

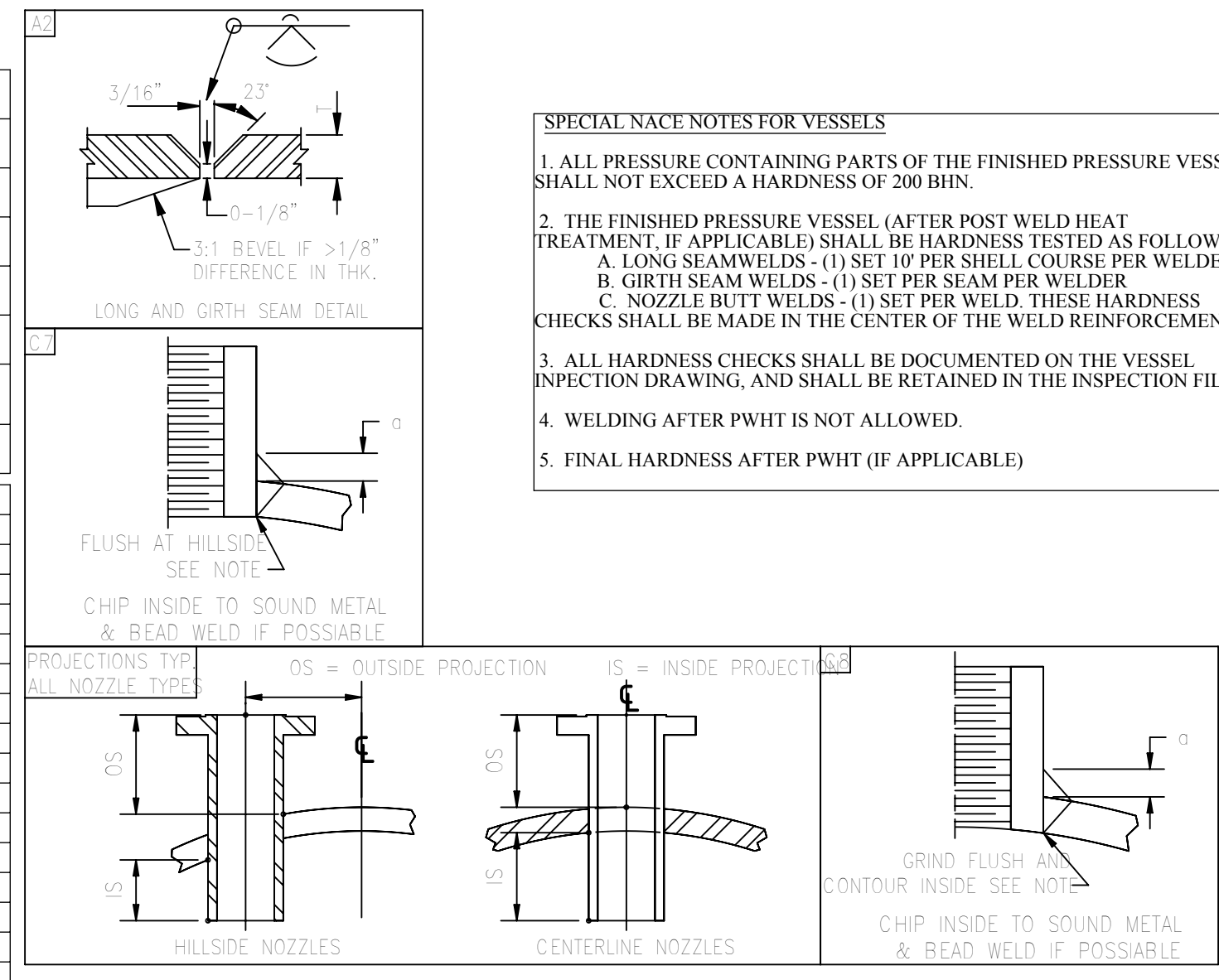
- GENERAL NOTES:**
1. FLANGES TO HAVE BOLT HOLES STRADDLING VESSEL TRUE CENTER LINES.
 2. ALL CONNECTIONS SHALL TO BE COVERED OR PLUGGED FOR SHIPPING.
 3. DRILL AND TAP 1/4" NPT. TELLTALE HOLE IN ALL REINFORCING PADS.
 4. INSIDE EDGE OF NOZZLES NECKS SHALL BE ROUNDED. THE RADIUS OF ROUNDEDNESS 1/8" MIN. OR ONE-HALF THE WALL THICKNESS OF THE NOZZLE WALL IS LESS THEN 1/4".
 5. SEE PAINT FORM FOR COATING REQUIREMENTS.
 6. SEE TABLE UW-33 FOR ALIGNMENT TOLERANCE.
 7. SEE TABLE UW-35 FOR FINISHED LONGITUDINAL AND CIRCUMFERENTIAL JOINT TOLERANCE.

