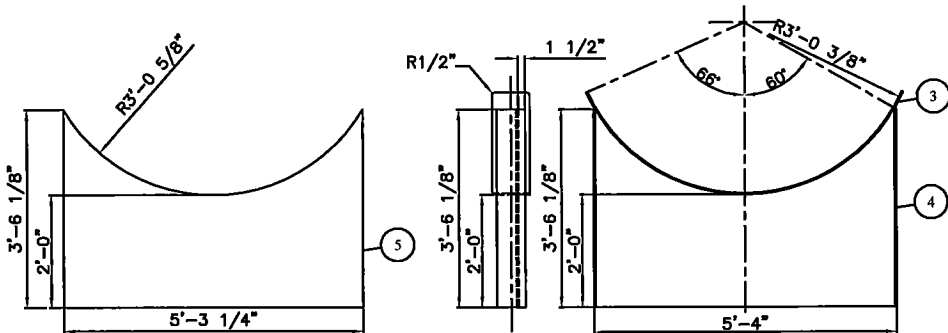


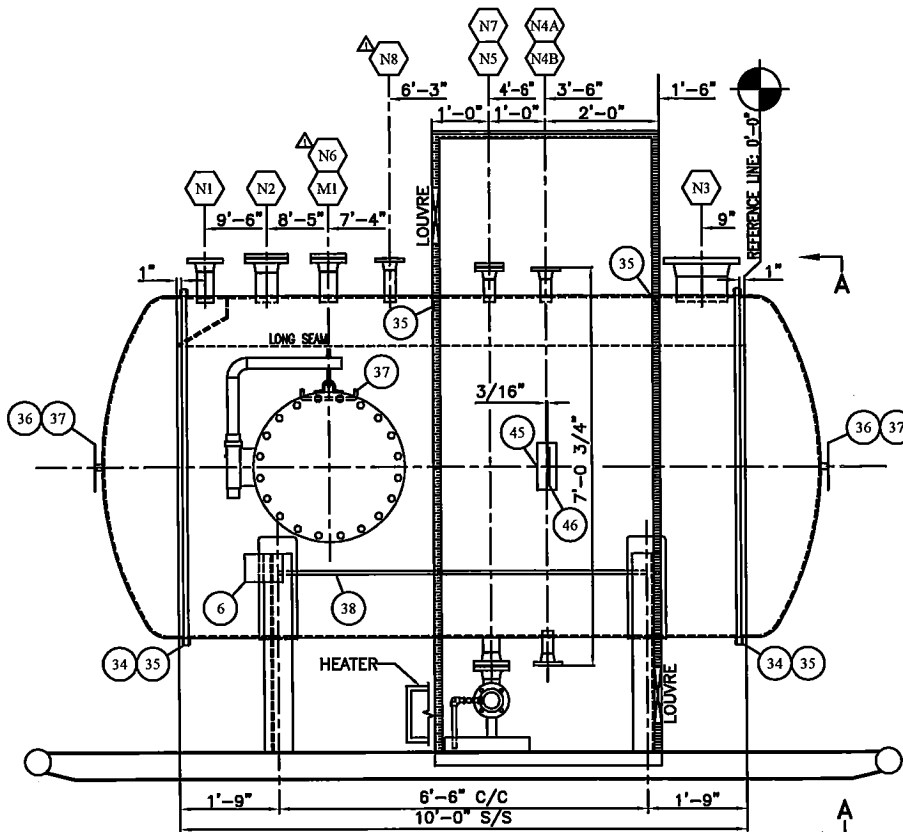
1. QUALITY CONTROL PROGRAM NUMBER: AQP-1317(S)
2. WELDING PROCEDURE REGISTRATION NUMBER: WP1970.2
3. MAGNETIC PARTICLE TESTING: 10% WET FLOURESCENT
-INTERNAL & EXTERNAL BUTT & FILLET WELDS ONLY
4. HYDROSTATIC TEST PRESSURE: 124 PSIG NEW & COLD
-ALL FUTURE HYDROTESTS 75 PSIG
5. HYDROTEST TO BE RECORDED AND HELD FOR 1 HOUR
6. INTERNAL FINISH: NIL
7. EXTERNAL SANDBLAST: SSPC-SP6 (COMMERCIAL)
8. EXTERNAL FINISH:
ALL AREAS: ONE COAT OF PRIMER
NON-INSULATED AREAS: ONE COAT OF INDUSTRIAL ENAMEL (GREY)
9. INSULATION:
VESSEL: 1 1/2" THK - 4# MINERAL WOOL c/w ALUMINIUM CLADDING
BUILDING: 1 1/2" THK RIGID URETHANE c/w ALUMINIUM CLADDING
-(1) 3'-0" x 7'-0" MANDOUR c/w WEATHERTRIPPING, PANIC
HARDWARE, LOCKSET & CLOSURE
10. ALL BOLT HOLES TO STRADDLE CENTERLINE
11. ALL OPENINGS TO BE COVERED PRIOR TO SHIPPING
12. ALL OUTSIDE PROJECTIONS MEASURED ALONG CENTERLINE OF NOZZLE
13. ALL INSIDE PROJECTIONS MEASURED ALONG SHORTSIDE OF NOZZLE
14. ALL WEAR PADS/REPADS TO HAVE 1/4" NPT WEEP HOLE
15. FABRICATION TOLERANCE AS PER BWMI DWG: TOL2002
16. VESSEL TO BE REGISTERED IN ALBERTA & BRITISH COLUMBIA
17. VESSEL TO BE SUPPLIED WITH U-STAMP
18. DRAWINGS TO BE STAMPED BY P.ENG.
19. SHIPPING DIMENSIONS: 9'-0" W x 11'-6" H x 14'-6" LG
20. SHIPPING WEIGHT: 8,000 LBS
21. SERIAL NUMBER: 15248

MARK	QTY	DESCRIPTION	NPS	CLASS	TYPE	PROJECTION		WELD DETAIL	WELD		REPAD		BILL OF MATERIALS ITEM NUMBER
						INSIDE	OUTSIDE		A	B	C	D	
N1	1	GAS INLET	3	150	RFWN	1"	8"	1,2	1/4	-	-	-	9,10,11
N2	1	DRAIN INLET	4	150	RFWN	1"	8"	1,2	5/16	-	-	-	12,13
N3	1	GAS VENT	10	150	RFWN	1"	8"	1,2	5/16	-	-	-	14,15,16
N4A/B	2	BRIDLE	2	150	RFWN	1"	5 1/2"	1,2	5/16	-	-	-	17,18,19
N5	1	TRUCK-OUT	3	150	RFWN	FLUSH	6"	1,3	1/4	-	-	-	9,20,21
N6	1	PG TRAP VENT	3	150	RFWN	1"	8"	1,2	1/4	-	-	-	9,10
N7	1	SPARE	2	150	RFWN	1"	6"	1,2	5/16	-	-	-	17,18,23,24,25,26
N8	1	WATER INLET	2	150	RFWN	1"	8"	1,2	5/16	-	-	-	17,22
M1	1	MANWAY	24	150	RFWN	1"	8"	1,2	5/16	-	-	-	27,28,29,30,31,32,33

