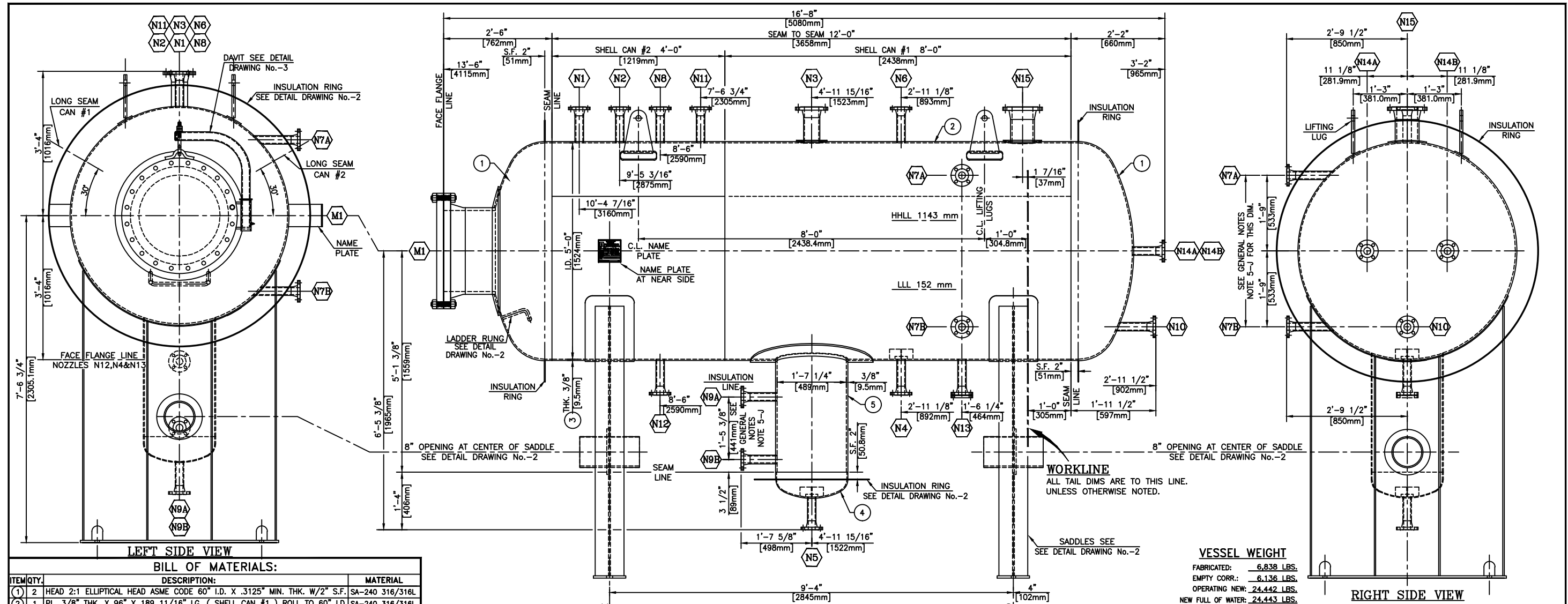
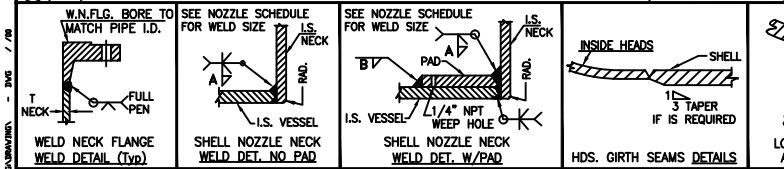




