

GENERAL NOTES

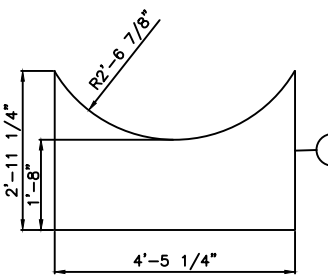
- QUALITY CONTROL PROGRAM NUMBER: AQP-1317(S)
- WELDING PROCEDURE REGISTRATION NUMBER: WP1970.2
- SELECT CHEMISTRY OF ALL PRESSURE RETAINING MATERIAL IS REQUIRED AS PER BP CANADA TECHNICAL SPECIFICATION DOC# NOEL-10-SF-EQT-000010
- DRAIN SPOOL SHALL BE FABRICATED AS PER ASME B31.3 2006 DESIGN PRESSURE & TEMPERATURE: 197 PSIG @ 392°F MDMT: -49°F CORROSION ALLOWANCE: 1/8" RADIOGRAPHY: 100% S/C IMPACTS: EXEMPT PER TABLE 323.2.2 PWHT: SAME AS VESSEL MPI: RFSO FILLET WELDS PER APP. 6 HYDRO-TEST: 428 PSI(G)
- ULTRASONIC TESTING: ALL CAT "D" WELDS
- MAGNETIC PARTICLE INSPECTION: PER APP. 6 INTERNAL AND EXTERNAL WELDS AND ATTACHMENTS, BEFORE PWHT AND AFTER HYDRO-TEST.
- HARDNESS TESTING: PERFORMED ON ONE CIRC SEAM, ONE LONG SEAM & ONE CAT "D" FILLET PER WELDER (200HB MAXIMUM) -ALL HARDNESS TESTING TO BE PERFORMED ON INTERNAL OF VESSEL
- PWHT: ACCORDING TO UCS-56 HEAT FROM AMBIENT TO 800°F AT A MODERATE RATE HEAT FROM 800°F TO 1175°F AT 400°F/Hr MAX SOAK AT 1150°F FOR 120 MIN COOL TO 800°F AT 500°F/HR MAX FROM 800°F AIR COOL IN FURNACE
- HEADS & SHELLS IMPACTS EXEMPT AS PER FIG UCS-66
- NOZZLE IMPACTS EXEMPT AS PER UCS-66(g)
- PRODUCTION IMPACTS OF HAZ EXEMPT AS PER UCS-67(d)(3)
- FILLER METAL IMPACTS EXEMPT PER UCS-67(a)(2) & UCS-67(d)(2) -FILLER METAL TO BE CLASSIFIED AS IMPACT TESTED AT TEMP. NOT WARMER THAN -49 F PER APPLICABLE SFA CLASSIFICATION USED.
- INTERNAL SANDBLAST: SSPC-SP10 (NEAR WHITE)
- INTERNAL FINISH: DEVOE 253 AS PER MANUFACTURERS SPECIFICATIONS
- EXTERNAL SANDBLAST: UN-INSULATED AREAS ONLY - SSPC-SP10 (NEAR WHITE)
- EXTERNAL FINISH: ONE (1) COAT CLOVAZINC II 83002 PRIMER TWO (2) COATS CLOVERDALE 83206 HEAT RESISTANT ENAMEL (WARM GREY)
- INSULATION: 1 1/2" THK RIGID URETHANE c/w ALUMINUM CLADDING
- CATADYNE HEATER SHALL BE SUPPLIED WITH THE FOLLOWING: -VENT HOOD, TEMP. CONTROL VALVE, SAFETY SHUTOFF VALVE, REGULATOR, THERMOSTAT, 25'-0" START-UP CABLE -CABLE SHALL TERMINATE IN A MELTRIC 22-38059-S30 MALE PLUG c/w MALE PLUG COVER AND MELTRIC 22-3A023-034 WALL MOUNT BOX -CLIENT TO INSTALL FUEL GAS REGULATORS AND BALL VALVES (ENSURE SUFFICIENT ROOM)
- ALL BOLT HOLES TO STRADDLE CENTERLINE
- ALL OPENINGS TO BE COVERED PRIOR TO SHIPPING
- ALL OUTSIDE PROJECTIONS MEASURED ALONG CENTERLINE OF NOZZLE
- ALL INSIDE PROJECTIONS MEASURED ALONG SHORTSIDE OF THE NOZZLE
- ALL VALVES SHALL BE IDENTIFIED WITH STAINLESS STEEL TAGS
- FABRICATION TOLERANCE AS PER BWML DWG#: TOL2002
- VESSEL TO BE REGISTERED IN ALBERTA & BRITISH COLUMBIA
- VESSEL TO BE SUPPLIED WITH U-STAMP
- SHIPPING WEIGHT: 10,500 LBS
- SHIPPING DIMENSIONS: 6'-0" W x 8'-6" H x 20'-0" LG
- VESSEL SERIAL NUMBER: 15007