ITEM	QTY	REF.	PART No.	DESCRIPTION	MATERIAL	WEIGHT
1	1	1-002424	SHELL	3/8" THK x 120" W ROLL TO 72" ID (CIRC=19'-0 1/2")	SA-516-70N	2900#
2	2	1-001370	HEAD	3/8" THK (0.3130" MIN) x 72" ID F&D (KR=5" CR=66")	SA-516-70N	1100#
3	2	1-003986	SADDLE	6" x 1/4" THK x 7'-0 3/8" LG, ROLL TO 72 3/4" ID	SA-516-70N	95#
4	4	1-001120	SADDLE	6" x 3/8" FLATBAR x 3'-6 1/8" LG	SA-36	150#
5	2	2-000217	SADDLE	3/8" THK x 3'-6 1/8" W x 5'-3 1/4" LG (SEE DETAIL)	SA-36	475#
6	1	2-000219	NAMEPLATE	6" x 8" NAMEPLATE BRACKET	SA-569	3#
7	1	1-001701	NAMEPLATE	6" x 8" NAMEPLATE ALUMINUM NAMEPLATE	ALUMINUM	2#
8	1	-	SKID	SKID (SEE DWG D1677-2 FOR DETAIL)	-	1200#
9	3	1-000898	N1,N6,N5	3" x CLASS 150 RFWN FLG SCH XH	SA-105-N	30#
10	2	1-003364	N1,N6	3" PIPE SCH XH x 6 3/4" LG (BOE,ROE)	SA-106-B	12#
11	1	2-000022	N1	3/8" THK x 2"-B" DEFLECTOR	SA-516-70N	9#
12	1	1-000920	N2	4" x CLASS 150 RFWN FLG SCH XH	SA-105-N	15#
13	1	1-003369	N2	4" PIPE SCH XH x 6 1/2" LG (BOE,ROE)	SA-106-B	9#
14	1	1-000942	N3	10" x CLASS 150 RFWN FLG SCH STD	SA-105-N	52#
15	1	1-003384	N3	10" PIPE SCH STD x 5 3/4" LG (BOE,ROE)	SA-106-B	20#
16	1	-	N3	10" x CLASS 150 GOOSENECK VENT PIPE (SEE DWG D1677-3)	SA-106-B	445#
17	4	1-000882	N4,N8,N7	2" x CLASS 150 RFWN FLG SCH 160	SA-105-N	24#
18	3	1-003359	N4,N7	2" PIPE SCH 160 x 4 3/4" LG (BOE,ROE)	SA-106-B	12#
19	1	-	N4	4" NPS BRIDLE ASSEMBLY (SEE DWG D1677-5 FOR DETAILS)	-	-
20	1	1-003364	N5	3" PIPE SCH XH x 3 1/2" LG (BOE,COE)	SA-106-B	3#
21	1	-	N5	3" TRUCK-OUT SPOOL (SEE DWG D1677-1 FOR DETAIL)	-	50#
22	1	1-003359	N8	2" PIPE SCH 160 x 6 3/4" LG (BOE,ROE)	SA-106-B	3#
23	16	1-002627	N6,N7,N8	5/8" DIA x 3 1/2" LG STUD	SA-193-B7M	-
24	32	1-001868	N6,N7,N8	5/8" DIA NUT	SA-194-2HM	-
25	1	1-000869	N7	2" x CLASS 150 RF BLIND FLG	SA-105-N	4#
26	1	1-001292	N7	2" x CLASS 150 RF "CG" GRAPHITE FILLED FLEX GASKET	316SS	-
27	1	1-000965	M1	24" x CLASS 150 RFWN FLG SCH STD	SA-105-N	260#
28	1	1-000966	M1	24" x CLASS 150 RF BLIND FLG	SA-105-N	411#
29	1	1-001306	M1	24" x CLASS 150 RF "CG" GRAPHITE FILLED FLEX GASKET	316SS	-
30	1	1-004062	M1	24" x CLASS 150 DAVIT ARM	-	45#
31	1	1-003402	M1	24" PIPE SCH STD x 5 1/2" LG (BOE,ROE)	SA-106-B	44#
32	20	1-002694	M1	1 1/4" DIA x 6 3/4" LG STUD	SA-193-B7M	-
33	40	1-001882	M1	1 1/4" DIA NUT	SA-194-2HM	-
34	2	1-001078	INSULATION	1" x 1/8" THK x 19'-10" LG, ROLLED TO 75 1/2" ID (EASY WAY)	SA-36	30#
35	14	2-000249	INSULATION	1 1/2" x 1/4" x INSULATION TAB x 1 1/4" LG	SA-516-70N	3#
36	2	1-003347	INSULATION	1" PIPE SCH XH x 1 1/2" LG	SA-106-B	1#
37	2	2-000425	INSULATION	12ga x 10" OD INSULATION HEAD PLATE	SA-569	2#
38	2	1-001434	INSULATION	3/4" DIA HRR x 6'-6" LG	SA-36	8#
39	2500#	1-001473	INSULATION	1 1/2" THK - 4# MINERAL WOOL INSULATION	-	-
40	900#	1-000066	INSULATION	0.024 THK STUCCO EMBOSSED ALUMINUM CLADDING	-	-
41	2	1-001529	INSULATION	12" x 12" ALUMINUM LOUVRES	-	-
42	1	1-001323	INSULATION	HYDRAULIC DOOR CLOSURE	-	-
43	1	1-001322	INSULATION	DOOR CHECK CHAIN	-	-
44	1	1-001324	INSULATION	PANIC HARDWARE & LOCKSET ASSEMBLY	-	-
45	1	BRIDLE SUPP	2-001717	REPAD: 1/4" THK x 4" W x 10" LG	SA-516-70N	4#
46	1	BRIDLE SUPP	2-001812	3/8" THK x 4" W x 6" LG WITH HOLES	SA-36	-
47	1	1-000891	N6	3" x CLASS 150 RF BLIND FLG	SA-105-N	10#
48	1	1-001297	N6	3" x CLASS 150 RF "CG" GRAPHITE FILLED FLEX GASKET	316SS	-
49	1	1-000911	N2	4" x CLASS 150 RF BLIND FLG	SA-105-N	13#
50	1	1-001300	N2	4" x CLASS 150 RF "CG" GRAPHITE FILLED FLEX GASKET	316SS	-



