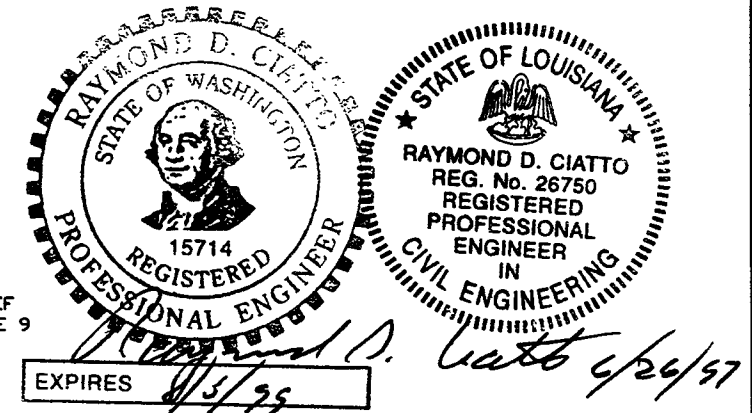


ITEM	PART NUMBER	SUFFIX	QTY	UM	DESCRIPTION
1	V0494020		2	EA	FLANGE, GROOVED, 72 1/4" ID X 80" OD
2	V0494BIP2		1	EA	SHELL, 304/304L SST, 1/4" THK
3		1	25	SF	PLATE, A36, 1 3/8" THK
4		1	2	SF	PLATE, A36, 1 3/8" THK
5	V049M814		1	EA	RING ANGLE, 304 SST 4" X 4" X 1/4"
6		1	28	FT	TUBING, RECT. 4" X 4" X 1/2" A500 GRB
7	V049M759		3	EA	BOLT, 5/8-11 UNC X 5 1/2" LG. A325
8	V049M753		3	EA	NUT, 5/8-11 UNC, A325
9	V049M773		3	EA	LOCK WASHER, 5/8" STL
10			16	EA	ANCHOR MULTI HVA 1" DIA @ 1/4" MIN EMBED W/VASHER
11	V049M852		3	EA	BAR, 4"x3/8", SST 304
12	202678		3	EA	BOLT, SA193 B7, HEX 7/8-UNCx4"LG
13	202679		3	EA	NUT, SA193 B7, HEX 7/8-UNC
14	202581		3	EA	WASHER, STL, 1 3/4 O.D.xd 5/16 I.D.xd 1/4" THK
15	V049M020		2	EA	O-RING, VITRON (PER SPEC. V049-2-045)
16	V049M021		2	EA	O-RING, VITRON (PER SPEC. V049-2-045)
17	V0494BIP17		2	EA	SUPPORT ASSY.
18	V049M822		1	EA	RING ANGLE, 304 SST, 4x3x1/2
19	V0494061		2	EA	3/4" O.D. ELBOW x 2 3/4" O.D. CF.
20	V0494080GSH		1	EA	SHIPPING COVER ASSY
21	V049M740		1	EA	PSI NAME PLATE