TOLERANCES:
 CUTS (NOZZLE HOLES IN VESSEL): +/- 1/8"
 ANGLES (FACE OF FLANGE OR COUPLINGS): +/- 1/2"
 WELD ASSEMBLIES (CLIPS OR BRACING ATTACHED TO VESSEL): +/- 1/8"

EnCana Nace Requirements	
HARDNESS TESTING	200 BNH (VHN 210) MAX.
HEAD AND SHELLS	HIC TESTING IN ACCORDANCE WITH NACE: TMO177-96 AS PER MR0175/ISO 15156 2003 PART2 TABLE B.3.
PLATE (Pressure Containing) SA-516-70N	PHOSPHOROUS SHALL BE 0.015% MAX SULFUR SHALL BE 0.005% MAX
FLANGES & FORGINGS (NORMALIZED) SA-350-LF2	CARBON 0.30% MAX MANGANESE 1.30% MAX PHOSPHOROUS 0.020% MAX SULPHUR 0.010% MAX
PIPE & FITTINGS (NORMALIZED) SA-333-GR-6 SA-420-WPL	CARBON 0.30% MAX MANGANESE 1.06% MAX PHOSPHOROUS 0.020% MAX SULPHUR 0.010% MAX
CARBON Equivalent (CE) Pipe, Plate, Flanges and other Forgings and Fittings CE = %C + %Mn/6 + %Cr + %SMo + %V + %Ni + %15Cu/	0.42 MAX
Mill Test Reports	All Material
Welding: Procedures Specification No. (101-HT) SURE WAVE ALL WELDS Internals: Seal weld is required (FULL PENETRATION) Nozzles: Full Penetration (No Couplets Allowed) External Attachments: Seal welding is required.	3
Stress Relieving (PWHT) (Vessels and Piping)	YES chilled down to 300°F (150°C) NO WELDING ALLOWED AFTER PWHT INCOMPLIANCE WITH ENCANNA PROCEDURE ECA-VES-US REV. 0
X-RAY (Vessels & Piping)	100% RT-1 (VESSELS)
Hydro testing (Vessels and Piping)	1 HR MIN. (CHARTED)
Ultrasonically Tested (UT) PLATE USED FOR VESSEL SHELLS AND HEAD 1/2" THK AND OVER SHALL BE ULTRASONICALLY CHECKED FOR LAMINATIONS AND DEFECTS IN ACCORDANCE WITH ASME SECTION II, PART A, SPECIFICATION SA-578 LEVEL B ON A 76MM (3" GRID).	
ALL CATEGORY "D" WELD SHALL BE 100% SHEAR VAVE UT EXAMINED PRIOR TO THE FINAL CAP WELD BEING APPLIED BUT AFTER THE WELD HAS BEEN ALLOWED TO COOL TO A TEMPERATURE JUST WARM TO THE TOUCH. AFTER THE WELD HAS BEEN EXAMINED AND ACCEPTED, THE TEMPERATURE OF IT MUST BE RAISED TO A MINIMUM OF 100° C AND THE FINAL CAP APPLIED.	
Wet Magnetic Particle Inspection	All Pressure Containing Welds after Hydro Test
Accessories	No yellow metals allowed NACE certified Pressure Gauges (liquid filled)
Tubing & Tubing Fittings	Stainless Steel