NOZZLE SCHEDULE

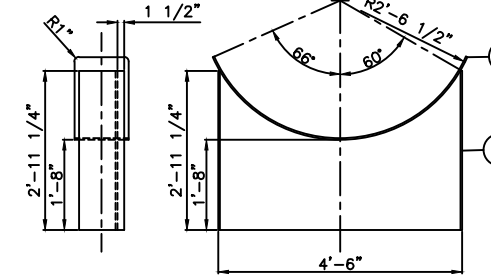
MARK	NO. REQ'D	DESCRIPTION	NPS	CLASS	TYPE	PROJECTION		WELD DETAIL	WELD		REPAD	BILL OF MATERIALS ITEM NUMBER
						INSIDE	OUTSIDE		A	B		
N1	1	GAS INLET	4	150	RFLWN	3/8"	8"	3	3/8	-	-	9,10,57
N2	1	GAS OUTLET	4	150	RFLWN	1/2"	9 1/2"	3	3/8	-	-	11,57
N3	1	PI-31101	2	150	RFWN	1"	8"	1,3	1/4	-	-	12,13,19,20,32,58,59,60
N4	1	LIT-31101	2	150	RFWN	1"	8"	1,3	1/4	-	-	12,13
N5	1	VENT	6	150	RFLWN	1 1/4"	8"	3	3/8	-	-	14,15,16,17,18
N6	1	DRAIN	3	150	RFWN	FLUSH	6"	1,4	5/16	-	-	19-28,45,46,47,48,49
N7	1	SPARE	2	150	RFWN	1"	8"	1,3	1/4	-	-	12,13,19,20,31,32
N8	1	SPARE	2	150	RFWN	1"	8"	1,3	1/4	-	-	12,13,19,20,31,32
N9	1	SPARE	2	150	RFWN	1"	8"	1,3	1/4	-	-	12,13,19,20,31,32
C1	1	CLEANOUT	1/2	3000	TOL	-	-	2	3/8	-	-	52,53,54,55,56
M1	1	MANWAY	24	150	RFHB	1"	7"	3	3/8	-	-	33,34,35,36,37,38