SADDLE DETAILS

[illegible]

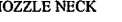
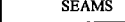
INSULATION NOTES

1. INSULATION: 1 1/2" THK - #4 MINERAL WOOL
CLADDING: 0.5mm THK x SMOOTH STUCCO EMBOSSED ALUMINUM
BANDING: 1.0mm THK x 3/4" WIDE 304SS
S-CLIPS: 1.0mm THK x 3/4" WIDE 304SS
SCREWS: No.10 x 1/2" LONG SELF TAPPING ROBERTSON HEAD 304SS
2. INSULATION APPLIED WITH STAGGERED JOINT ARRANGEMENT
3. INSULATION SECURED IN PLACE BY MACHINE STRETCHED BANDS (9" C/C)
4. CIRC & LONG JOINTS IN CLADDING LAPPED A MIN. 2" ON BOTH SIDES
5. CLADDING SECURED IN PLACE BY MACHINE STRETCHED BANDS AT EACH LAP OR BY USING SCREWS ON 10" CENTERS
6. NAMEPLATES, NOZZLES, AND WEEPHOLES SHALL NOT BE INSULATED
7. INSULATION SHALL BE STOPPED SHORT OF A SUFFICIENT DISTANCE TO ALLOW BOLT REMOVAL WITHOUT DAMAGE TO THE INSULATION.

DESIGN & FABRICATE TO: 2007 ASME BOILER & PRESSURE VESSEL
CODE, SEC VIII, DIV 1, 2010 ADDENDA
DESIGN PRESSURE & TEMPERATURE: 50 PSI @ 100°F
MINIMUM DESIGN METAL TEMP: -20°F @ 50 PSI
IMPACT TESTS: EXEMPT AS PER UG-20(f)(1)-(5)
RADIOGRAPHY: RT-2 AS PER UW-11(a)(5)(b)
POST WELD HEAT TREATMENT: NONE AS PER UCS-56
HYDROSTATIC TEST PRESSURE: SEE NOTE 4 PREHEAT: 50°F
CORROSION ALLOWANCE: 1/16" MAWP: 50 PSI @ 100°F
HEAD THK. MIN.: 0.3130" VOLUME: 337 FT³ 9.6 m³
WEIGHT EMPTY: 6,300 LBS WEIGHT FULL: 34,500 LBS

60 BBL SINGLE WALL FLARE VENT DRUM			
72" ID x 10'-0" S/S x 50 PSI MAWP			
DATE: 02/03/11		SALE ORDER: 002262	
SHEET: 1 OF 5		JOB ORDER:	SIZE
DRAWN BY: JAH		D1677	
PURCHASE ORDER: 8400274194		D	
LOCATION: 1-5-63-6 W8M		DRAWING NO.:	REV.
CRN DWG: BWM-106-04 R6	PM: PAT P.	D1677-1	2
CRN NUMBER: R6405.21			

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

1	2	3	4	5	6
WELD NECK FLANGE	NOZZLE NECK	NOZZLE NECK	ATTACHMENTS	SEAMS	STAINLESS ATTACHMENT
 $\alpha = 75^{\circ} (15^{\circ})$ $G = 1/8^{\circ} (1/16^{\circ})$	EXPOSED INSIDE EDGES SHALL BE CHAMFERED AS PER US-78(a)  $\alpha = 40^{\circ} (15^{\circ})$ $G = 1/8^{\circ} (1/16^{\circ})$ $h = 1/16^{\circ} (1/16^{\circ})$	EXPOSED INSIDE EDGES SHALL BE CHAMFERED AS PER US-78(a)  $\alpha = 40^{\circ} (15^{\circ})$ $G = 1/8^{\circ} (1/16^{\circ})$ $h = 1/16^{\circ} (1/16^{\circ})$	 VESSEL WALL ATTACHMENT $7/4^{\circ}$	 WITHOUT BACKING $\alpha = 60^{\circ} (15^{\circ})$ $G = 1/8^{\circ} (1/16^{\circ})$ $h = 3/32^{\circ}$	 $7/4^{\circ}$ VESSEL WALL

REV. NO.	DATE	REVISION	BY	APP'D
A	02/03/11	ISSUED FOR APPROVAL	JAH	CLIENT
0	02/10/11	ISSUED FOR FABRICATION	JAH	JAM
1	02/11/11	REVERSED LOCATIONS OF N6 & N8	JAH	JAM
2	03/24/11	AS BUILT	JAH	

BILTON

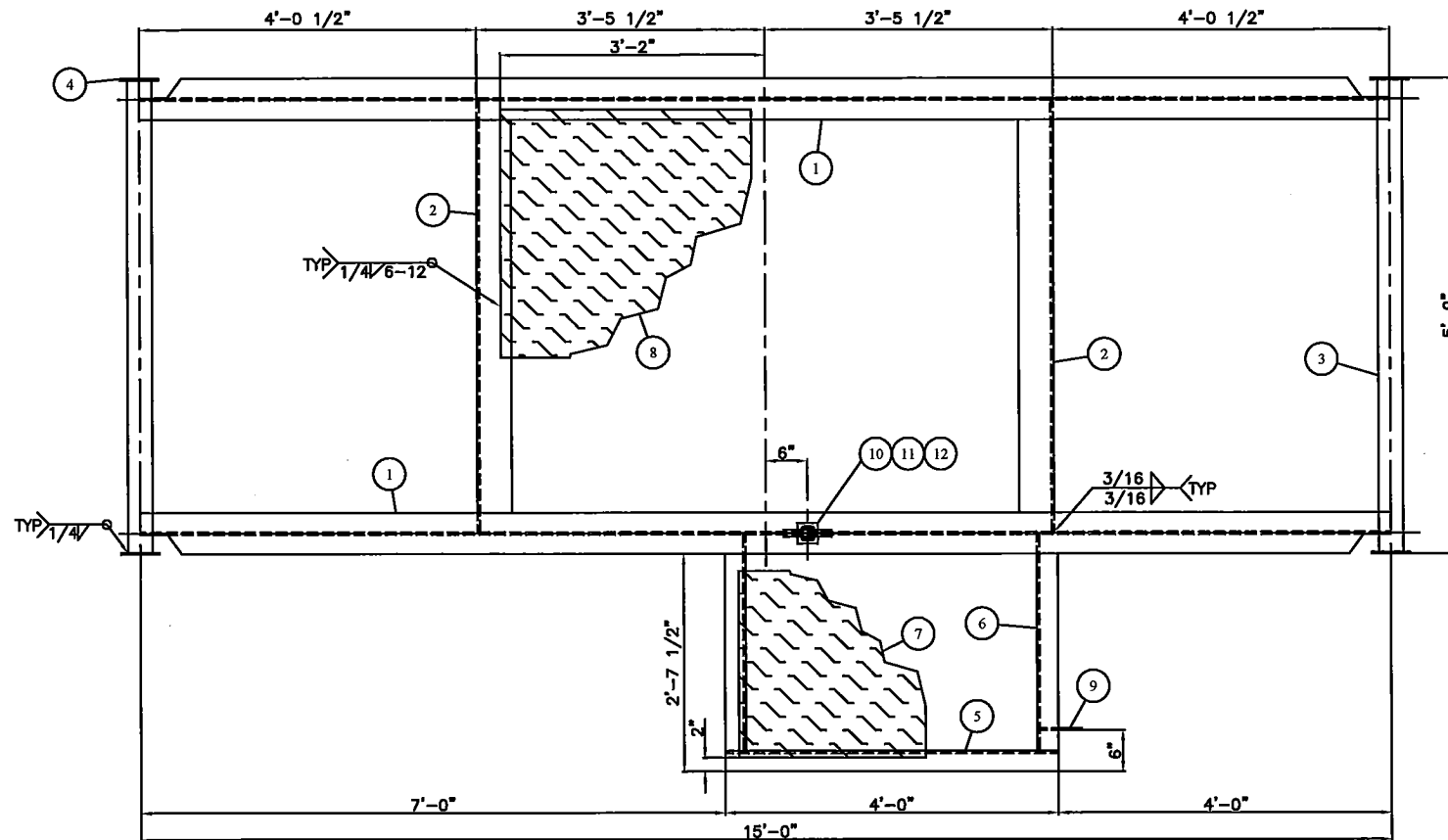
BOX 6106
5815 37 Street
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CANADA
403-227-7799
1-888-227-4923
FAX 227-7796