Pipe O.D.	8.625	CLAMP END	PIPE PROGRAM - TTG-110007						OPEN END
			SEAM	C4	C3	C6	C2	C1	
Cut Name:			7	6	5	4	3	2	1
File Number			7	6	5	4	3	2	1
Cut Type			Straight	Hole ID	Hole ID	Hole ID	Hole ID	Hole ID	Straight
Mate Diameter			8.625	2.375	2.375	3.125	2.375	2.375	8.625
Mate Thickness			NA	NA	NA	NA	NA	NA	NA
Mate Angle			90	90	90	90	90	90	90
Mate Offset			0	0	0	0	0	0	0
Bevel Angle			23	30	30	30	30	30	23
Lead In			On	On	On	On	On	On	On
Salvage			R						L
Start RA			0	180	90	270	90	90	0
Start TP			0	4	4	22.25	34.5	42	48
Link to File #			7	7	6	5	4	3	2
Cut Name:									

- SPECIAL NACE NOTES FOR VESSELS**
1. ALL PRESSURE CONTAINING PARTS OF THE FINISHED PRESSURE VESSEL SHALL NOT EXCEED A HARDNESS OF 200 BHN.
 2. THE FINISHED PRESSURE VESSEL (AFTER POST WELD HEAT TREATMENT, IF APPLICABLE) SHALL BE HARDNESS TESTED AS FOLLOWS:
 A. LONG SEAM WELDS - (1) SET 10' PER SHELL COURSE PER WELDER
 B. GIRTH SEAM WELDS - (1) SET PER SEAM PER WELDER
 C. NOZZLE BUTT WELDS - (1) SET PER WELD. THESE HARDNESS CHECKS SHALL BE MADE IN THE CENTER OF THE WELD REINFORCEMENT
 3. ALL HARDNESS CHECKS SHALL BE DOCUMENTED ON THE VESSEL INSPECTION DRAWING, AND SHALL BE RETAINED IN THE INSPECTION FILES.
 4. WELDING AFTER PWHT IS NOT ALLOWED.
 5. FINAL HARDNESS AFTER PWHT (IF APPLICABLE)



MARK	QTY	SERVICE	CONNECTION TYPE	CONN. BOM ITEMS	NECK	REPAD	O.S.	I.S. (MIN)	WELD DETAIL	a	b	c	REMARKS
C6	1	SIGHT PORT CONNECTION	CPLG / FULL / THRD, 1-1/2" 6000# X 3.125" LG	(5)	-	-	YES	FLUSH	C8	-	3/8"	-	-
C5	1	DRAIN / LIQUID OUTLET	CPLG / FULL / THRD, 1" 6000# X 2.375" LG	(4)	-	-	YES	FLUSH	C8	-	3/8"	-	-
C4	1	PI / THERMAL RELIEF	CPLG / FULL / THRD, 1" 6000# X 2.375" LG	(4)	-	-	YES	FLUSH	C8	-	3/8"	-	-
C3	1	OUTLET	CPLG / FULL / THRD, 1" 6000# X 2.375" LG	(4)	-	-	YES	FLUSH	C8	-	3/8"	-	-
C2	1	CLEANOUT	CPLG / FULL / THRD, 1" 6000# X 2.375" LG	(4)	-	-	YES	FLUSH	C8	-	3/8"	-	-
C1	1	INLET	CPLG / FULL / THRD, 1" 6000# X 2.375" LG	(4)	-	-	YES	FLUSH	C7	-	3/8"	-	-

