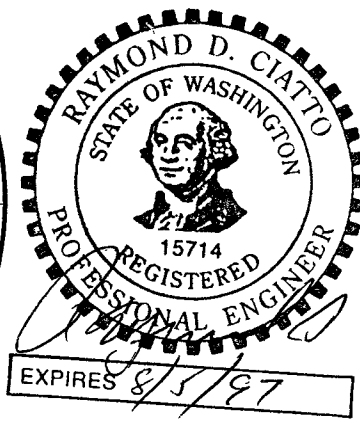
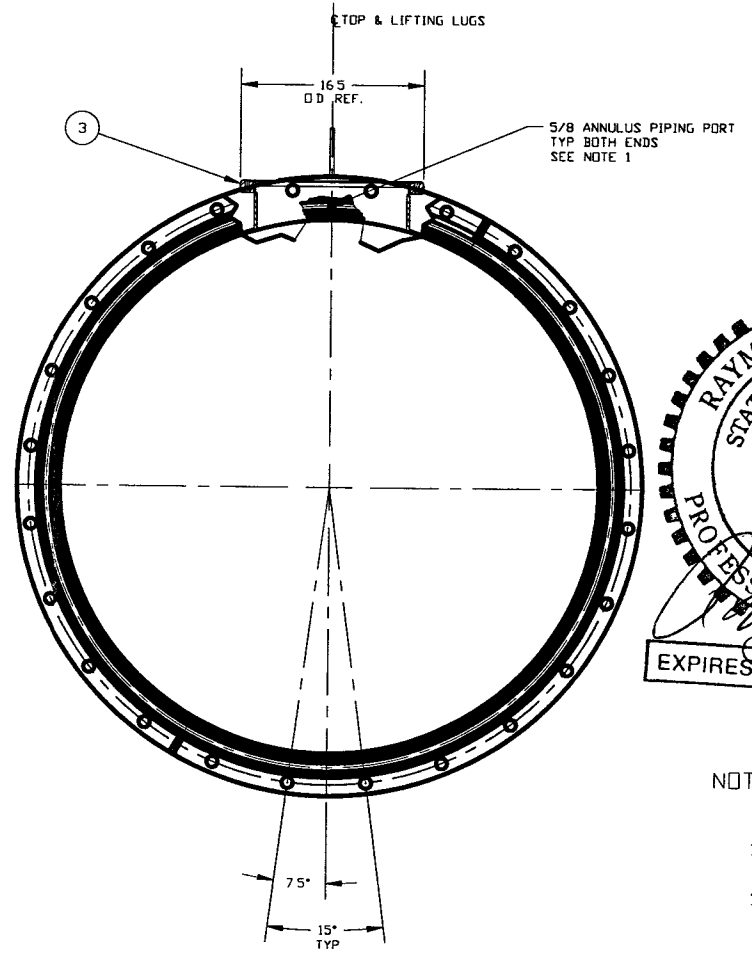
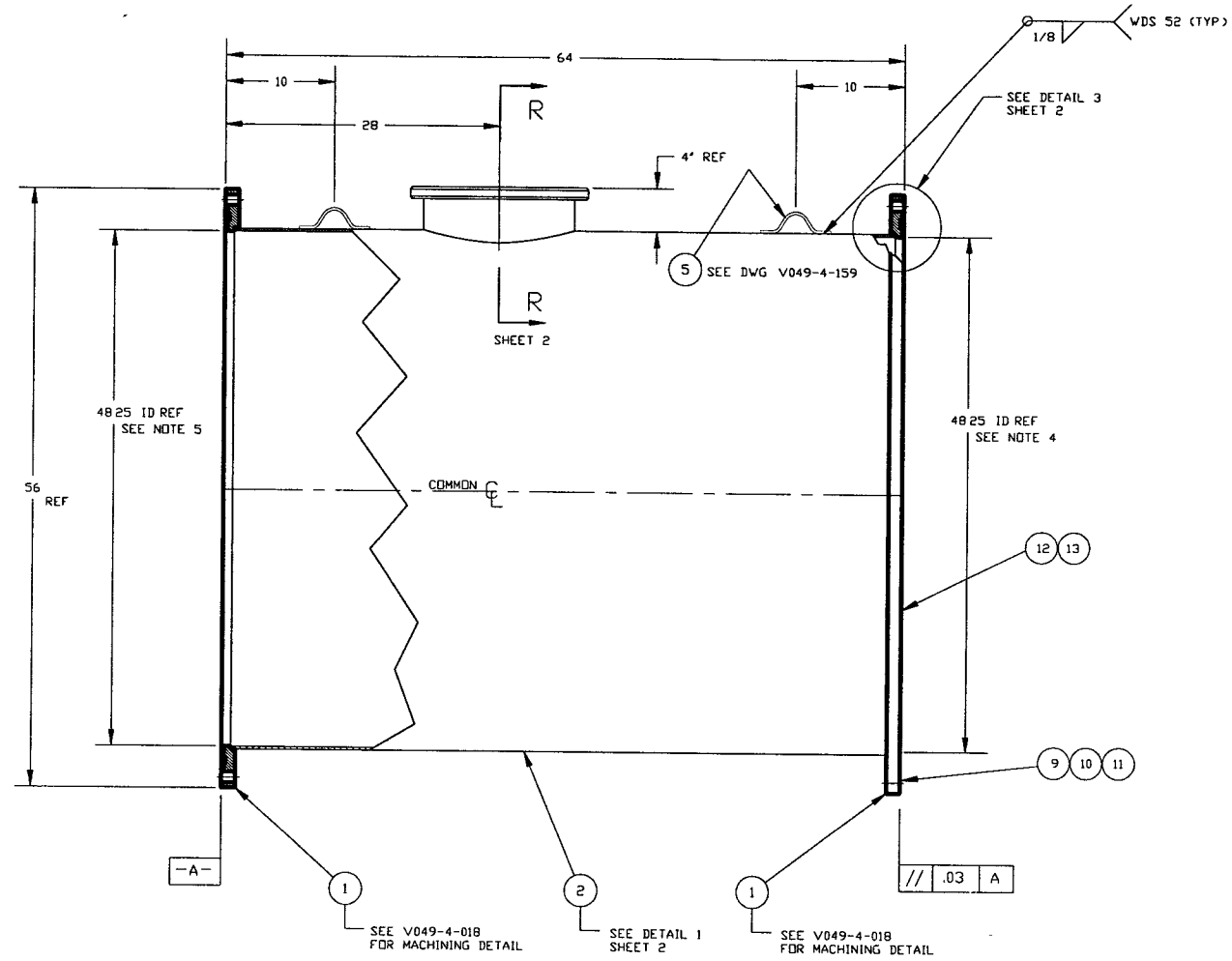


