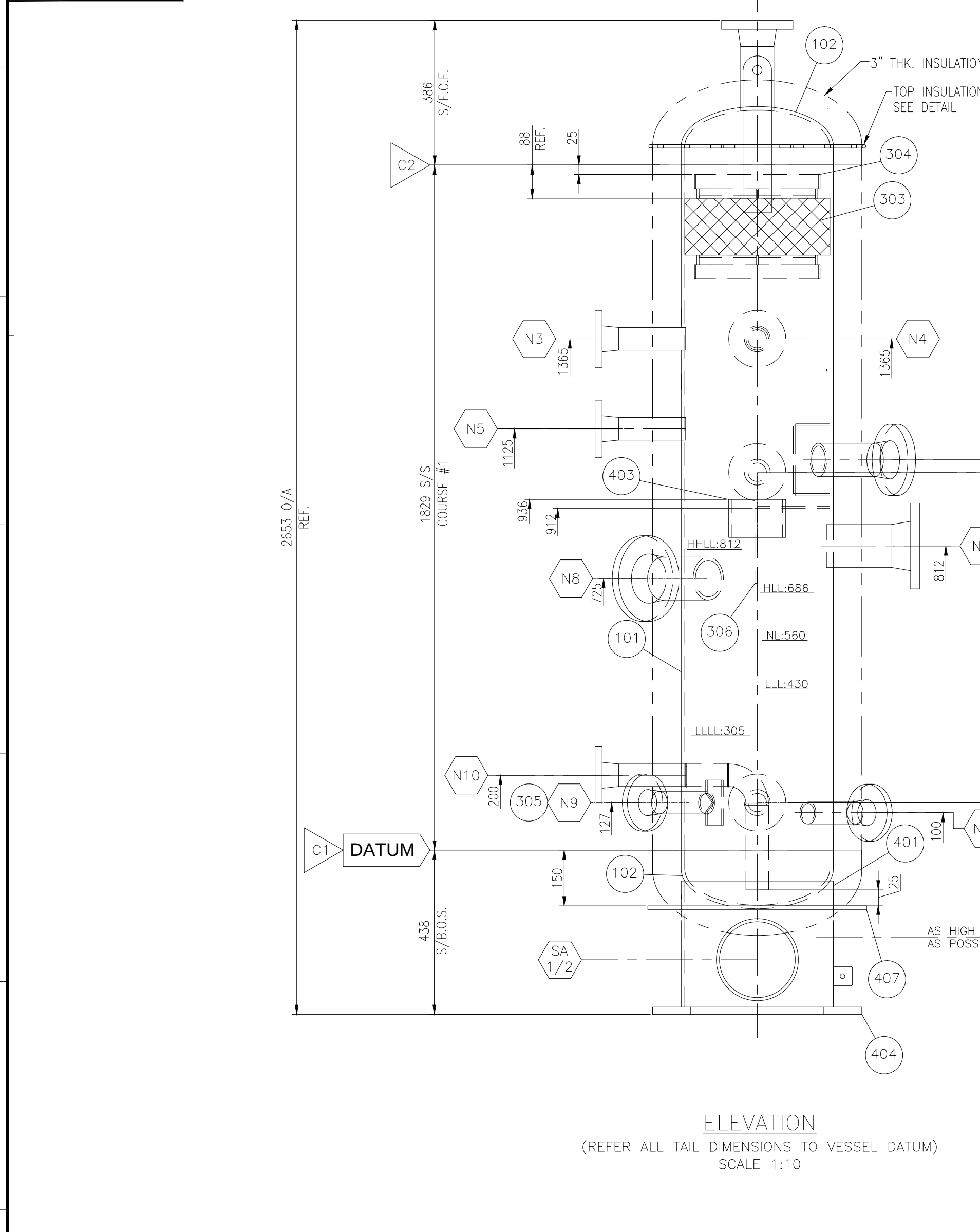
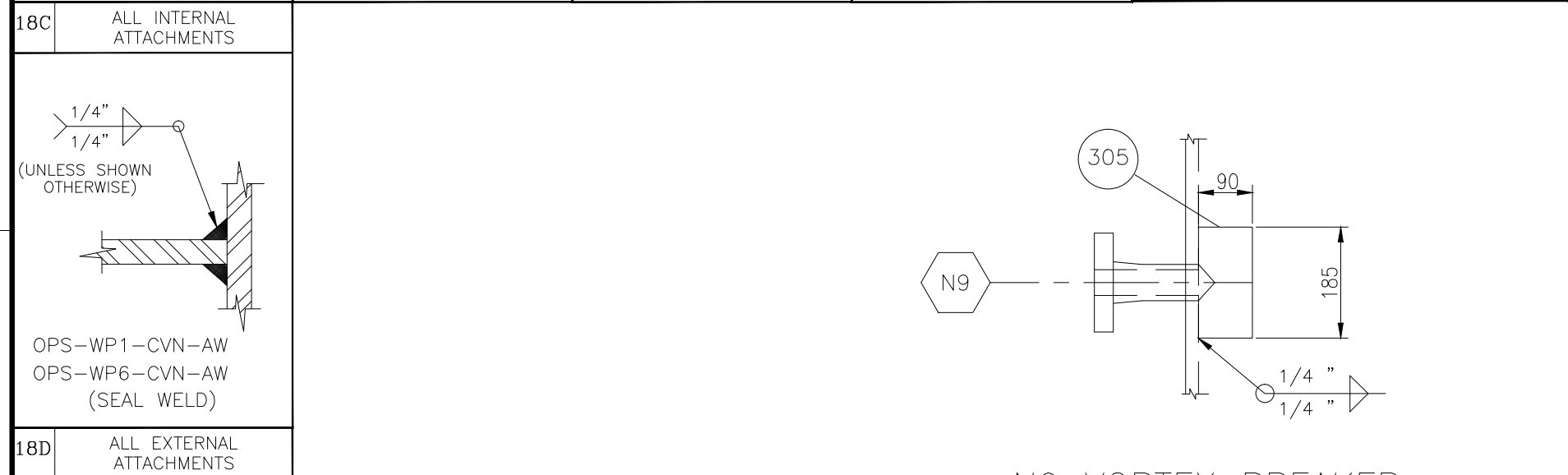
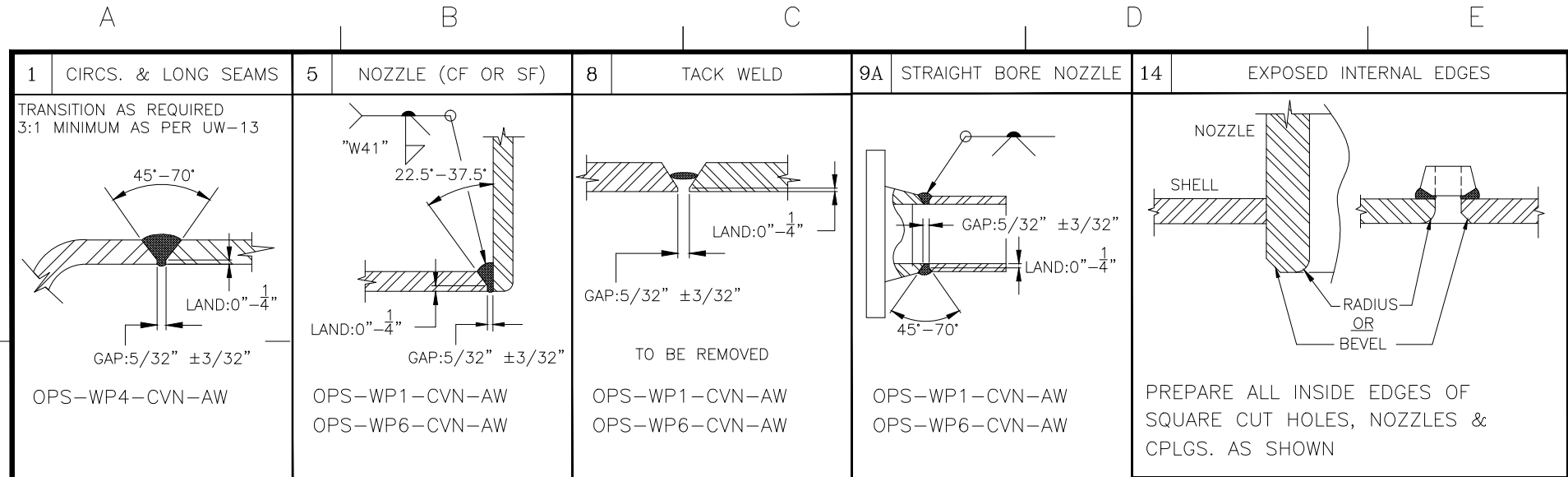