MARK	QTY	SERVICE	CONNECTION TYPE	CONN. BOM ITEMS	NECK	REPAD	O.S.	I.S. (MIN)	WELD DETAIL	a	b	c	REMARKS
16	02700030	1	-	3"	3"	EXPANED METAL / FLAT, STYLE: 1/2 No. 13			SA-106-B	FT			STAINLESS STEEL
15	01600143	1	1/4"	15/16"	15/16"	PLATE, 0.25" / SPARGER END CAP			SA-516-70N	SF			SA-516-70N
14	01600143	1	0.25	6 1/2"	6 1/2"	PLATE, 0.25" / NAMEPLATE TBRACKET / FACE			SA-516-70N	SF			SA-516-70N
13	01600143	1	0.25	13 5/8"	13 5/8"	PLATE, 0.25" / SKIRT BASE PLATE 13 5/8" OD X 5 1/2" ID			SA-516-70N	SF			SA-516-70N
12	01600143	2	1/4"	7 1/2"	7 1/2"	PLATE, 0.25" / SUPPORT RING, 7 1/2" OD			SA-516-70N	SF			SA-516-70N
11	01600143	1	0.25	2 1/2"	6 1/2"	PLATE, 0.25" / NAMEPLATE TBRACK / BACK			SA-516-70N	SF			SA-516-70N
10	01600142	1	.0598	7 5/16"	7 5/16"	PLATE / PERFORATED, 16 GAUGE / 1/8" DIAMETER PERFORATION ON 1/4" CENTERS			CS	SF			CS
9	01600141	1	.25	7 5/16"	7 5/16"	PLATE / PERFORATED, W/ 3/8" DIAMETER PERFORATION ON 1/2" CENTERS"			CS	SF			CS
8	01700129	1	-	-	9.8125	PIPE / SMLS, 8" STD (0.322" NOM WALL) BBE			SA-106-B	FT			SA-106-B
7	01700028	1	0.179	-	6 13/16"	PIPE / SMLS, 1" XH (0.179" NOM WALL) / SPARGER POE / TOE			SA-106-B	FT			SA-106-B