ITEM	PART NUMBER	SUFFIX	QTY	UM	DESCRIPTION
1	V0494018		2	EA	FLANGE 48 1/4" I.D. GROOVED
2	V0494B4P2		1	EA	SHELL, 304/304L SST. 1/4"
3	V049M308		3	EA	HALF NIPPLE, SST, 304L, CONFLAT, 16 1/2" O.D. x 14" O.D. TUBE x 1/4" WT
4					
5	V0494159		2	EA	LIFTING LUG
6	202666		3	EA	BLANK, CONFLAT, SST 304L, 16 1/2" O.D.
* 7	202670		3	EA	GASKET, COP COPH, CONFLAT, 16 1/2" O.D.
8	V049M780		36	EA	BOLT, 18-8 SST, HEX HD 3/8"-16x3" LG
* 9	202678		3	EA	BOLT, SA 193 B7, HEX, 7/8-9UNCx4" LG
* 10	202679		3	EA	NUT, SA 194 B7, HEX, 7/8-9UNC
* 11	202581		3	EA	WASHER, STL, 1 3/4 O.D. x 15/16 I.D. x 1/4 THK
12	V049M024		2	EA	O-RING, VITRON, (PER SPEC V049-2-045)
13	V049M025		2	EA	O-RING, VITRON, (PER SPEC V049-2-045)
14	V049M783		36	EA	NUT, SILICON BRZ HEX HD. 3/8"-16x3" LG.
15	V049M786		72	EA	WASHER, 18-8 SST, FLAT 3/8"