Welding & Manufacturing Ltd.

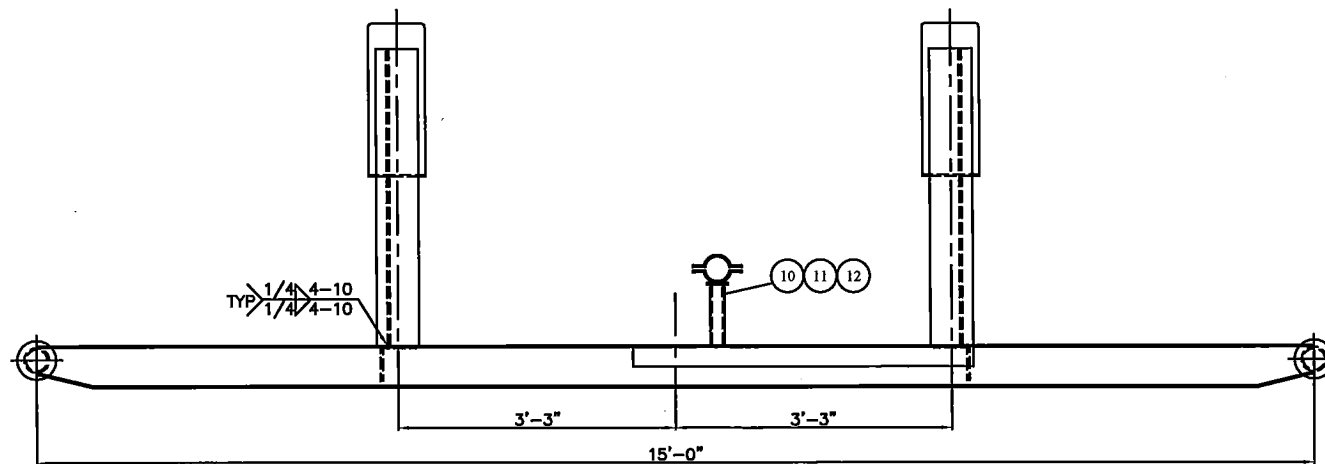
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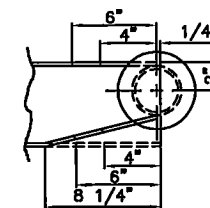
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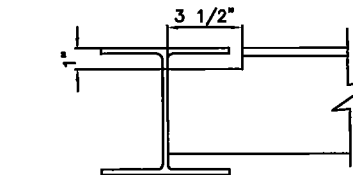
PLAN VIEW



ELEVATION VIEW



COPE DETAIL



ANGLE COPE DETAIL

BILL OF MATERIALS

ITEM	QTY	REF.	PART No.	DESCRIPTION	MATERIAL	WEIGHT
1	2	RUNNER	1-003659	W6015 x 15'-0" LG (ROUGH CUT TO 180 1/2")	G40.21-50W	450#
2	2	CROSSMEM	1-000049	5" x 3/8" ANGLE x 5'-2 5/8" LG (SEE ANGLE COPE DETAIL)	SA-36	135#
3	2	PULL	1-003363	3" STD PIPE x 5'-8 1/2" LG	SA-106-B	90#
4	4	PULLCAP	2-000024	1/4" THK x 5 1/2" OD (TEMPLATE #11)	SA-36	5#
5	1	WING	1-000033	3" x 3/8" ANGLE x 4'-0" LG	SA-36	30#
6	2	WING	1-000033	3" x 3/8" ANGLE x 2'-7 1/4" LG (SEE ANGLE COPE DETAIL)	SA-36	38#
7	1	FLOOR	1-006237	1/4" THK CHECKERPLATE 2'-6" W x 3'-8" LG	SA-36	95#
8	1	FLOOR	1-006237	1/4" THK CHECKERPLATE 5'-0" W x 6'-4" LG	SA-36	310#
9	1	GROUND LUG	2-000228	2" x 1/4" THK x 6" LG c/w HOLE (TEMPLATE #16)	SA-36	1#
10	1	SUPPORT	1-002509	2" x 1/4" THK HSS x 8 5/8" LG	SA-36	3#
11	1	SUPPORT	1-001105	3" x 1/4" THK FLATBAR x 3" LG	SA-36	1#
12	1	SUPPORT	1-000426	2" FIG 212 PIPE CLAMP	-	-

GENERAL NOTES

1. WELD PROCEDURE: GM-1
2. SANDBLAST: SSPC-SP8 (COMMERCIAL)
3. PRIME: ONE (1) COAT PRIMER
4. PAINT: ONE (1) COAT INDUSTRIAL ENAMEL (WARM GREY)
5. INSULATION: 4" THK FIRE RETARDANT SPRAY FOAM
6. APPROXIMATE WEIGHT: 1,200 LBS