6	05000001	1	-	-	-	NAME PLATE ASME CODE TITAN Gainesville			SA-240-304	EA			SA-240-304
5	01913511	1	-	-	-	CPLG / FULL / THRD, 1-1/2" 6000# X 3.125" LG			SA-350-LF2	EA			SA-350-LF2
4	01913504	5	-	-	-	CPLG / FULL / THRD, 1" 6000# X 2.375" LG			SA-350-LF2	EA			SA-350-LF2
3	04300012	1	-	-	-	CLOSURE, YALE - 8" FIG. 500 SERIES ANSI 600# / HINGED FOR VERTICAL INSTALLATION			SA350-LF2	EA			SA350-LF2
2	04000180	1	-	-	-	HEAD / ASME 2:1 ELLIP, 8 5/8" OD (0.4375" MIN THK) 0.500" NOM THK W/2" SF			SA-516-70N	EA			SA-516-70N
1	01700481	1	0.500	-	48	PIPE / SMLS, 8" XH (0.500" NOM WALL)			SA-106-C	FT			SA-106-C

REV.	DESCRIPTION	DATE	DESIGNER	CHECK BY
A	ISSUED FOR APPROVAL	3/8/2011	A.DETHLOFF	R.DOVERSPIKE
0	ISSUED FOR FABRICATION	3/28/2011	M.MCMILLAN	R.DOVERSPIKE
1	ADD WELD MAP AND CHANGE PWHT TEMP.	5/11/2011	R.DOVERSPIKE	A.DETHLOFF
3	ADDED SS MESH OVER C3 OUTLET	5/27/2011	M.MCMILLAN	R.DOVERSPIKE
3	REVISED WELD PROCEDURE	6/3/2011	A.DETHLOFF	R.DOVERSPIKE



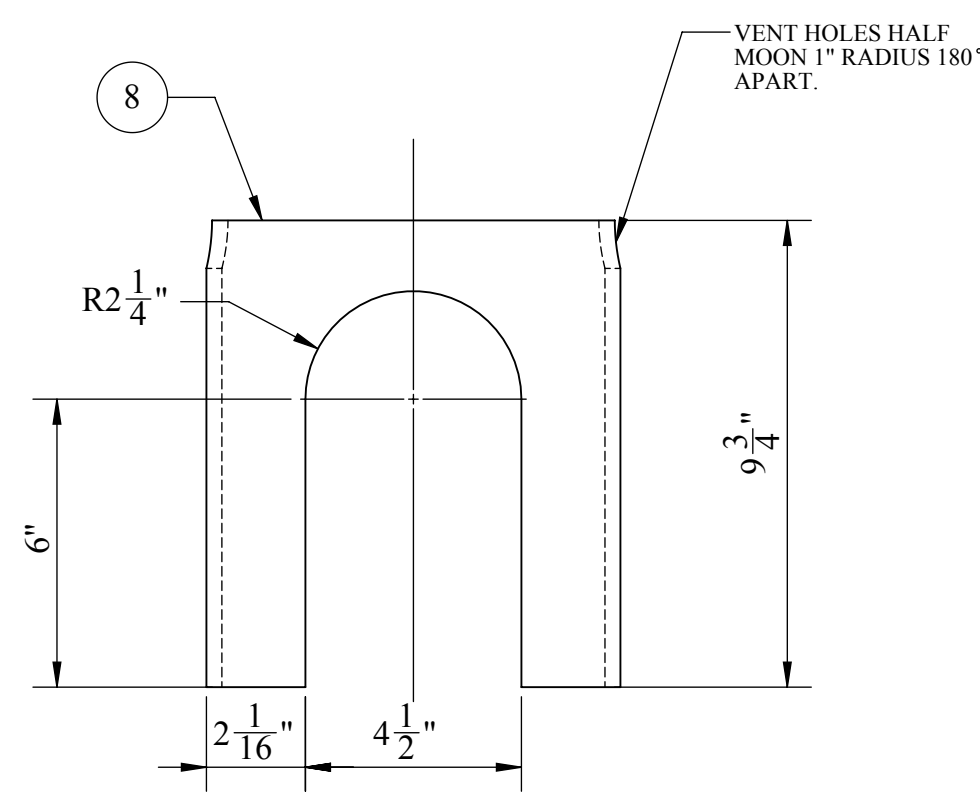
TITLE: DESICCANT DRYER (NACE)
 8 5/8" OD X 4'-0" S/S 1440# DP
 ASME CODE VESSEL LAYOUT