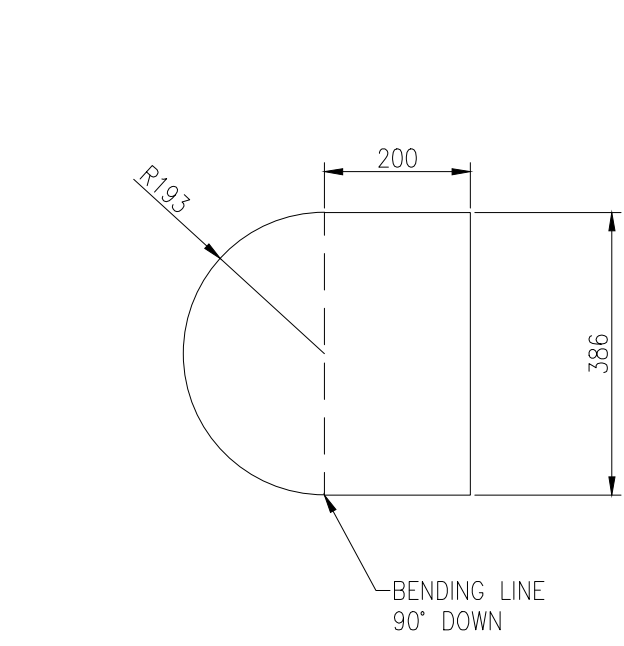


EXCELSIOR ORDER #4178HUS-REQ--003	No.	DATE	REVISIONS	BY	CHK	REW	APP	PM	QC	No.	DATE	REVISIONS	BY	CHK	REW	APP	PM	QC
	A	JULY 16 2014	ISSUED FOR APPROVAL	PC	TMD	EH	IH	LA	JL	4	OCT 20 2014	REVISED LIFT LUGS	TMD	TMD	EH	JH	LA	JL
	0	AUG 08 2014	ISSUED FOR CONSTRUCTION	TJD	TMD	EH	IH	LA	JL	5	JUN 16 2015	AS-BUILT	JC					
	1	AUG 18 2014	VESSEL MATERIAL CHANGED TO LOW TEMP.	PC	TMD	EH	IH	LA	JL									
	2	AUG 26 2014	ADDED ORDER NOTE	OC	TMD	EH	IH	LA	JL									
	3	OCT 10 2014	SA CHANGED FROM 6" TO 8"															
			SVa/b ROTATED, ITEM 407 MOVED UP	OC	TMD	EH	IH	LA	JL									