CERTIFIED
AS BUILT

REV. NO.	DATE	REVISION	BY	APP'D
A	02/02/11	ISSUED FOR APPROVAL	JAH	CLIENT
0	02/10/11	ISSUED FOR FABRICATION	JAH	JAM
1	03/24/11	AS BUILT	JAH	

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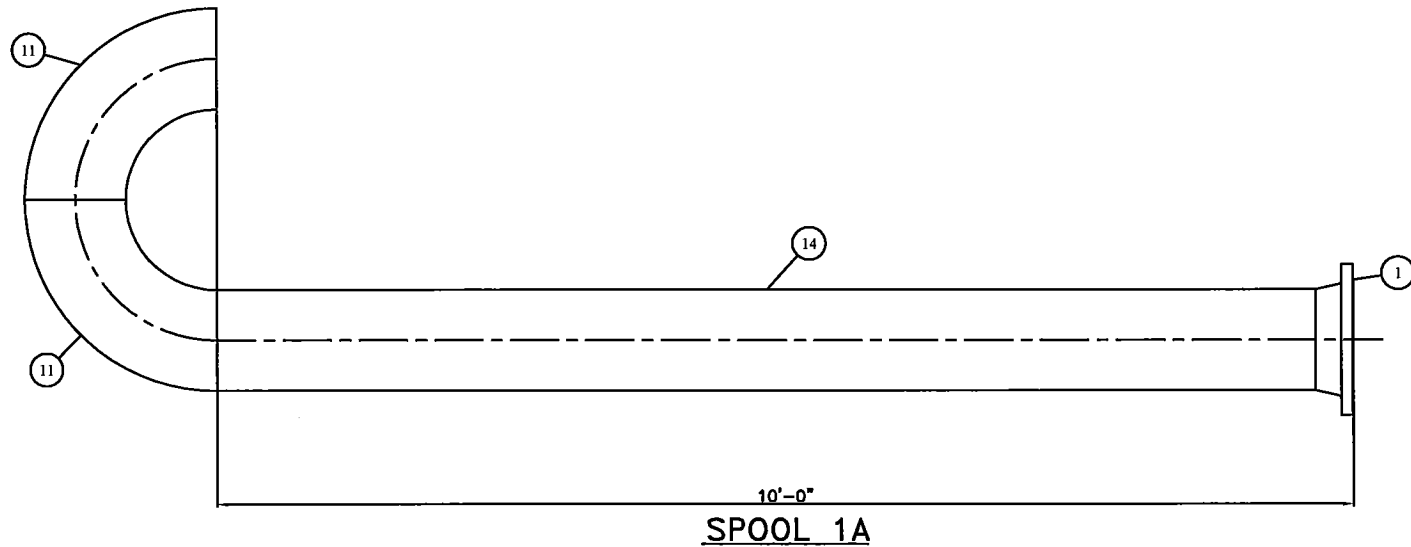
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HUSKY OIL OPERATIONS LTD

60 BBL SINGLE WALL FLARE VENT DRUM
SKID DETAILS

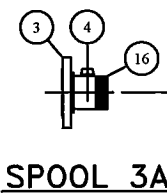
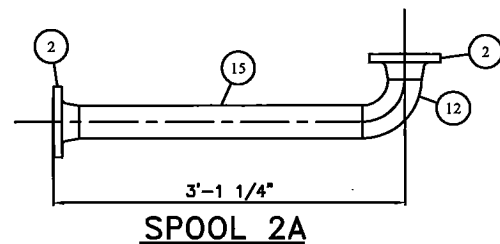
DATE: 02/02/11	SALE ORDER: 002262
SHEET: 2 OF 5	JOB ORDER:
DRAWN BY: JAH	D1677
PURCHASE ORDER: 8400274194	DRAWING NO.: D1677-2
LOCATION: 1-5-63-6 W6M	REV. 1
APP'D BY: JAM	



BILL OF MATERIALS						
ITEM	QTY	REF.	PART No.	DESCRIPTION	MATERIAL	WEIGHT
1	1	-	1-000942	10" x CLASS 150 RFWN FLG SCH STD	SA-105-N	52#
2	2	-	1-000898	3" x CLASS 150 RFWN FLG SCH XH	SA-105-N	20#
3	1	-	1-000893	3" x CLASS 150 RFTO FLG	SA-105-N	6#
4	1	-	1-004680	TRUCKOUT NIPPLE ASSEMBLY 3" NPT x 4" LG x 1/2 NPT	SA-106-B	6#
5	1	-	1-005283	10" x CLASS 150 RF GRAPHOIL FLEX GASKET	316SS	-
6	3	-	1-001297	3" x CLASS 150 RF GRAPHOIL FLEX GASKET	316SS	-
7	12	-	1-002653	7/8" DIA x 4 1/2" LG STUD	SA-193-B7M	-
8	24	-	1-001874	7/8" DIA NUT	SA-194-2HM	-
9	12	-	1-002626	5/8" DIA x 3 1/2" LG STUD	SA-193-B7M	-
10	24	-	1-001868	5/8" DIA NUT	SA-194-2HM	-
11	2	-	1-000716	10" x 90° LR BW ELBOW SCH STD	SA-234-WPB	110#
12	1	-	1-000689	3" x 90° LR BW ELBOW SCH XH	SA-234-WPB	6#
14	1	-	1-003383	10" PIPE SCH 20 x 9'-7 3/4" LG (BBE)	SA-106-B	280#
15	1	-	1-003364	3" PIPE SCH XH x 2'-6" LG (BBE)	SA-106-B	26#
17	2	-	1-001737	1/2" x 1 1/2" LG NIPPLE SCH XH	SA-106-B	1#
18	1	-	1-003340	1/2" PIPE SCH XH x 9 1/2" LG (TOE,COE)	SA-106-B	3#
19	1	-	1-000735	1/2" x CLASS 2000 90° THRD ELBOW	SA-105-N	1#
20	1	-	1-000312	3" MALE CAMLOCK x FEMALE NAPT	ALUMINUM	3#
21	1	-	1-000304	3" CAMLOCK CAP	ALUMINUM	3#
22	1	-	1-004231	12 GAUGE 12" x 18" CONTAINMENT TRAY ASSEMBLY	-	24#

GENERAL NOTES

- DESIGNED & FABRICATED AS PER ASME B31.3 2008 EDITION
- DESIGN SPECIFICATIONS:
 - SEE LINE DESIGNATION CHARTS
 - CORROSION ALLOWANCE: 1/16"
 - IMPACT TESTS EXEMPT AS PER 323.2.2A
- EXTERNAL SANDBLAST: SSPC-SP6 (COMMERCIAL)
- EXTERNAL FINISH: ONE (1) COAT SHOP PRIMER
ONE (1) COAT INDUSTRIAL ENAMEL (GREY)
- ALL BOLT HOLES TO STRADDLE CENTERLINE
- FABRICATION TOLERANCES AS PER BILTON DRAWING NUMBER TOL2002
- WELD PROCEDURE: BWM-1