CUSTOMER: ENCANNA
LOCATION: North Louisiana / East Texas

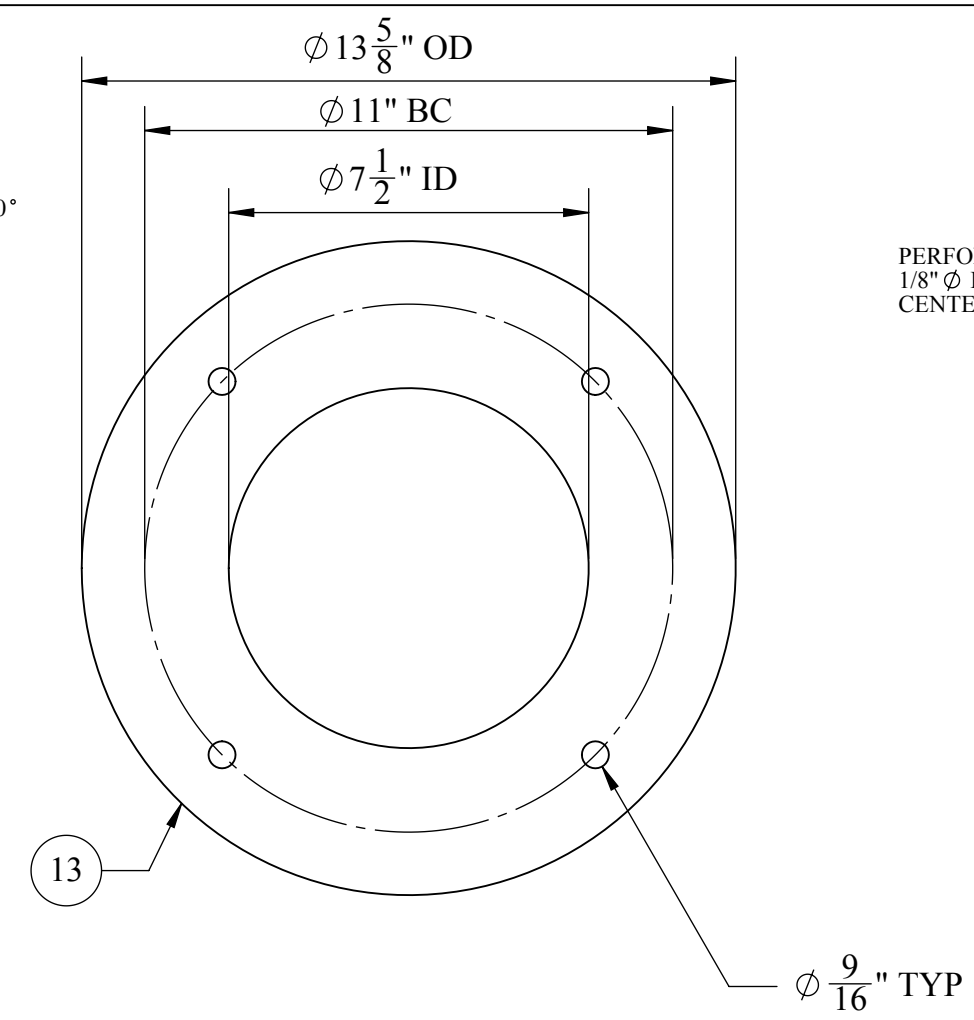
DRAWN BY: ALLEN DETHLOFF
CHK BY: RANDY DOVERSPIKE

PROJECT NO.: TTG-110007
SHEET 1 OF 2 SCALE: 1:4

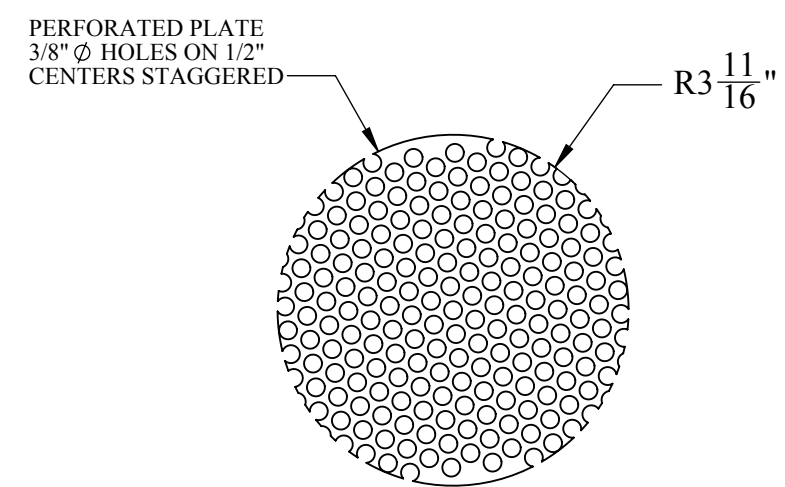
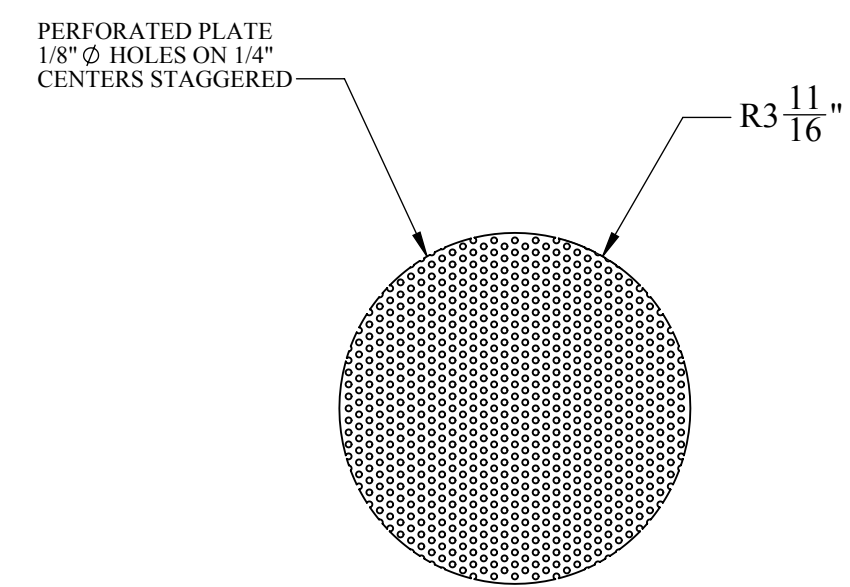
REV.: 3