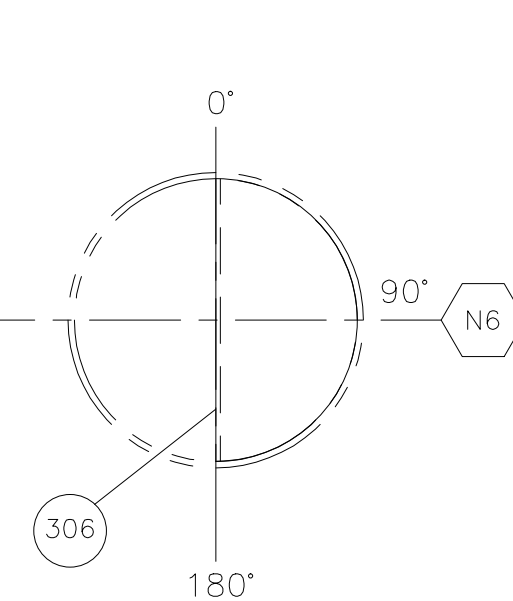
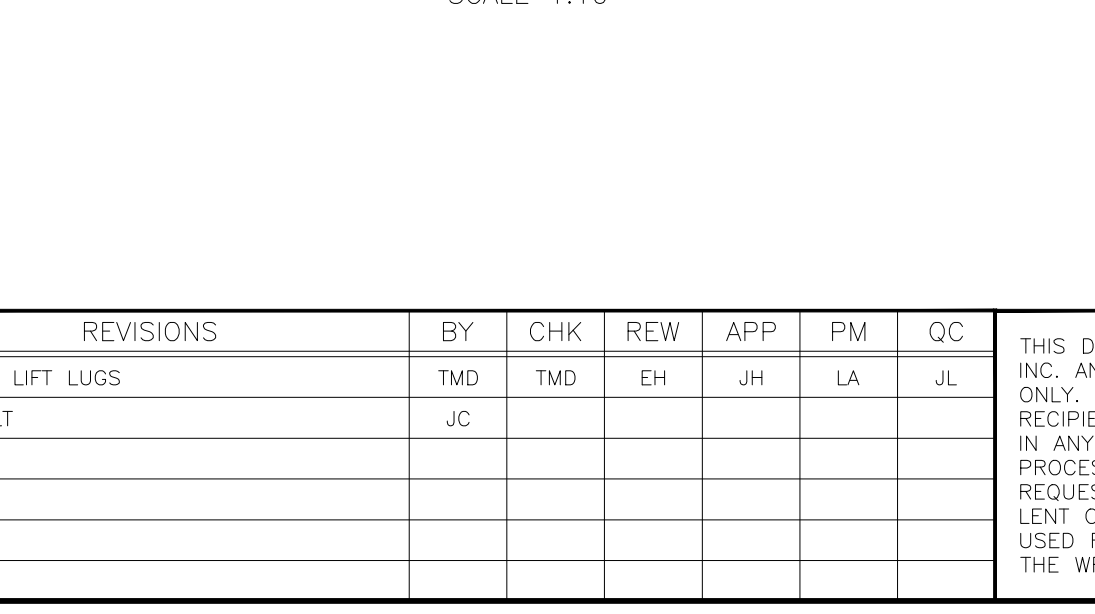
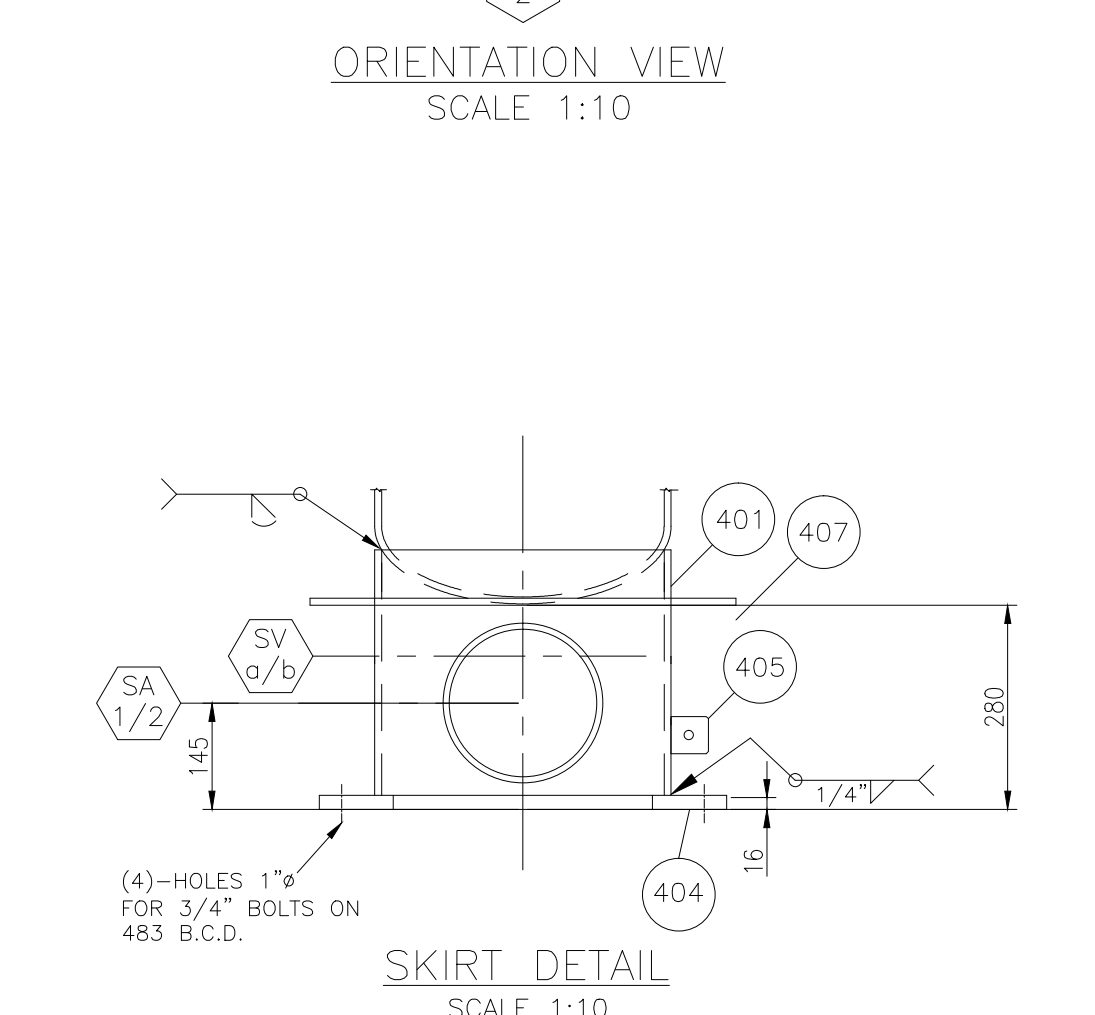
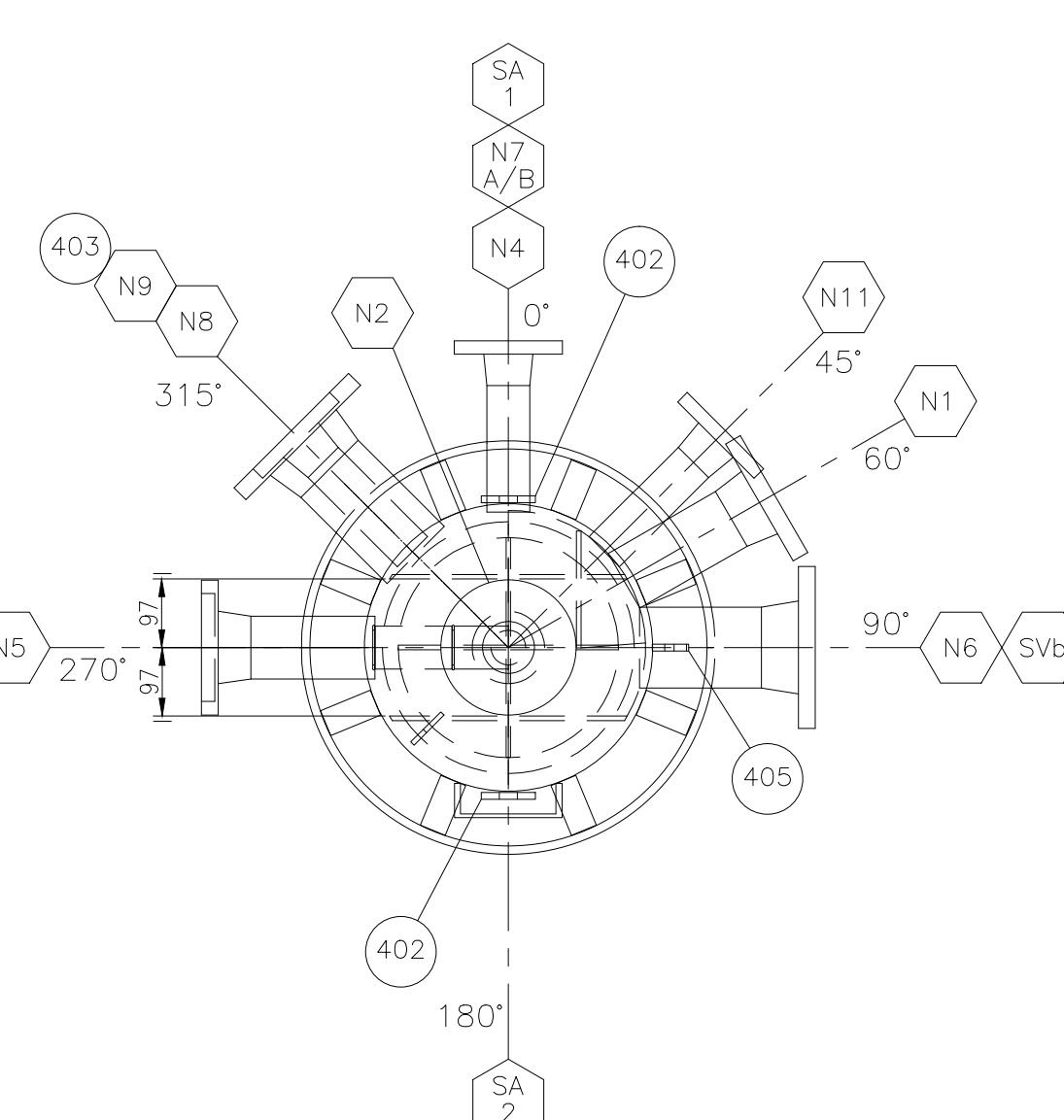
GENERAL NOTES:
1. ALL DIMENSIONS ARE IN METRIC UNLESS OTHERWISE NOTED.
2. ALL BOLT HOLES TO STRADDLE NATURAL VESSEL CENTER LINES UNLESS OTHERWISE NOTED.
3. FULL PENETRATION WELDS TO BE COUDED BEFORE FILLING.
4. CORNER RADIUS 1/8" MINIMUM FOR NOZZLES AND 1/8" MINIMUM FOR MANWAYS.
5. VESSEL TO BE REGISTERED IN AB.
6. IF PSV IS NOT SHOWN IN NOZZLE SCHEDULE, IT IS THE USER'S RESPONSIBILITY TO LOCATE THE PSV IN ADJACENT PIPING PER ASME UG-125.
7. 3" THK. CELLULAR GLASS INSULATION