LINE DESIGNATION CHART

LINE	PROCESS	DESIGN PRESS. (kPa)	DESIGN TEMP. (°C)	TEST PRESS. (kPa)	MATERIAL & GRADE	DIAMETER & SCHEDULE	FLANGE RATING	RT (%)	TEST MEDIUM
1A	GAS VENT	ATM	-29/38	NIL	SA-106-B SA-105-N SA-234-WPB	10" S20	150	N/A	N/A
2A	TRUCK OUT	1965	-29/38	2948	SA-106-B SA-105-N SA-234-WPB	3" XH	150	10	WATER
3A	CAMLOCK CONNECTION	ATM	-29/38	NIL	SA-106-B SA-105-N	3" XH	150	N/A	WATER

REV. NO.	DATE	REVISION	BY	APP'D
A	02/03/11	ISSUED FOR APPROVAL	JAH	CLIENT
0	02/10/11	ISSUED FOR FABRICATION	JAH	JAM
1	03/24/11	AS BUILT	JAH	

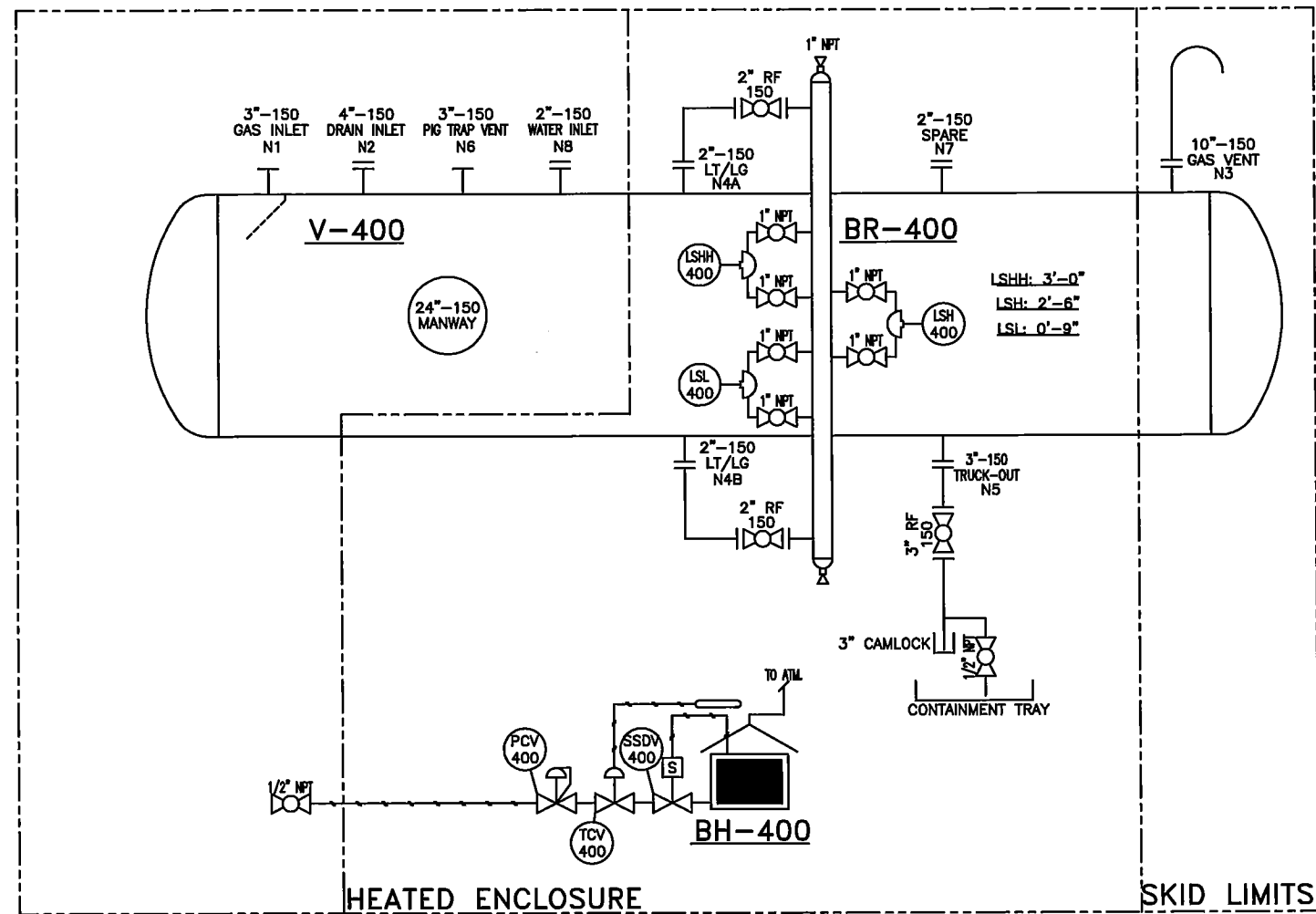
BILTON
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HUSKY OIL OPERATIONS LTD			
60 BBL SINGLE WALL FLARE VENT DRUM PIPE SPOOLS			
DATE: 02/03/11	SALE ORDER: 002262		
SHEET: 3 OF 5	JOB ORDER:	D1677	SIZE D
DRAWN BY: JAH	PURCHASE ORDER: 8400274194		
LOCATION: 1-5-63-6 W6M	DRAWING NO.:	D1677-3	REV. 1
APP'D BY: JAM			

CERTIFIED
AS BUILT



V-400
FLARE KNOCKOUT DRUM
72" ID x 10'-0" S/S
50 PSIG @ 100°F
C.A.: 1/16"
SERIAL #: 15748
CRN: R6405.21
BUILT: 2011

BR-400
4" NPS BRILDE
50 PSIG @ 100°F
C.A.: 1/16"
SERIAL #: 15752
CRN: OH06257.21
BUILT: 2011

BH-400
CATADYNE MKII-12x24
DUTY: 8,000 BTU/HR
12 VOLT, NATURAL GAS
c/w VENT HOOD

REV. No.	DATE	REVISION	BY	APP'D
A	02/02/11	ISSUED FOR APPROVAL	JAH	CLIENT
0	02/10/11	ISSUED FOR FABRICATION	JAH	JAM
1	03/24/11	AS BUILT	JAH	

BILTON
Welding & Manufacturing Ltd.
BOX 6106
5815 37 Street
INNISFAIR, AB
CANADA
403-227-7799
1-888-227-4923
FAX 227-7796