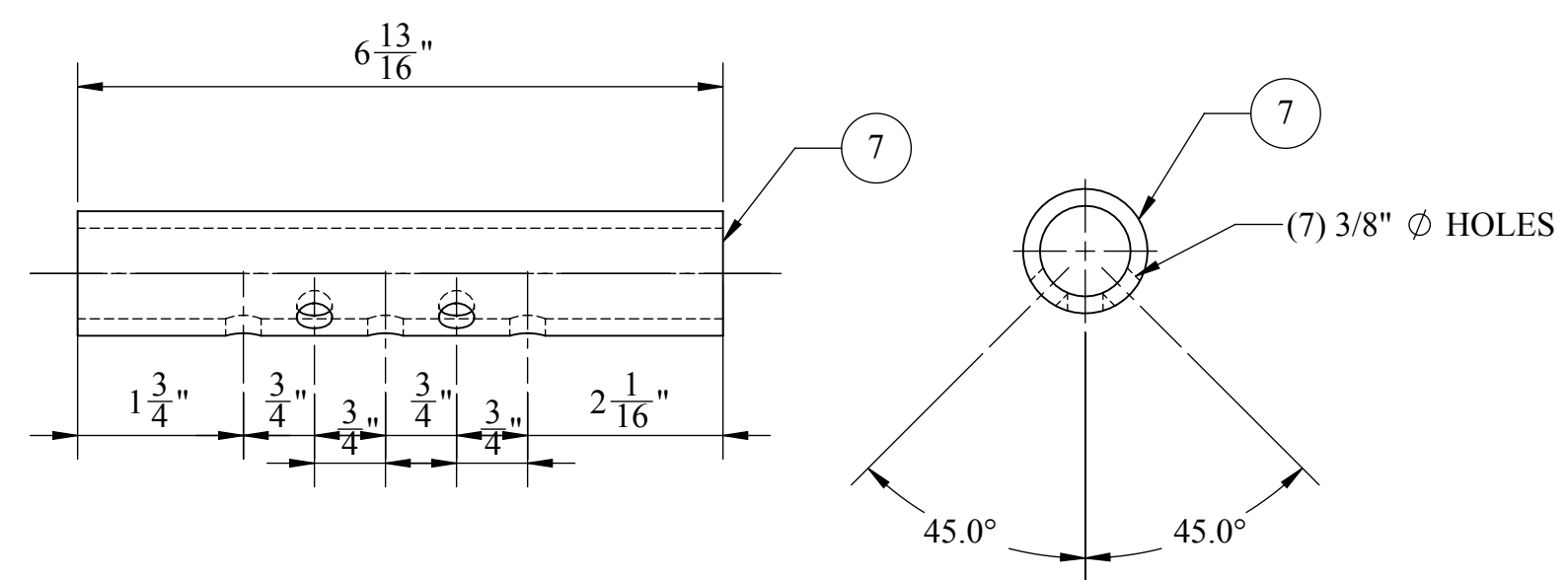
SKIRT OPENING DETAIL
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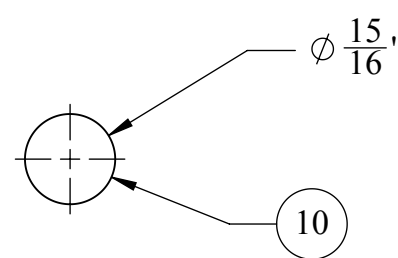
BASE PLATE DETAIL
SCALE: 1:4



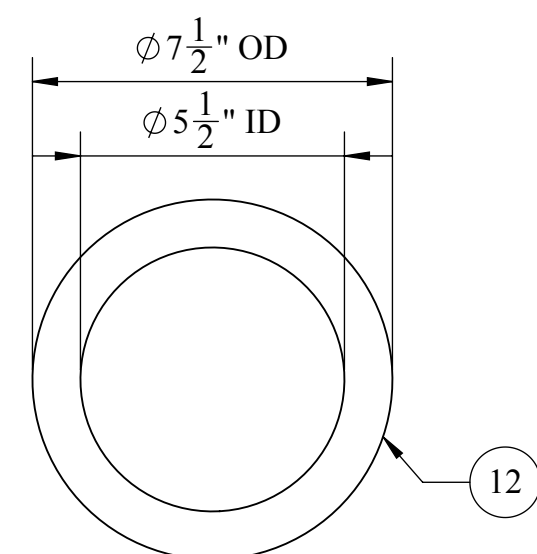
DISTRIBUTION / SUPPORT PLATES DETAIL
SCALE: 1:4



SPARGER DETAIL
SCALE:



SPARGER END CAP DETAIL
SCALE: 1:4



SUPPORT RING DETAIL
SCALE: 1:4



TITLE:		DESICCANT DRYER (NACE) 8 5/8"OD X 4'-0" S/S 1440# DP ASME CODE VESSEL LAYOUT	
CUSTOMER:	ENCANA	LOCATION:	GAINESVILLE, TX
DRAWN BY:	ALLEN DETHLOFF	DWG. NO.:	TTG-110007
CHECK BY:	RANDY DOVERSPIKE	SHEET 2 OF 2	SCALE: NOTED
			REV. 3