	FT	PIPE 24" SCH XH SA333-6	2	6 1/4" LG
	14	M1 DAVIT	62474	2.0	EA	DAVIT 24IN CL150 HORIZONTAL MOUNT LEFT HANDED	2	DWG 13058B
	15	MW REPAD	59410	21.2	F2	PL 1.0" SA516-70N IMP -50F	2	24" X 39"
	16	N1, N2	59384	2.0	EA	FLG 6" CL150 RFWN SCH 80 (XH) BORE SA350-LF2 CL1	2	
	17	N1, N2 REPAD	65363	0.8	F2	PL 875" SA516-70N IMP -50F	2	11 1/4" OD, 6 5/8" ID
	18	N1	58050	11.7	FT	PIPE 6" SCH 80 (XH) SA333-6	1	140 1/4" LG
	19	N2	58050	0.5	FT	PIPE 6" SCH 80 (XH) SA333-6	1	6" LG
	20	N13A/B	64186	2.0	EA	FLG BLIND 4" CL150 RF SA350-LF2 CL1	2	
E	21	N4, N13A/B	63364	3.0	EA	FLG 4" CL150 RFWN SCH 80 (XH) BORE SA350-LF2 CL1	3	
E	22	N4, N8, N13A/B, N16	58058	7.0	FT	PIPE 4" SCH 80 (XH) SA333-6	5	16 3/4" LG
E	23	DELETED						
E	24	N4, N8, N13A/B, N16 REPAD	65363	2.5	F2	PL 875" SA516-70N IMP -50F	5	8 1/2" OD, 4 1/2" ID
	25	N15A/B	59383	2.0	EA	FLG 3" CL150 RFWN SCH 80 (XH) BORE SA350-LF2 CL1	2	
	26	N15A	56114	1.4	FT	PIPE 3" SCH 80 (XH) SA333-6	1	16 3/4" LG
	27	N15B	56114	0.4	FT	PIPE 3" SCH 80 (XH) SA333-6	1	5 1/4" LG
	28	N15A/B	65363	0.8	F2	PL 875" SA516-70N IMP -50F	2	7 1/2" OD, 3 1/2" ID
	29	N3, N6, N7A/B, N9A, N10A	67177	6.0	EA	FLG 2" CL300 RFLWN 0.66" WALL X 20" SA350-LF2 CL1	6	
	30	N5, N9B, N10B	73434	3.0	EA	FLG 2" CL300 RFLWN 0.66" WALL X 8" SA350-LF2 CL1	3	
	31	N14	64863	1.0	EA	FLG 2" CL300 RFLWN 0.66" WALL X 12" SA350-LF2 CL1	1	
	32	N11, N12	74612	2.0	EA	FLG 2" CL300 RFLWN 0.66" WALL X 22" SA350-LF2 CL1	2	
	33	LIFT LUG REPAD	59410	2.6	F2	PL 1.0" SA516-70N IMPACT -50F	2	22-13/16" X 8"
	34	LIFT LUG	64817	2.0	F2	PL 2.0" SA516-70N IMPACT -50F	2	SEE DETAIL
E	35	N13A/B	73888	2.0	EA	GASKET 4" CL150 GRPH SPRL WND - 316L-SS C/W INNER RING AND SS OUTER RING	2	
	36	N13A/B	59414	16.0	EA	STUD 5/8" NC X 3-3/4" LG SA193-B7M, (4" CL150)	2	SET(S)
	37	N13A/B	58668	32.0	EA	NUT 5/8" NC SA194-2HM, (4" CL150)	2	SET(S)
	38	M1, M2	70325	2.0	EA	GASKET 24" CL150 GRPH SPRL WND 316L-SS C/W INNER & SS OUTER RING	2	
	39	M1, M2	55514	40.0	EA	STUD 1-1/4" NC X 7" LG SA193-B7M, (24" CL150)	2	SET(S)
	40	M1, M2	60864	80.0	EA	NUT 1-1/4" NC SA194-2HM, (24" CL150)	2	SET(S)
	41	MANWAY RUNGS	74569	6.0	EA	RUNG LADDER INTERNAL/TOWER BAR RND 1" - 44W	6	DWG 12284B
F	42	M1	67594	4.0	EA	HANDLE MANWAY COVER - 3/4" RND	4	DWG. 2002-1015A
F, D	43	BRIDLE CLIP	59206	1.7	F2	PL 375" SA516-70N IMPACT -50F	2	11-13/16" X 9-13/16"
F, D	44	BRIDLE PAD	59206	0.4	F2	PL 375" SA516-70N IMPACTS @ -50F	2	14-1/8" X 4"
B	45	PLATFORM PADS	59206	0.9	F2	PL 375" SA516-70N IMPACT -50F	4	8" X 4"
B	46	PLATFORM PADS	59206	1.3	F2	PL 375" SA516-70N IMPACT -50F	4	12" X 4"
E, D	47	N8, N16	58045	2.0	EA	FLG 4" CL300 RFWN SCH 80 (XH) BORE SA350-LF2 CL1	2	
F	48	N8, N16	76371	2.0	EA	GASKET 4" CL300 GRPH SPRL WND 316L-SS C/W INNER AND SS OUTER RING	2	