BILL OF MATERIALS:		
ITEM	QTY.	DESCRIPTION:
(1)	2	HEAD 2:1 ELLIPTICAL HEAD ASME CODE 60" I.D. X .3125" MIN. THK. W/2" S.F.
(2)	1	PL. 3/8" THK. X 96" X 189 11/16" LG. (SHELL CAN #1) ROLL TO 60" I.D.
(3)	1	PL. 3/8" THK. X 48" X 189 11/16" LG. (SHELL CAN #2) ROLL TO 60" I.D.
(4)	1	HEAD 2:1 ELLIPTICAL HEAD ASME CODE 20" O.D. X .25" MIN. THK. W/2" S.F.
(5)	1	PL. 3/8" THK. X 34 1/4" X 61 5/8" LG. (BOOT SHELL) ROLL TO 19 1/4" I.D.
(6)	1	PL. 1/2" THK. X 34 13/16" X 35 3/8" LG. (BOOT 7" W. PAD)
(7)	1	24"-150# RFWN W/22 1/2" BORE FLANGE (MANWAY M1)
(8)	1	PL. 3/4" THK. X 9 1/4" X 73 1/16" LG. (MANWAY NECK) ROLL TO 22 1/2" I.D.
(9)	1	PL. 1/2" THK. X 25 1/2" I.D. X 37 1/2" O.D. (MANWAY 6" W. PAD)
SHOP TO USE 346" ONLY AND FORM TO 24 3/8" I.D. AND 35 3/4" I.D. X 1 5/8" HT.		
(10)	1	24"-150# RF BLIND FLANGE (MANWAY M1)
(11)	1	GASKET FOR 24"-150# RF. FLANGE (MANWAY M1)
(12)	20	1 1/4" DIA. X 7" LG. STUDS W/(2) H.H.NUTS EA. (MANWAY)
(13)	16	2"-150# RFWN FLANGE W/SCH. 80S (ALL 2" NOZZLES)
(14)	8	2" SCH. 80S PIPE X 7 3/4" LG.(NOZZ. N1,N2,N4,N6,N8,N11,N12 & 13 NECK)
(15)	1	2" SCH. 80S PIPE X 7 3/8" LG. (NOZZLE N5 NECK)
(16)	2	2" SCH. 40S PIPE X 11 3/4" LG. (NOZZLE N7A & N7B NECK)
(17)	2	2" SCH. 80S PIPE X 7 3/4" LG. (NOZZLE N9A & N9B NECK)
(18)	1	2" SCH. 80S PIPE X 10" LG. (NOZZLE N10 NECK)
(19)	2	2" SCH. 80S PIPE X 8 3/4" LG. (NOZZLE N14A & N14B NECK)
(20)		DELETED ITEM
(21)	1	2"-150# RF BLIND FLANGE (NOZZLE N13)
(22)	1	GASKET FOR 2"-150# RF. FLANGE (NOZZLE N13)
(23)	4	5/8" DIA. X 3 1/4" LG. STUDS W/(2) H.H.NUTS EA.
(24)	1	4"-150# RFWN FLANGE W/SCH. 40S (NOZZLE N3)
(25)	1	4" SCH. 40S PIPE X 7 3/8" LG. (NOZZLE N3 NECK)
(26)	1	PL. 3/8" THK. X 4 13/16" I.D. X 8 13/16" O.D. (NOZZLE N3 2" W. PAD)
(27)	1	6"-150# RFWN FLANGE W/SCH. 80S (NOZZLE N15)
(28)	1	6" SCH. 80S PIPE X 7 1/8" LG. (NOZZLE N15 NECK)
(29)	1	PL. 3/8" THK. X 6 15/16" I.D. X 10 15/16" O.D. (NOZZLE N15 2" W. PAD)
(30)	1	PL. 1/4" THK.(1)= 6 1/4" X 6 1/4" LG.(1)=9 1/4" X 6 1/4" LG.(N/PL. BRACKET)



CUSTOMER NOTES

- PLEASE PROVIDE NOZZLES N14A AND N14B INTERNAL HEATING LOOP DETAIL (SEE DATA SHEET #2 NOTE 12)
- PLEASE APPROVE LIFTING LUGS ELEVATION AND DETAILS ON SHEET #3
- PLEASE APPROVE NAME PLATE DETAIL, ELEVATION AND ORIENTATION OR ADVISE.
- PLEASE APPROVE SADDLES DETAILS ON SHEET #2