BILL OF MATERIALS

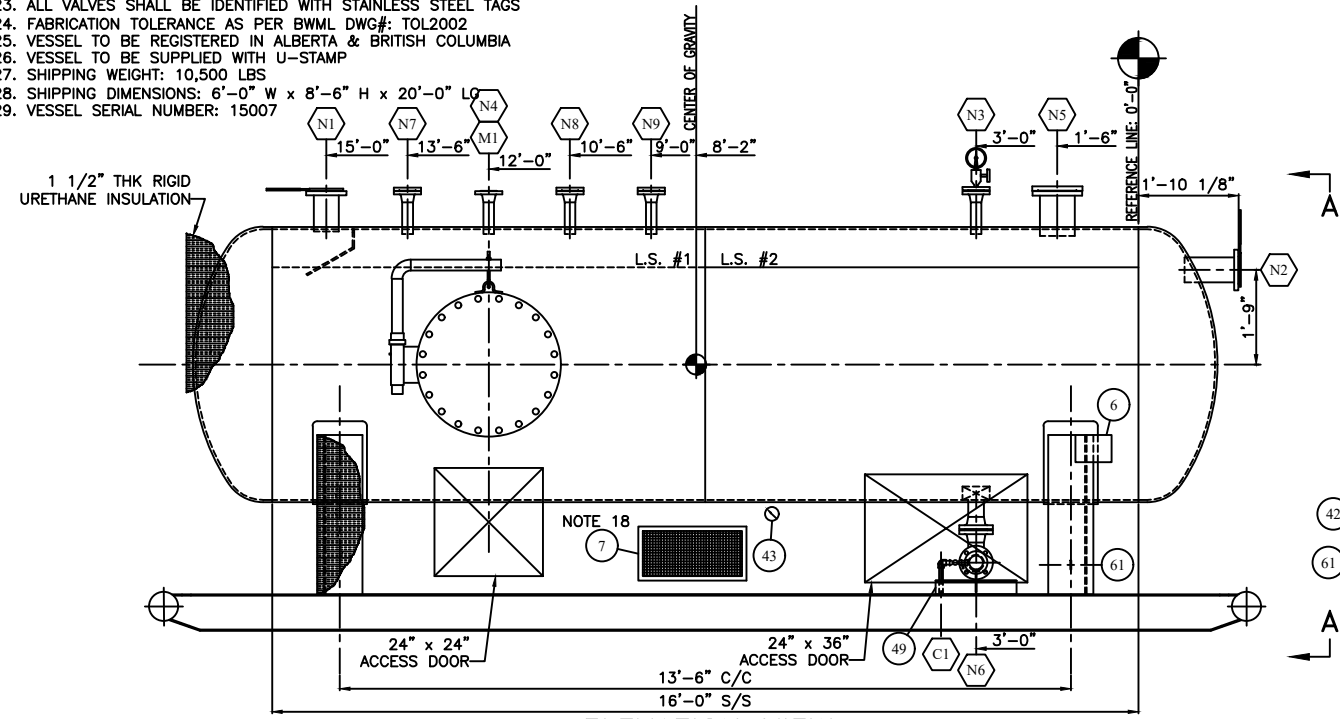
ITEM	REQ'D	PART	DESCRIPTION	MATERIAL	WEIGHT
1	2	SHELL	1/2" THK x 96" W, ROLL TO 60" ID (CIRC=15'-11 5/8")	SA-516-70N	5170#
2	2	HEAD	1/2" THK (0.4375" MIN) x 60" ID 2:1 S.E.	SA-516-70N	1355#
3	2	SADDLE	3/8" THK x 12" W x 5'-11 1/8" LG, ROLL TO 61" ID	SA-516-70N	182#
4	4	SADDLE	10" x 3/8" THK x 2'-11 3/4" LG	SA-36	155#
5	2	SADDLE	3/8" THK x 2'-11 1/4" W x 4'-5 1/4" LG (SEE DETAIL)	SA-36	370#
6	1	NAMEPLATE	6" x 8" NAMEPLATE BRACKET c/w ALUMINUM NAMEPLATE	SA-36	3#
7	1	HEATER	12" x 24" CATADYNE HEATER 12 VOLT NATURAL GAS (SEE NOTE 18)	-	-
8	1	SKID	SKID (SEE DWG C648-2 FOR DETAIL)	-	1550#
9	1	N1	4" x CLASS 150 RFLWN FLG x 9" LG	SA-350-LF2 CL1	40#
10	1	N1	3/8" x 2-8 DEFLECTOR ASSEMBLY	SA-516-70N	10#
11	1	N2	4" x CLASS 150 RFLWN FLG x 12" LG	SA-350-LF2 CL1	48#
12	5	N3,4,7,8,9	2" x CLASS 150 RFLWN FLG SCH 160	SA-350-LF2 CL1	30#
13	5	N3,4,7,8,9	2" PIPE SCH 160 x 7" LG (BOE,ROE)	SA-333-6	20#
14	1	N5	6" x CLASS 150 RFLWN FLG x 10" LG	SA-350-LF2 CL1	65#
15	1	N5	6" x CLASS 150 RF BLIND FLG	SA-350-LF2 CL1	26#
16	1	N5	6" x CLASS 150 RF GRAPHOIL FLEX GASKET (CGI STYLE)	316SS	-
17	8	N5	3/4" DIA x 4" LG STUD	SA-193-B7M	-
18	16	N5	3/4" DIA NUT	SA-194-2HM	-
19	28	N3,N6,N7,N8,N9	5/8" DIA x 3 1/2" LG STUD	SA-193-B7M	-
20	56	N3,N6,N7,N8,N9	5/8" DIA NUT	SA-194-2HM	-
21	1	N6	3" x CLASS 150 RFLWN FLG SCH 160	SA-350-LF2 CL1	10#
22	2	N6	3" x CLASS 150 RFLWN FLG SCH XH	SA-350-LF2 CL1	20#
23	1	N6	2-1/2" to 3-1/2" T&B GROUND CABLE CLAMP	-	-
24	3	N6	3" x CLASS 150 RF GRAPHOIL FLEX GASKET (CGI STYLE)	316SS	-
25	1	N6	3" PIPE SCH 160 x 3 7/8" LG (BOE,COE)	SA-333-6	4#
27	1	N6	3" x 90° LR BW ELBOW SCH XH	SA-420-WPL6	4#
28	1	N6	3" STAINLESS REMOVABLE VORTEX BREAKER	SA-240-316L	3#
31	3	N7,N8,N9	2" x CLASS 150 RF BLIND FLG	SA-350-LF2 CL1	15#
32	4	N3,N7,N8,N9	2" x CLASS 150 RF GRAPHOIL FLEX GASKET (CGI STYLE)	316SS	-