FABRICATION NOTES:
1. FOR FABRICATION TOLERANCES REFER TO "STANDARD FABRICATION TOLERANCES FOR UNFIRED PRESSURE VESSELS. (REV. 0)"
2. RETURN DWG. TO QC AFTER FABRICATION
3. MATERIAL/FABRICATION AND NDE SHALL MEET THE REQUIREMENTS OF HUSKY.
4. MAXIMUM WELD DEPOSIT < 3/8" (9mm) PER PASS.
5. MATERIAL SUBSTITUTION FOR:
SA-105N USE SA-350-LF2 CL1
SA-106B USE SA-333-GR.6
SA-234-WPB USE SA-420-WPL6

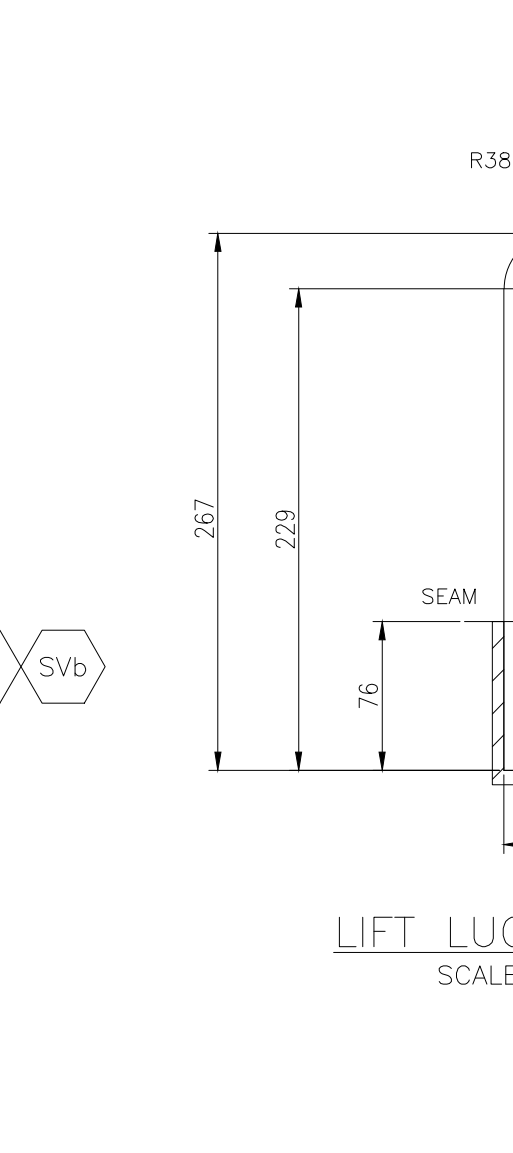
INSPECTION NOTES:
1. RT-2: SPOT ON CIRC. NOZZLES >= 10" OR 1 1/8" WT.
2. MPI ON LIFTING LUGS
3. CHART RECORDER FOR HYDRO.



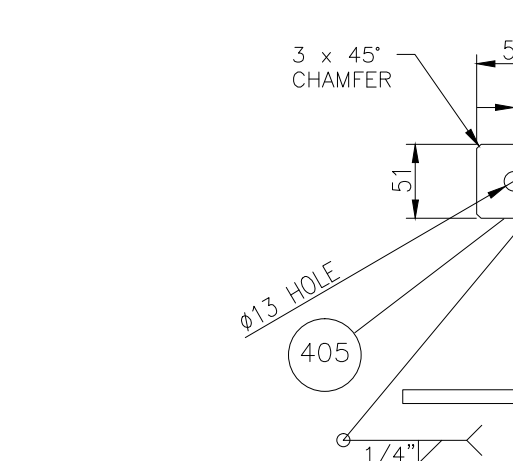
ITEM 306 DETAIL
SCALE: 1:10



ITEM 306 TOP VIEW
SCALE: 1:10



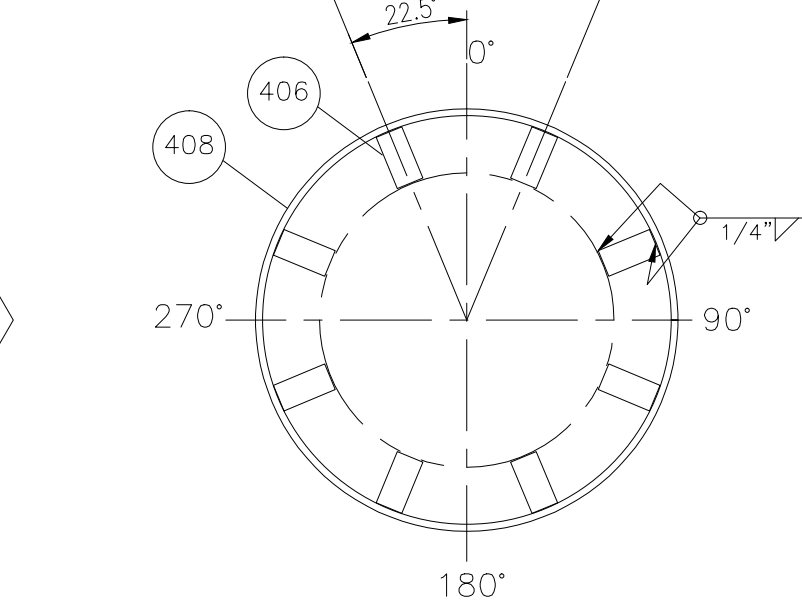
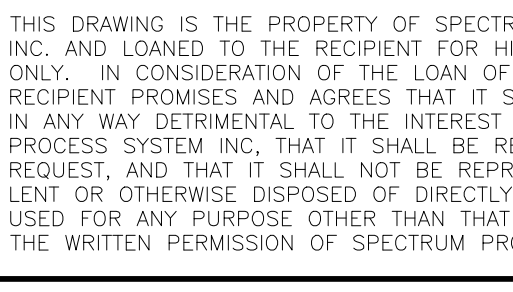
TOP INSULATION RING DETAIL
SCALE: 1:10