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HUSKY OIL OPERATIONS LTD			
60 BBL SINGLE WALL FLARE VENT DRUM			
P&ID			
DATE: 02/02/11	SALE ORDER: 002262		
SHEET: 4 OF 5	JOB ORDER:	D1677	SIZE D
DRAWN BY: JAH	PURCHASE ORDER: B400274194		
LOCATION: 1-5-63-6 WSM	DRAWING NO.:	D1677-4	REV. 1
APP'D BY: JAM			

INSTRUMENTATION

TAG	QTY	PART No.	DESCRIPTION
LSHH/LSH/LSL	3	1-003649	2" NPT SOR 1510C ELECTRIC LEVEL SWITCH MODEL: 1510C-G2A-C-W9-ES-CS-CV
-	3	1-007659	EXTERNAL FLOAT CHAMBER MURPHY MODEL: 15700799

HEATER

TAG	QTY	PART No.	DESCRIPTION
BH-400	1	1-008525	12" x 24" CATADYNE HEATER, 12 VOLT NATURAL GAS ASSEMBLY
PCV-400	1	-	1/4" NPT x 3/8" NPT FISHER 912 REGULATOR, SET @ 11" WC
PCV-400	1	-	3/8" NPT APPLIANCE REGULATOR MAXITROL MODEL RV-20, SET @ 7.5" WC
TCV-400	1	-	3/8" NPT THERMOSTATIC TEMPERATURE CONTROLLER (HEATER MANUFACTURER STD)
SSDV-400	1	-	3/4" NPT JOHNSON CONTROLS H19 SERIES TAMPER RESISTANT SAFETY SHUT-OFF VALVE/THERMOCOUPLE
-	1	1-001486	24" VENT HOOD ASSEMBLY

VALVES

TAG	QTY	PART No.	DESCRIPTION
-	1	1-003623	3" x CLASS 150 RF RP BALL VALVE (NACE) ENFLO 3R012FA02S3TL
-	2	1-005402	2" x CLASS 150 RF RP BALL VALVE (NACE) MERIDIAN FB2-R20R01NHBEA
-	6	1-007768	1" NPT 3000 RP BALL VALVE (NACE) WKM B136-CS3-43-S2
-	2	1-003604	1/2" NPT 2000 BARSTOCK BALL VALVE (NACE)

GENERAL NOTES:

1. PIPING DESIGNED & FABRICATED TO ASME B31.3
2. TUBING MATERIAL: 316SS SEAMLESS c/w 316SS SWAGelok FITTINGS
-PROCESS TUBING: 1/2" OD - 0.035"
-INSTRUMENT TUBING: 3/8" OD - 0.035"
3. ALL THREADED FITTINGS SHALL BE CLASS 3000
4. THREADED PIPING: 1/2" to 1 1/2" SHALL BE SCH XH
5. ALL INSTRUMENTS SHALL BE IDENTIFIED WITH STAINLESS STEEL TAGS
6. DRAIN ALL WATER FROM ALL INSTRUMENTS

CERTIFIED
AS BUILT

STAMP

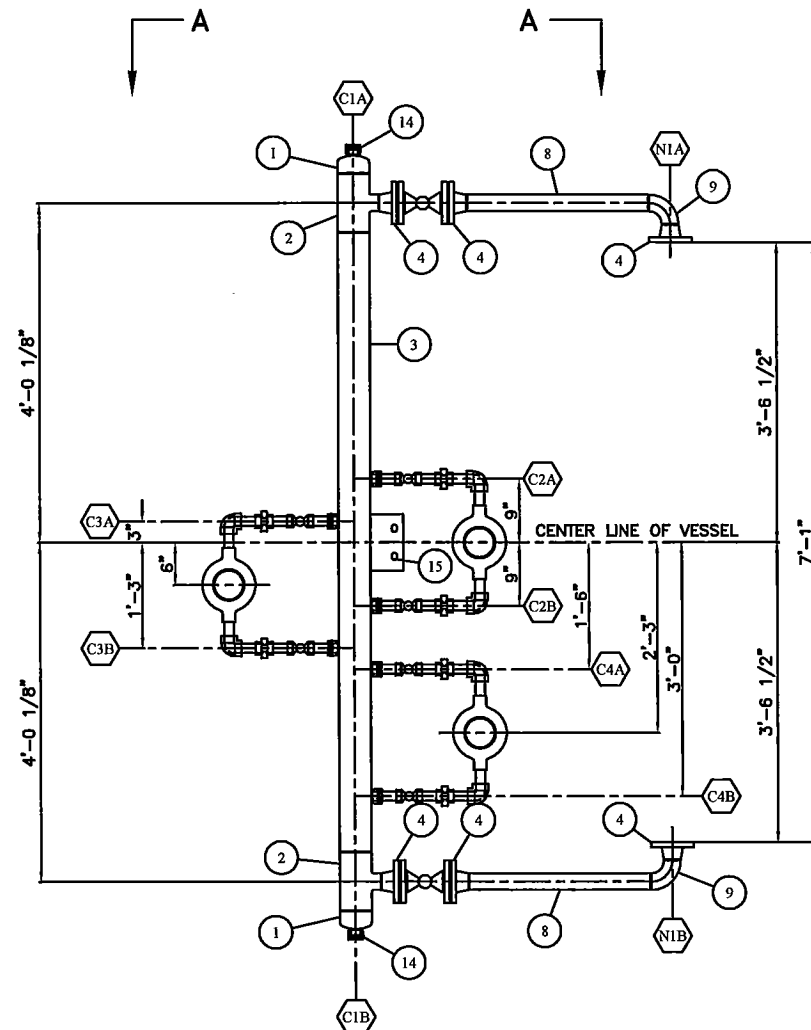
BILTON
S/N: 15752
50 PSI @ 100°F
MDMT: -20°F
C.A.: 1/16"
X-RAY: RT-2
CRN: 0H6257.21