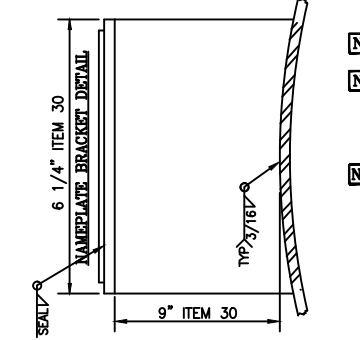
SHOP NOTE: ALL S.S. MATERIALS & WELDS SHALL BE ADEQUATELY PROTECTED FROM CARBON STEEL CONTAMINATION DURING FABRICATION AND SEE DRAWING No.2 FOR VESSEL TOLERANCES, GENERAL NOTES, PREPARATION FOR SHIPMENT AND SHOP NOTES

DESIGN DATA:	
1) DESIGN BASIS:	ASME SECT. VIII DIV. 1 2010 ADDENDA 2011
2) STAMPING REQUIREMENTS:	YES
3) DESIGN INT. PRESS. @ TEMP.	50.8 PSIG @ 138.2 °F
4) DESIGN EXT. PRESS. @ TEMP.	15 PSIG @ 138.2 °F
5) MINIMUM DESIGN METAL TEMP.	-320 °F @ 50.8 PSIG
6) SPECIFIC GRAVITY OF LIQUID	1.0
7) RADIOGRAPHING	RT-1
8) JOINT EFFICIENCY:	SHELL 100% HEADS 100%
9) NOM.CORR.ALLOW.	SHELL 1/16" HEADS 1/16" NOZZ. 1/16"
10) HYDROSTATIC TEST PRESS.(NEW & COLD)	107.49 PSIG
11) M.A.W.P. @ DESIGN TEMP.	82.69 PSIG LIMITED BY: SADDLES
12) LOADS: WIND	100 MPH EARTHQUAKE N/A
13) INSULATION	6" THK. MINERAL WOOL BY OTHERS.

WELDING PROCEDURES	
RCT-103-2 (P8-P8) GTSW+SAW (ER316L+E316L) AND RCT 110-1 (P8-P8) FCW (E316L-1)	
MATERIALS	
SHELL SA-240 316/316L	FLANGES SA-182 F316/316L
HEADS SA-240 316/316L	SUPPORTS SA-240 316/316L
CPLOS. N/A	INTERVALS SA-240/312 316/316L
STUDS SA-193 Gr. BM CL-2 **	REIN. PADS SA-240 316/316L
NUTS SA-194 Gr.B **	NOZZ. NECKS SA-312 TP 316/316L*
GASKETS SPIRAL WOUND, FLEXIBLE GRAPHITE FILLED, FULLY ANNEALED CENTER, INNER AND WIND RING MATERIALS 316/316L STAINLESS STEEL FLEX TYPE	
NOTE * NOZZLES NECK PIPE SHALL BE SEAMLESS.	
NOTE** STUDS AND NUTS SHALL BE COATED WITH SUITABLE COLLOIDAL NICKEL OR SILVER LUBRICANT PRIOR TO ASSEMBLY	

Field & Shop Note

This vessel shall be lifted using spreader bar or its equivalent during all lifting operations.



NAT'L. BD. LATER CERTIFIED BY: R.C. TECHNICAL WELDING & FAB. INC. STAFFORD, TEXAS

W RT-1 MANWP. 82.69 PSIG AT 138.2 °F MOMT. -320 °F AT 82.69 PSIG

DES.PRES. 50.8 PSIG AT 138.2 °F EXT.PRES. 15 PSIG AT 138.2 °F

SERIAL No. 12459 WEIGHT: 6,838 LBS. YEAR BUILT: 2012 PROJ.: CS15481

P.O. No. EQUIP: HUSKY ANSEL GAS PLANT

PLANT: IDENTIFICATION NO. ()

VESSEL WEIGHT

FABRICATED: 6,838 LBS.
EMPTY CORR.: 6,136 LBS.
OPERATING NEW: 24,442 LBS.
NEW FULL OF WATER: 24,443 LBS.