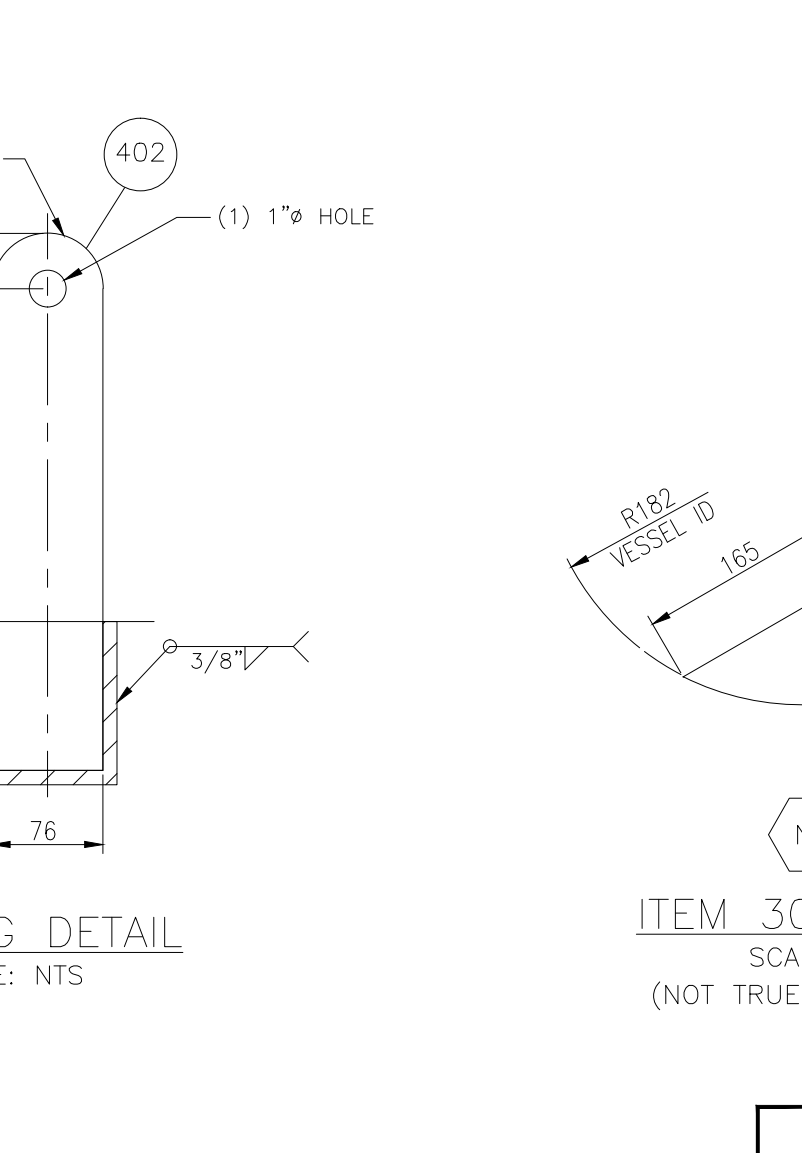
LIFT LUG DETAIL
SCALE: NTS



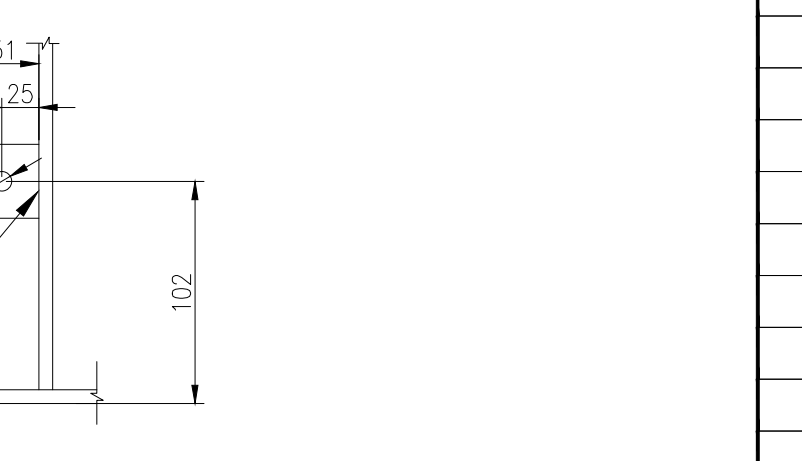
GROUND LUG DETAIL
SCALE NTS



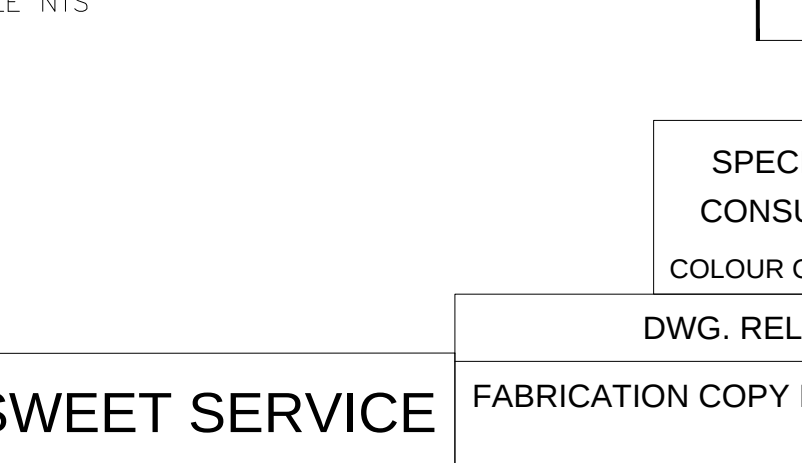
TOP INSULATION RING DETAIL
SCALE: 1:10



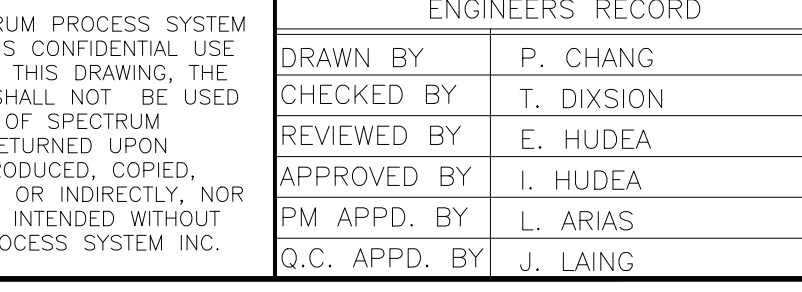
ITEM 302 DETAIL
SCALE: 1:5
(NOT TRUE ORIENTATION)