DESIGN DATA - ENGLISH (METRIC) UNITS			
ASME SEC. VIII DIV. 1, 2010 EDITION, 2011 ADDENDA		SYMBOL UW12 (a) & (b)	
MAWP INT. 250 psi (1724 kPa) EXT: 15 psi (103 kPa)		DIAMETER: 129 ID" (3277 mm)	
DESIGN TEMP. - INT & EXT: 140 °F (60 °C) & 109 °F (43 °C)		LENGTH O/A: 73' - 3.625" (22342 mm)	
MDMT: -49 °F at 250 psi (-45 °C 1724 kPa)		CAPACITY: 6293 FT ³ (178.2 m ³)	
XRAY SHELL LONG-FULL UW-11(a)		CIRC-FULL UW-11(a)	
XRAY HEAD LONG-SMLS NO RT		CIRC-FULL UW-11(a)	
JOINT EFF: SHELL LONG: 1.0		SHELL CIRC: 1.0	
JOINT EFF: HEAD LONG: 1.0		HEAD CIRC: 1.0	
STRESS RELIEVED: YES, 65 MINS @ 1100-1200 °F (594-649 °C)		HEAD TYPE: SE 2.1	
HYDROTEST: 325 psi (2241 kPa)		HEAD MATERIAL: SA516-70N IMP-50F	
LIMITED BY:		SHELL THICKNESS: 0.8836" (22.44 mm)	
SHIPPING WEIGHTS: 100000 lb (45362 kg)		SHELL CORROSION ALLOWANCE: 0.063" (1.60 mm)	
HYDROTEST WEIGHT: 493000 lb (223633 kg)		SHELL MATERIAL: SA516-70N IMP-50F	
OPERATING WEIGHT: 294500 lb (134717 kg)		SHELL THICKNESS: 0.900" (22.86 mm)	
SANDBLAST: SSPC-SP6		HEAD CORROSION ALLOWANCE: 0.063" (1.60 mm)	
PRIMER: SEE NOTES		STUDS: SA193-87M	
INSULATION: N/A		NUTS: SA194-2HM	
CRN: W2073.21		MW GASKETS: SPRL WDN 176 316SS CW 316 SS	
		INNER & OUTER RING	
		FLANGES: SA503-LF3 CL1	
		PIPE: SA333-GRS SMLS	
		SUPPORT MTL: SA516-70N	
		REINFORC MTL: SA516-70N IMP-50F	
		REG DRAWING: 122130-RC	

Maxfield Inc.

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47-1M USWG 129" ID X 65'-5" S/S LPG STORAGE BULLET VESSEL FABRICATION DRAWING

DEVON NEC CORPORATION - WORLEY PARSONS

TAG: 002-V-08-0212

THIRD ANGLE PROJECTION

SCALE: 1:40

P/N: 75638

JOB: 31-3097-V

DRAWING No. 13181D

SHEET 1 OF 1

REV. F

REV	DRAWN BY	DATE	CHECKED BY	ENG	APPROVED BY	DESCRIPTION
F	JVH	13.10.01	WS	GS		ADDED BRIDLE PAD & CLIP, ADDED STRESS RELIEVE SPECS, MODIFIED WP
E	HMJ/DW	13.09.11	WS	GS		ADDED VORTEX BREAKER DETAIL. CHANGED N8B TO N16 AND N8A TO N8.
D	HM	13.08.27	WS	GS	GS	REVISED WELD PROCEDURE [2].
C	HM	13.08.09	WS	GS	GS	REVISED VORTEX BREAKER, DESIGN DATA, AND BOM. ADDED N8B (N8A/B ON HOLD), WELD SYMBOLS AND DIMENSIONS.
B	HM	13.08.01	WS	GS	GS	REVISED ITEMS 35 & 42. ADDED MANWAY HANDLE DETAIL.
A	HM	13.05.22	GS	GS	GS	REVISED ITEMS 2, 3, 35, 43, 44, 45. ADDED ITEM #4 AND ADJUSTED CIRC SEAM
0	HM	13.03.25	GS	GS	GS	REVISED AS PER CUSTOMER MARK UPS. UPDATED B.O.M., NOZZLE SCHEDULE AND DESIGN DATA. ADDED DETAILS.
REV	DRAWN BY	DATE	CHECKED BY	ENG	APPROVED BY	DESCRIPTION
	YYMMDD					REVISIONS