NOZZLE SCHEDULE										*NOTE: NOZZLE PROJ. FROM CL. VESSEL	
MARK	QTY.	SIZE	RATE	FACE	BORE	S E R V I C E	PAD THK.	WELD SIZE	NECK	PROJECTION	
B	1	20"	N/A		19.25"	BOOT	1/2" x 7" W.	1/2/1/2	SCH. 3/8"	SEE ELEV.	0"
N1	1	2"	150#	RFWN	1.939"	GAS/LIQUID INLET		3/8"	80S .218"		0"
N2	1	2"	150#	RFWN	1.939"	LPG DRAIN INLET		3/8"	80S .218"		0"
N3	1	4"	150#	RFWN	4.026"	GAS OUT	3/8" x 2" W.	3/8/3/8	40S .237"		0"
N4	1	2"	150#	RFWN	1.939"	HC LIQUID OUT		3/8"	80S .218"		0"
N5	1	2"	150#	RFWN	1.939"	HEAVY LIQUID OUT		3/8"	80S .218"	SEE ELEV.	0"
N6	1	2"	150#	RFWN	1.939"	PSV RETURN		3/8"	80S .218"		0"
N7 A/B	2	2"	150#	RFWN	1.939"	LEVEL CONTROL		3/8"	80S .218"	SIDE VIEW	0"
N8	1	2"	150#	RFWN	1.939"	PRESSURE GAUGE		3/8"	80S .218"		0"
N9 A/B	2	2"	150#	RFWN	1.939"	LEVEL GAUGE		3/8"	80S .218"	SEE ELEV.	0"
N10	1	2"	150#	RFWN	1.939"	TEMPERATURE ELEMENT		3/8"	80S .218"	SEE ELEV.	0"
N11	1	2"	150#	RFWN	1.939"	VENT		3/8"	80S .218"		0"
N12	1	2"	150#	RFWN	1.939"	DRAIN		3/8"	80S .218"		0"
N13	1	2"	150#	RFWN		SPARE W/BLIND		3/8"	80S .218"		0"
N14 A/B	2	2"	150#	RFWN	1.939"	HEATING LOOP		3/8"	80S .218"	SEE ELEV.	DETAIL
N15	1	6"	150#	RFWN	5.761"	LEVEL GAUGE	3/8" x 2" W.	3/8/3/8	80S .432"		0"
M1	1	24"	150#	RFWN	22.50"	MANWAY W/BLIND FLG.	1/2" x 6" W.	1/2/3/8	PL. 3/4"	SEE ELEV.	0"

C RE-ISSUED FOR APPROVAL 08/08/12 SG DB

B RE-ISSUED FOR APPROVAL 05/24/12 SG DB

A ISSUED FOR APPROVAL 04/02/12 SG DB

REV. DESCRIPTION DATE BY APPROVED

CODE: CUSTOMER P.O. No.: LATER

SHOP ORDER No.: 12459

DRAWN BY: SALVADOR GONZALEZ

REVISED BY: S.G.

DATE: 05/24/2012

CHK'D BY: DANNY S. BUGARIN

DATE: 04/02/2012

APPR'D BY: DANNY S. BUGARIN

DATE:

R.C. TECHNICAL WELDING & FABRICATION, INC. 12814 MULA LANE STAFFORD, TEXAS 77477

CUSTOMER: VAREC BIOGAS

CLIENT: HUSKY

HUSKY ANSEL GAS PLANT PROJ. No. CS15481

TITLE: HC DRAIN DRUM PRESSURE VESSEL-HORIZONTAL

ITEM No.

SIZE FILE NAME: DWG. No.: RCT12-12459

SCALE: N/A DWG. IN AUTOCAD 2011 SHEET 1 OF C