* ELECTROLESS NICKEL PLATE



NOTES:

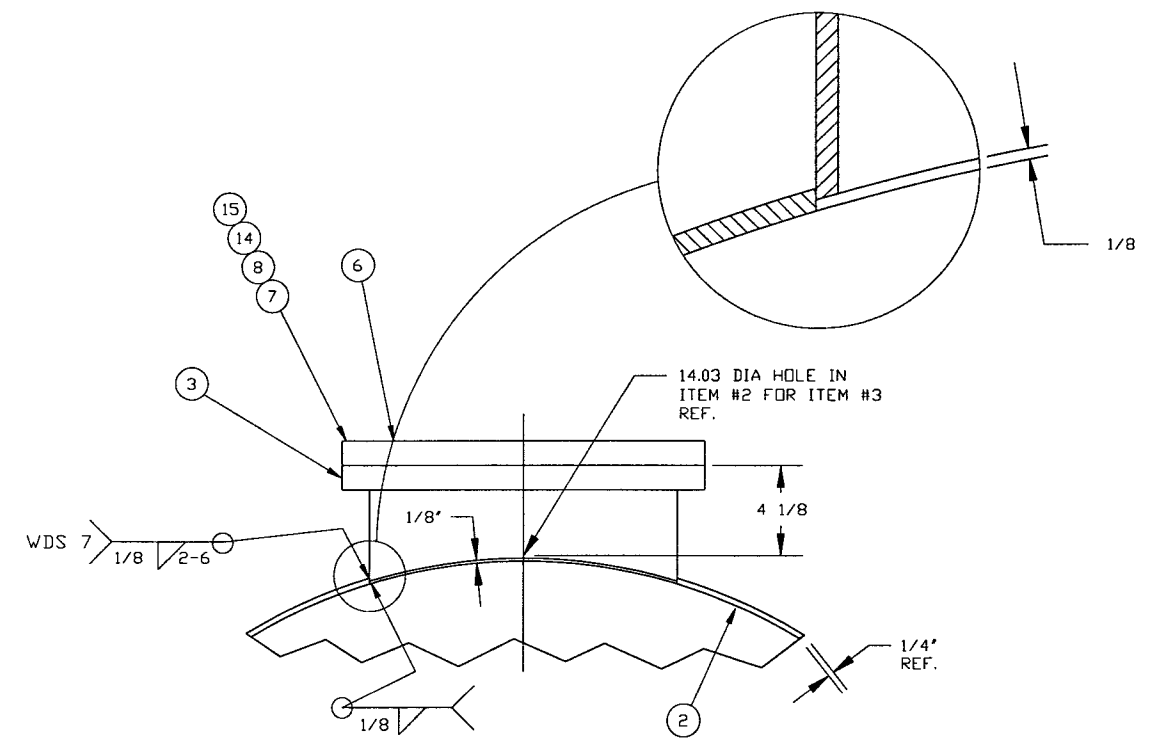
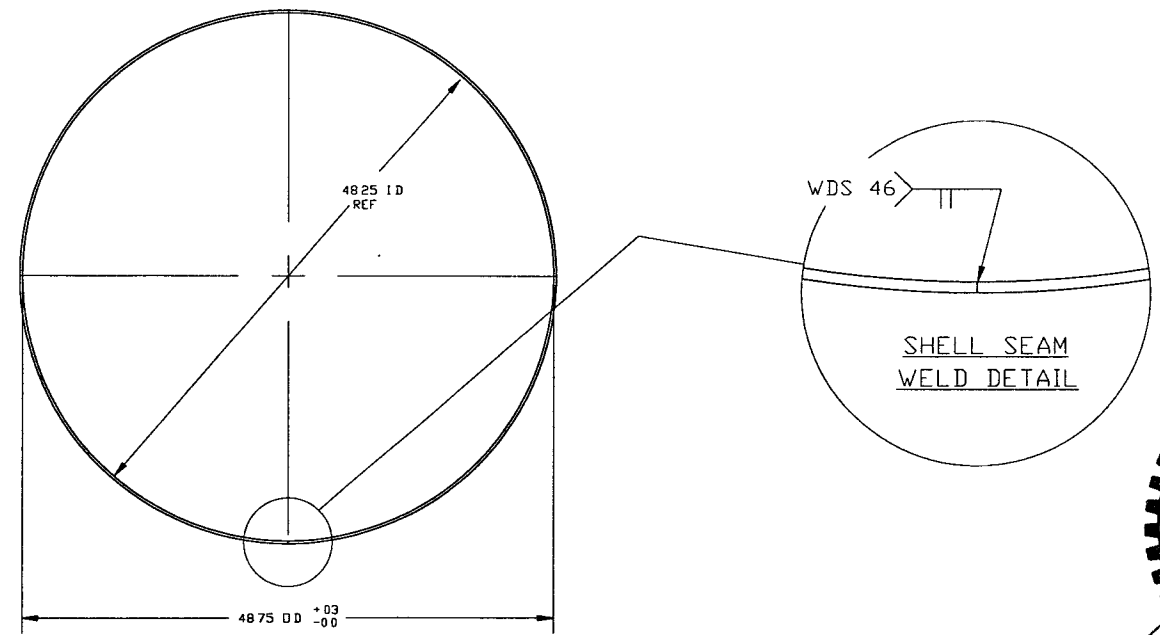
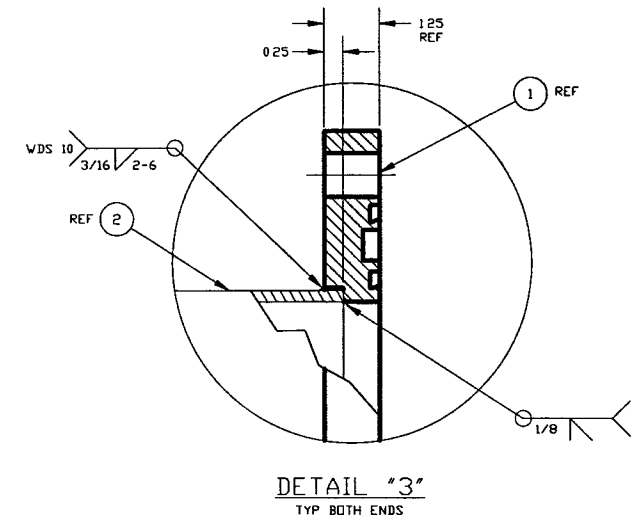
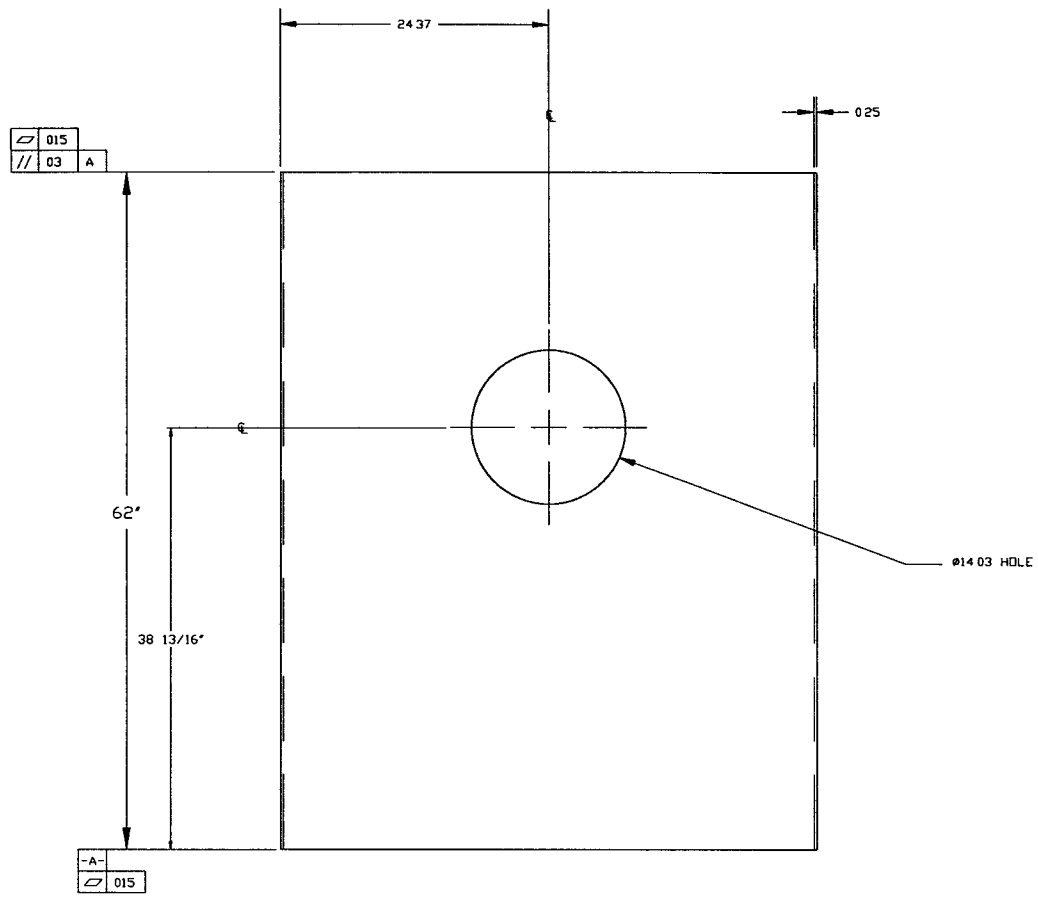
- WDS NO'S REFER TO WELD DATA SPEC. V049-2-084.
- CONFLAT FLANGES ARE TO HAVE PROTECTIVE COVERS AT ALL TIMES DURING & AFTER MANUFACTURING.
- EACH FINISHED SHELL IS TO BE MARKED WITH A SEQUENTIAL PSI SERIAL NUMBER. THE NUMBER IS TO BE