33	1	M1	24" x CLASS 150 RFHB FLG x 12" LG	SA-350-LF2 CL1	575#
34	1	M1	24" x CLASS 150 RF BLIND FLG	SA-350-LF2 CL1	430#
35	1	M1	24" x CLASS 150 RF GRAPHOIL FLEX GASKET (CGI STYLE)	316SS	-
36	1	M1	24" x CLASS 150 DAVIT ARM ASSEMBLY (LOW TEMP)	SA-333-6	50#
37	20	M1	1 1/4" DIA x 6 3/4" LG STUD	SA-193-B7M	-
38	40	M1	1 1/4" DIA NUT	SA-194-2HM	-
39	4	INSULATION	1 1/2" x 19'-4" LG SHT RIGID URETH,CORR & STUCCO EMBOSS ALUM ONE SIDE (CURFS)	-	-
40	2	INSULATION	1 1/2" x 12'-0" LG SHT RIGID URETH,CORR & STUCCO EMBOSS ALUM ONE SIDE	-	-
41	2	INSULATION	1 1/2" x 14'-4" LG SHT RIGID URETH,CORR & STUCCO EMBOSS ALUM BOTH SIDES	-	-
42	1	INSULATION	3/4" x CLASS 3000 FULL CPLG	SA-105-N	-
43	1	INSULATION	3" FACE -20 to 120°F TREND DUAL SCALE TEMPERATURE INDICATOR	-	-
44	1	INSULATION	3/4" x 1 1/2" x 4" LG 316SS THERMOWELL	316SS	-
45	1	N6	3" x CLASS 150 RFTO FLG	SA-350-LF2 CL1	10#
46	1	N6	3" x CLASS 150 RF RP MERIDAN BALL VALVE (LT/NACE) - TAG: KCB-1	SA-350-LF2	-
47	1	N6	3" x 4" LG NIPPLE SCH XH	SA-333-6	2#
48	1	N6	3" MALE/FEMALE CAMLOCK c/w CAP	ALUM	-
49	1	N6	12 Ga x 12" x 18" x 3" HIGH CONTAINMENT TRAY	SA-36	-
52	1	C1	1/2" x 3" x CLASS 3000 TOL	SA-350-LF2 CL1	1#
53	1	C1	1/2" NPT x CLASS 3000 x 90° ELBOW	SA-350-LF2 CL1	1#
54	1	C1	1/2" NPT x CLASS 3000 WKM BALL VALVE (LT/NACE) - TAG: KEB-7	SA-350-LF2	-
55	2	C1	1/2" x 2" LG NIPPLE SCH XH	SA-333-6	1#
56	1	C1	1/2" PIPE SCH XH x 5 1/2" LG (TOE,COE)	SA-333-6	1#
57	2	N1,N2	4" x CLASS 150 SPECTACLE BLIND (SHIPPED LOOSE)	SA-516-70N	20#
58	1	N3	2" x CLASS 150 RF BLIND FLG, TAPPED TO 1/2" NPT	SA-350-LF2 CL1	15#
59	1	N3	1/2" MNPT x FNPT x CLASS 6000 CENTURY NEEDLE VALVE - TAG: LGN-7X	316SS	1#
60	1	N3	4" FACE 0-60 PSI 1/2" BTM MOUNT WKA 233 SERIES PRESSURE INDICATING GAUGE	-	-
61	2	GROUND LUG	1/4" THK x 2" W x 6" LG GROUND LUG C/W 1/2" DIA HOLE	SA-36	3#