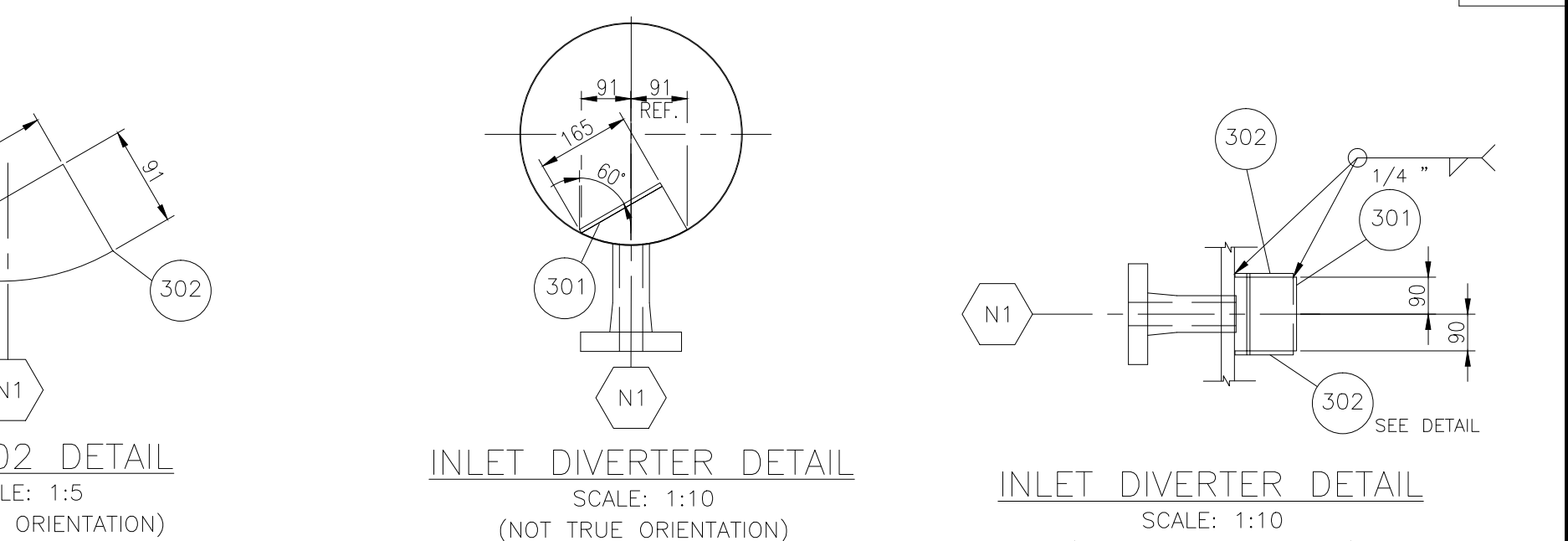
INLET DIVERTER DETAIL
SCALE: 1:10
(NOT TRUE ORIENTATION)



INLET DIVERTER DETAIL
SCALE: 1:10
(NOT TRUE ORIENTATION)



BILL OF MATERIAL											
ITEM	QTY.	SIZE	TYPE	RATING	SCH./W.T.	MAT'L SPEC	DESCRIPTION				WEIGHT (kg)
100. VESSEL											
101	1	16" OD	PIPE		STD	SA-333-GR6	1829 LG. SMLS				200
102	2	16" OD	FORMED PLATE		3/8"	SA-516-70N	2:1 S.E. HEAD (0.3125" FORMED MIN.) HOT FORMED				35
200. CONNECTIONS											
201	2	3"	RFWN	CL150	80	SA-350-LF2 CL1	ANSI FLANGE				16
202	2	4"	RFWN	CL150	80	SA-350-LF2 CL1	ANSI FLANGE				4
203	8	2"	RFWN	CL150	160	SA-350-LF2 CL1	ANSI FLANGE				3
204	AS REQ'D	3"	PIPE		80	SA-333-GR6	SEAMLESS PIPE				5
205	AS REQ'D	4"	PIPE		80	SA-333-GR6	SEAMLESS PIPE				4
206	AS REQ'D	2"	PIPE		160	SA-333-GR6	SEAMLESS PIPE				2
207	1	2"	CS ELBOW		160	SA-420-WPL6	ELBOW, BW, LR, 90°				1
208	1	2"	RF BLIND	CL150		SA-350-LF2 CL1	ANSI BLIND FLANGE				1
209	2	2"	REDUCED BLIND	CL150		SA-350-LF2 CL1	ANSI BLIND FLANGE 2" RF x 1/2" NPT				1
210	1	2"	REDUCED BLIND	CL150		SA-350-LF2 CL1	ANSI BLIND FLANGE 2" RF x 3/4" NPT				1
211	AS REQ'D	8"	PIPE		40	SA-333-GR6	SEAMLESS PIPE				
300. INTERNAL ASSEMBLIES											
301	1	1/4" THK	PLATE			SA-516-70N	INLET DIVERTER SIDE PLATE 165 x 180				2
302	2	1/4" THK	PLATE			SA-516-70N	INLET DIVERTER TOP & BOTTOM PLATES (CUT TO FIT) 91x 165				2
303	1					316LSS	FIXED DEMISTER 144 KG/CU.M. 6" THICK c/w 25mm GRIDS TOP TOP & BOTTOM				-
304	4	3/8" THK	PLATE			SA-516-70N	DEMISTER HOLD DOWN BAR 38 x 335 LG				8
305	1	1/4" THK	PLATE			SA-516-70N	VORTEX BREAKER PLATE 90 x 185				1
306	1	1/4" THK	PLATE			SA-516-70N	INLET DIVERTER PLATE 386 x 393				1
400. EXTERNAL ASSEMBLIES											
401	1	16" OD	PIPE		0.375"	SA-333-GR6	SMLS PIPE, SKIRT 340 LG.				13
402	2	3/8" THK	PLATE			SA-516-70N	LIFTING LUGS 76 x 267				6
403	1	6" x 4"	PLATE			SA-516-70N	NAMEPLATE BRACKET				1
404	1	3/4" THK	PLATE			SA-516-70N	SKIRT BASE PLATE 559 OD x 356 ID				21
405	1	2" x 1/4" THK	FB			SA-240-316L	GROUND LUG 51 LG				1
406	8	3/8" THK	PLATE			SA-516-70N	INSULATION RING CLIPS 38 x 76				10
407	1	3/8" THK	PLATE			SA-36	INSULATION RING 585 OD x 410 ID				8
408	1	3/8" ø	ROD BAR			SA-36	TOP INSULATION RING (BEND AS SHOWN) 1790 LG. ROLL TO 570 ø				10
409	16 SETS	5/8" x 3 1/4" LG. STUDS				SA-193-B7M SA-194-2HM	1 STUDS & 2 NUTS				1
410	4	2"	RF GASKET	CL150		316SS	FLEXITALIC STYLE "CGI" SPWND GRAPHITE FILLED, 3 THK.				1
											359