MADE FROM THE DRAWING PLUS THE SEQUENTIAL NUMBER. V0494B4-01, 02 ETC.
- PLATES PRIOR TO ROLLING MUST HAVE DIAGONAL CORNER TO CORNER DIMENSIONS WITHIN 1/16" OF EACH OTHER.
- MACHINING & ROLLING PER SPEC V049-2-136.
- LEAK TEST & METHOD PER PSI SPEC. V049-2-014
- CERTIFIED MANUFACTURER'S MATERIAL TEST REPORTS REQUIRED, AS NOTED.
- BOLT HOLES OF ALL FLANGES TO STRADDLE VERTICAL CENTERLINE, +/- .015
- CLEAN PER SPEC. V049-2-015
- DO NOT USE CARBON STEEL BRUSHES OR BRUSHES CONTAMINATED WITH CARBON STEEL ON STAINLESS OR ALUMINUM MATERIAL.
- THE CENTER LINES OF ALL SHELLS AND FLANGES ARE TO LIE ON THE COMMON CENTER LINE WITHIN +/- 1/16.
- SPOOL FABRICATION TO BE IN ACCORDANCE WITH SPEC. V049-2-097.
- FOR FLANGE DETAILS SEE DWG. V049-4-018
- THESE FLANGES EACH INCLUDE AN ANNULAR CHANNEL BETWEEN O-RINGS, MANIFOLD TO A SINGLE PUMPOUT PORT ON EACH CHAMBER, SEE DWG V049-4-061