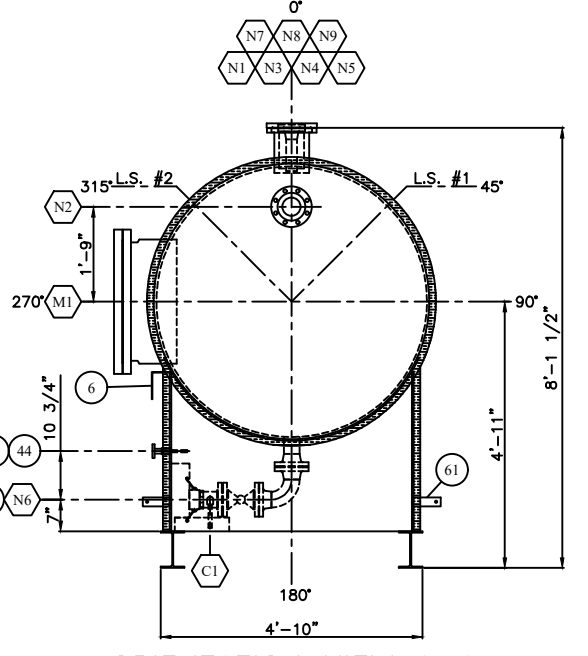
WEB PLATE DETAIL



SADDLE DETAILS



ELEVATION VIEW



ORIENTATION VIEW A-A

WELD DETAIL NUMBER	REGISTERED WELDING PROCEDURE NUMBER			BACKWELD/GOUGE
	ROOT	HOT PASS	FILL & CAP	
1,2,3,4,5	BWM-16 (GMAW)	BWM-16 (SMAW)	BWM-16 (SMAW)	SMAW / DETAIL 3 & 4
6	BWM-16 (GMAW)	BWM-10 (SAW)	BWM-10 (SAW)	BWM-16 (SMAW) / DETAIL 6
7	N/A	N/A	BWM-20 (SMAW)	N/A

1	2	3	4	5	6	7
WELD NECK FLANGE	THREADOLET	NOZZLE NECK	NOZZLE NECK	ATTACHMENTS	CIRC/LONG SEAMS	STAINLESS ATTACHMENTS
α=75°(15°) G=1/8"(1/16")	G=1/8"(1/16")	α=40°(15°) G=1/8"(1/16") h=1/16"(1/16")	α=40°(15°) G=1/8"(1/16") h=3/32"		WITHOUT BACKING α=60°(15°) G=1/8"(1/16") h=3/32"	

REV. NO.	DATE	REVISION	BY	APP'D
A	10/01/08	ISSUED FOR APPROVAL	DSG	
0	11/16/09	ISSUED FOR FABRICATION	DSG	JAM
1	12/01/09	DELETED SPEC BLIND AND ADDED GROUND CLAMP ON TRUCK-OUT	DSG	JAM
2	12/23/09	AS BUILT	DSG	JAM

BILTON
Welding & Manufacturing Ltd.

BOX 6106
5815 37 Street
INNISFAIL, AB
CANADA
403-227-7799
1-888-227-4923
FAX 227-7796

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DESIGN SPECIFICATIONS

DESIGN & FABRICATE TO: 2007 ASME BOILER & PRESSURE VESSEL CODE SEC VIII, DIV 1

DESIGN PRESSURE & TEMPERATURE: 197 PSI @ 392°F (FULL VACUUM)

MINIMUM DESIGN METAL TEMP: -49°F @ 197 PSI

IMPACT TESTS: SEE NOTES 9.10, 11 & 12

RADIOGRAPHY: 100% AS PER UW-11(g)

POST WELD HEAT TREATMENT: YES AS PER UCS-56

HYDROSTATIC TEST PRESSURE: 303 PSIG. PREHEAT: 50°F

CORROSION ALLOWANCE: 1/8" MAWP: 197 PSI @ 392°F

HEAD THK. MIN.: 0.4375" VOLUME: 354 ft³. 10 m³

WEIGHT EMPTY: 10,500 LBS WEIGHT FULL: 32,750 LBS

BP CANADA ENERGY

SOUR GAS WELLSITE FLARE KNOCKOUT DRUM - TAG: V-3110
60" ID x 16'-0" S/S x 197 PSI MAWP

DATE: 10/01/08
SHEET: 1 OF 2
DRAWN BY: DSG
PURCHASE ORDER: 30940-3051.003
LOCATION: NOEL MAJOR PROJECT
CRN DWG#: BWM-249-08 RO
CRN NUMBER: U7364.21

SALE ORDER: 001079
JOB ORDER:
D0738
DRAWING NO.:
APP'D: JAM
C648-1

SIZE: D
REV. 2

FILE PATH: MAINDATA\CAD\tANKS\C600-C699\C648-1