NOZZLE SCHEDULE

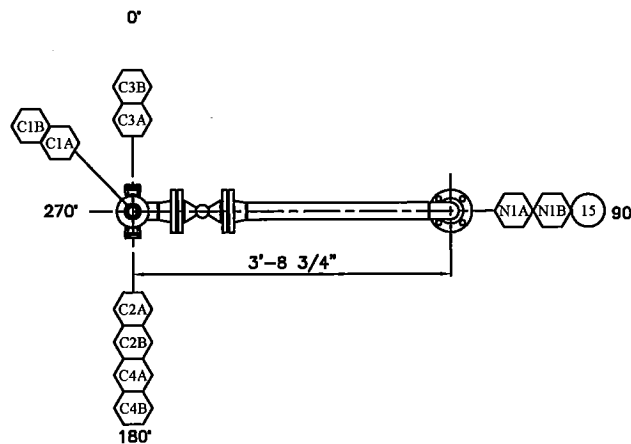
MARK	QTY	DESCRIPTION	NPS	CLASS	TYPE	PROJECTION		WELD	WELD				REPAD	BILL OF MATERIALS ITEM NUMBER
						INSIDE	OUTSIDE	DETAIL	A	B	C	D		
N1A/B	2	INLET/OUTLET	2	150	RFWN	-	-	1	-	-	-	-	-	4,5,6,7,8,9
C1A/B	2	INSPECTION	1	3000	TOL	-	-	2	1/4	-	-	-	-	10,11
C2A/B	2	LSHH	1	3000	TOL	-	-	2	1/4	-	-	-	-	10,12,13,14
C3A/B	2	LSH	1	3000	TOL	-	-	2	1/4	-	-	-	-	10,12,13,14
C4A/B	2	LSL	1	3000	TOL	-	-	2	1/4	-	-	-	-	10,12,13,14

BILL OF MATERIALS

ITEM	QTY	REF.	PART No.	DESCRIPTION	MATERIAL	WEIGHT
1	2	CAP	1-000329	4" BW WELD CAP SCH STD	SA-234-WPB	24#
2	2	SHELL	1-002980	4" x 2" RED TEE SCH XH (SCARF 4" TO SCH STD)	SA-234-WPB	32#
3	1	SHELL	1-003368	4" PIPE SCH STD x 7'-3 3/4" LG (BBE)	SA-106-B	79#
4	6	SHELL,N1	1-000877	2" x CLASS 150 RFWN FLG SCH XH	SA-105-N	36#
5	24	SHELL,N1	1-002627	5/8" DIA x 3 1/2" LG STUD	SA-193-B7M	-
6	48	SHELL,N1	1-001868	5/8" DIA NUT	SA-194-2HM	-
7	6	N1A/B	1-001292	2" x CLASS 150 RF "CG" GRAPHITE FILLED FLEX GASKET	316SS	-
8	2	N1A/B	1-003358	2" PIPE SCH XH x 2'-1 5/8" LG (BBE)	SA-106-B	22#
9	2	N1A/B	1-000676	2" x 90° LR BW ELBOW SCH XH	SA-234-WPB	6#
10	8	C1,2,3,4	1-006134	1" NPT x 4" x CLASS 3000 TOL	SA-105-N	8#
11	2	C1A/B	1-001963	1" NPT HEX PLUG	SA-105-N	4#
12	24	C2,3,4	1-001778	1" NPT PIPE NIPPLE x 3" LG	SA-106-B	24#
13	6	C2,3,4	1-003483	1" NPT x CLASS 3000 THRD UNION	SA-105-N	12#
14	6	C2,3,4	1-000744	1" NPT x CLASS 3000 90° THRD ELBOW	SA-105-N	12#
15	1	SUPPORT	2-001986	3/8" THK x 4 5/8" W x 8" LG WITH HOLES	SA-36	4#
16	2	SUPPORT	1-000824	5/8" DIA x 2" LG STRUCTURAL BOLT c/w NUT & WASHER	SA-325	-



ELEVATION VIEW



ORIENTATION VIEW A-A

GENERAL NOTES

1. QUALITY CONTROL PROGRAM NUMBER: AQP-1317(S)
2. WELDING PROCEDURE REGISTRATION NUMBER: WP1970.2
3. FLANGE MATERIAL: SA-105-N
4. WELDED FITTINGS: SA-234-WPB
5. PIPE MATERIAL: SA-106-B
6. PLATE MATERIAL: SA-36
7. BOLTING MATERIAL: SA-193-B7M/SA-194-2HM
8. EXTERNAL SANDBLAST: SSPC-SP6 (COMMERCIAL)
9. EXTERNAL FINISH: ONE (1) COAT SHOP PRIMER
ONE (1) COAT INDUSTRIAL ENAMEL (GREY)
10. ALL BOLT HOLES TO STRADDLE CENTERLINE
11. ALL OPENINGS TO BE COVERED PRIOR TO SHIPPING
12. FABRICATION TOLERANCES AS PER BW&ML DWG: TOL2002
13. BRIDLE TO BE REGISTERED IN ALBERTA & BRITISH COLUMBIA
14. SERIAL NUMBER: 15752

CERTIFIED
AS BUILT

DESIGN SPECIFICATIONS

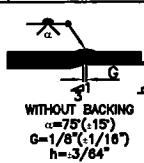
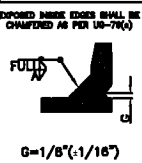
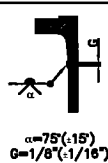
DESIGN & FABRICATE TO: 2007 ASME BOILER & PRESSURE VESSEL
CODE SEC VIII DIV 1, 2009 ADDENDA
DESIGN PRESSURE & TEMPERATURE: 50 PSI @ 100°F
MINIMUM DESIGN METAL TEMP: -20°F @ 50 PSI
IMPACT TESTS: EXEMPT AS PER UG-20(f)(1-5)
RADIOGRAPHY: RT-2 AS PER UW-11(a)(5)(b)
POST WELD HEAT TREATMENT: NONE PER UCS-56
HYDROSTATIC TEST PRESSURE: 75 PSI PREHEAT: 50°F
CORROSION ALLOWANCE: 1/16" MAWP: 50 PSI @ 100°F
HEAD THK. MIN.: 0.207" VOLUME: -
WEIGHT EMPTY: - WEIGHT FULL: -

HUSKY OIL OPERATIONS LTD.

60 BBL SINGLE WALL FLARE VENT DRUM
4" NPS BRIDLE ASSEMBLY

DATE: 02/03/11 SALE ORDER: 002262
SHEET: 5 OF 5 JOB ORDER: D1677 D
DRAWN BY: JAH PURCHASE ORDER: 84000274194
LOCATION: 1-5-63-5 WSM DRAWING NO.: REV.
CRN DWG: BW-105-04 R1 APP'D: JAM D1677-5 1
CRN NUMBER: 0H6257.21

1 WELD NECK FLANGE 2 THREADED 3 TEE TO PIPE (OR CAP)



WELD DETAIL REGISTERED WELDING PROCEDURE NUMBER BACKWELD/GOUGE
NUMBER ROOT HOT PASS FILL & CAP
1,2,3 BWM-1 (GMAW) BWM-1 (SMAW) BWM-1 (SMAW) N/A

REV. NO.	DATE	REVISION	BY	APP'D
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0	02/10/11	ISSUED FOR FABRICATION	JAH	JAM
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