INLET DIVERTER DETAIL
SCALE: 1:10
(NOT TRUE ORIENTATION)

LAYOUT		NOZZLE SCHEDULE							FILLET WELD SIZE		PROJECTION		ITEM	
Q.C.	SUPERVISOR	MARK	SIZE	RATING	NECK O.D.	TYPE	SERVICE	W.D.	W41	W42	W43	H (MIN.)		EXT. PROJ.
		N1	3"	CL150	3.5"	RFWN	GAS INLET	5, 14 9A	3/8"	-	BW	SF	230	201, 204
		N2	3"	CL150	3.5"	RFWN	GAS OUTLET/INSP.	5, 14 9A	3/8"	-	BW	SF	AS	201, 204
		N3	2"	CL150	2.375"	RFWN	PSV	5, 14 9A	3/8"	-	BW	SF	230	203, 206
		N4	2"	CL150	2.375"	RFWN	PIT	5, 14 9A	3/8"	-	BW	SF	230	203, 206, 209
		N5	2"	CL150	2.375"	RFWN	TIT	5, 14 9A	3/8"	-	BW	SF	230	203, 206, 209
		N6	4"	CL150	4.5"	RFWN	LSHH	5, 14 9A	3/8"	-	BW	SF	230	202, 205
		N7A/B	2"	CL150	2.375"	RFWN	LG	5, 14 9A	3/8"	-	BW	SF	230	203, 206, 210
		N8	4"	CL150	4.5"	RFWN	LC	5, 14 9A	3/8"	-	BW	SF	230	202, 205
		N9	2"	CL150	2.375"	RFWN	LIQUID OUT	5, 14 9A	3/8"	-	BW	SF	230	203, 206
		N10	2"	CL150	2.375"	RFWN	DRAIN	5, 14 9A	3/8"	-	BW	SF	230	203, 206, 207
		N11	2"	CL150	2.375"	RFWN	INSPECTION	5, 14 9A	3/8"	-	BW	SF	230	203, 206, 208
		SVa/b	2"			HOLE	SKIRT VENT	-	-	-	-	-	-	-
		SA 1/2	8"		8.625"	PIPE	SKIRT ACCESS	180	1/4"	-	-	50	50	211

SPECIAL MATERIAL CONSULT QC/SPECS
COLOUR CODE: GOLD

DWG. RELEASE
FABRICATION COPY NO: __ OF __
DATE: _____
SIGNED: _____

SWEET SERVICE
SPECTRUM NACE

DESIGN DATA

BW = BACKWELD
SF = SQUARE-CUT FLUSH
CF = CONTOUR-CUT FLUSH
AS = AS SHOWN
ARD = AS REC'D W/O CUTTING

DESIGN & CONSTRUCTION
Vessel to be designed and constructed in accordance with ASME Boiler and Pressure Vessel Code Section VIII Div. 1 Code Year: 2013

NDMT
-49°F. MATERIAL TESTING REQ'D ON ITEMS 101 & 102 PER UG-84, LOW TEMP. MATERIAL EXEMPT PER UCS-66(c), PRODUCTION TEST NOT REQUIRED.

MAWP	265 PSI	1827 KPA	SERIAL No.	14-05110-32
DESIGN TEMPERATURE	150 °F	65.6°C	CRN	V6435.2
HYDROTEST PRESS.	398 PSI	2744 KPA	TAG No.	V-326
CORR. ALLOWANCE	0.0625"	1.6 mm	YEAR BUILT	2014
VOLUME	8.56 Cu.Ft.	0.24 Cu.Mt	INSPECTION By	ABSA
RADIOGRAPHY	RT-2		APPROX. SHIPPING WT.	791 LB / 359 KG
CRN DRAWING No.	V-14-05110-32 REV.1		FINAL JOINT EFF.(LONG SEAM)	100%
STRESS RELIEVE	NO		MAWEP @ Deg.F	15 PSI @ 150 °F

Note: * Full on long seams, spot on circs, full on all butt welded nozzles > either 10" NPS or 1.125" WT as per UW11(a) & UW51

Note: For fabrication tolerances refer to "Standard Fabrication Tolerances for Unfired Pressure Vessels. (Rev. 0)"

CLIENT
HUSKY ENERGY
c/o EXCELSIOR ENGINEERING

PROJECT
DEHYDRATION AND JT PACKAGE
RAVEN CREEK COMPRESSOR STATION
ISD: 02-20-050-18 WSM

TITLE 406mm [16"] OD x 1626mm [5'-4"] S/S LOW TEMP. SEPARATOR (V-326)

Scale	JOB No.	DWG. No.	REV.
1:1	SPS-14-05110	V-14-05110-32	5

P.O. # 8400843246