APPROX. WEIGHT: 1195#

0961154-03-V

<p>PROPRIETARY AND CONFIDENTIAL</p> <p>THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION BELONGING TO PROCESS SYSTEMS INTERNATIONAL, INC. OR ITS AFFILIATES AND SHALL BE USED ONLY FOR THE PURPOSE FOR WHICH IT WAS SUPPLIED. IT SHALL NOT BE COPIED, REPRODUCED OR OTHERWISE USED, NOR SHALL SUCH INFORMATION BE FURNISHED IN WHOLE OR IN PART TO OTHERS EXCEPT IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT UNDER WHICH IT WAS SUPPLIED OR WITH THE PRIOR WRITTEN CONSENT OF PROCESS SYSTEMS INTERNATIONAL, INC. AND SHALL BE RETURNED UPON REQUEST.</p>		<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES</p> <p>TOLERANCES:</p> <p>FRACTIONAL ± .1</p> <p>ANGULAR MACH ± 30° BEND ± 2°</p> <p>TWO PLACE DECIMAL ± .03</p> <p>THREE PLACE DECIMAL ± .015</p> <p>FINISHED SURFACE RMS</p> <p>BREAK CORNERS IN OUT</p> <p>REMOVE ALL BURRS</p>		<p>3 REISSUED FOR FABRICATION</p> <p>2 DESIGN UPDATE/ISSUED FOR FABRICATION</p> <p>1 DESIGN UPDATE / FABRICATION (SHELL ONLY)</p> <p>0 ISSUED FOR FDR</p> <p>P1 PRELIMINARY DESIGN UPDATE</p>		<p>DO NOT SCALE THIS DRAWING</p> <p>USED ON:</p> <p>NEXT ASS'Y:</p>		<p>ISSUE DESCRIPTION</p>		<p>PROCESS SYSTEMS INTERNATIONAL, INC.</p> <p>20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA</p> <p>SPOOL B-4 48.25" ID LIGO VACUUM EQUIPMENT</p>		<p>CAD FILE: 4B4SI</p> <p>SIZE: D</p> <p>DWG. NO.: V049-4-B4</p> <p>SCALE: 1 1/2"=1'-0"</p>		<p>REV 3</p> <p>SHEET 1 OF 2</p>	
DWG NO	DESCRIPTION	DWG. NO	DESCRIPTION	DATE	BY	CHKD	DRWN	DATE	DECH						

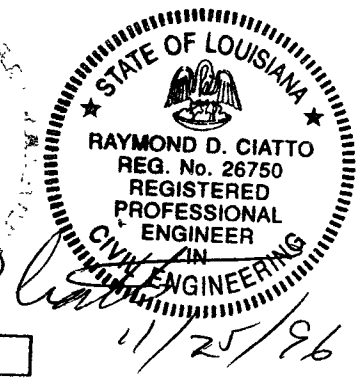
NOV 23, 1996 - 14:27:41



DETAIL "1"
QTY: 1
MAKE FROM V049M166-1

DETAIL "3"
TYP BOTH ENDS

SECTION R-R



PROCESS SYSTEMS INTERNATIONAL INC. 20 WALKUP DR WESTBOROUGH, MASSACHUSETTS 01581 USA			
SPOOL B-4 48.25" ID LIGD VACUUM EQUIPMENT			
CAD FILE 4B4S2	SIZE D	DWG NO V049-4-B4	REV 3
SCALE AS NOTED	SHEET 2 OF 2		

NOV 23 1996 - 148948