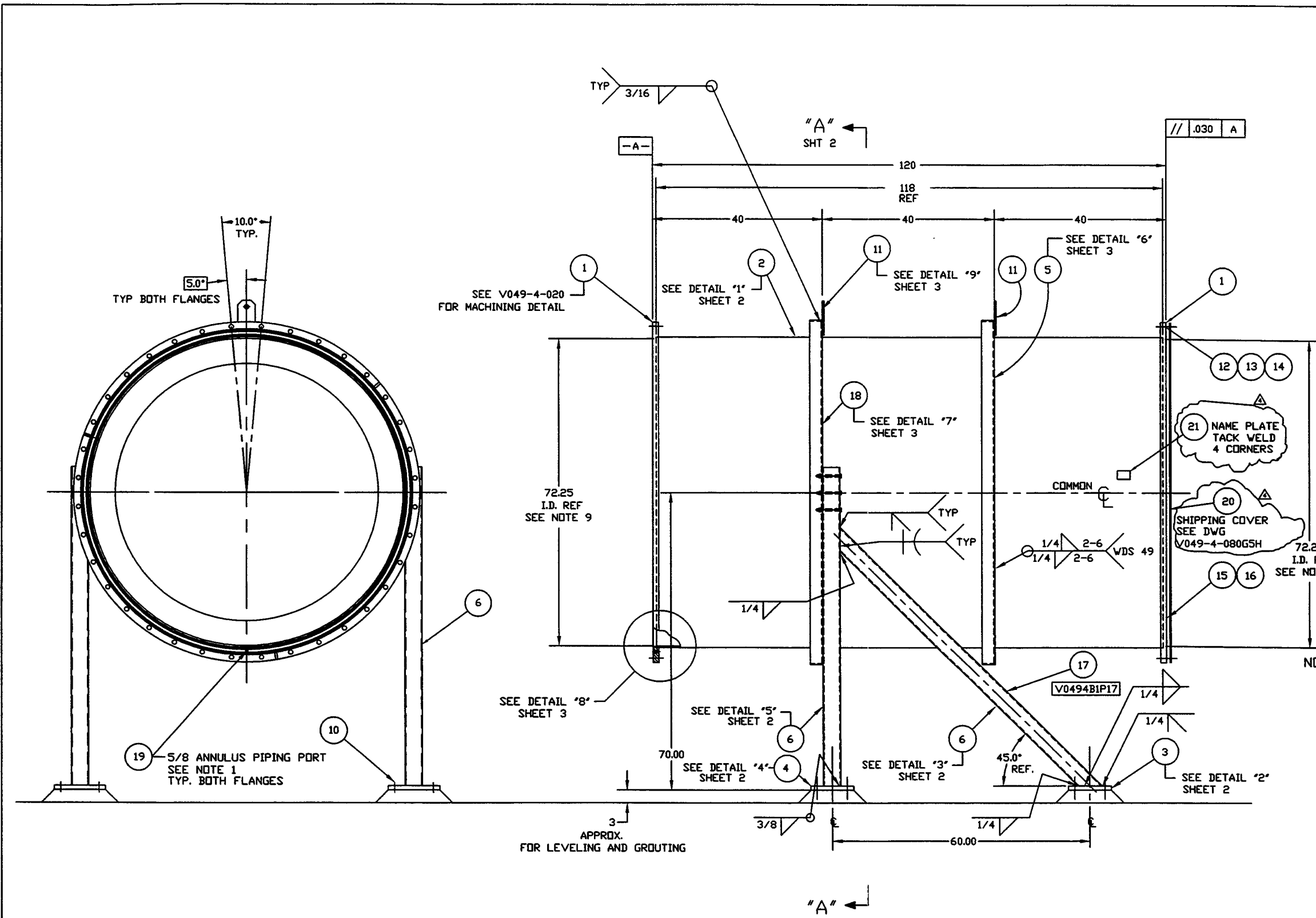
* ELECTROLESS NICKEL PLATE



- NOTES:
14. WDS NO'S. REFER TO WELD DATA SPEC. V049-2-084.
 13. STRUCTURAL STEEL FABRICATION TO BE IN ACCORDANCE WITH SPECIFICATION #V049-2-039.
 12. 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. V0494B1-01, 02 ETC.
 11. PLATES PRIOR TO ROLLING MUST HAVE DIAGONAL CORNER TO CORNER DIMENSIONS WITHIN 1/16" OF EACH OTHER.
 10. MACHINING & ROLLING PER SPEC V049-2-136.
 9. THE CENTER LINES OF ALL SHELLS AND FLANGES ARE TO LIE ON THE COMMON CENTER LINE WITHIN +/- 1/16".
 8. LEAK TEST & METHOD PER PSI SPEC: V049-2-014.
 7. CERTIFIED MANUFACTURER'S MATERIAL TEST REPORTS REQUIRED AS NOTED.
 6. BOLT HOLES OF ALL FLANGES TO STRADDLE VERTICAL CENTERLINE, +/- .015
 5. CLEAN PER SPEC: V049-2-015
 4. DO NOT USE CARBON STEEL BRUSHES OR BRUSHES CONTAMINATED WITH CARBON STEEL ON STAINLESS OR ALUMINUM MATERIAL.
 3. SPOOL FABRICATION TO BE IN ACCORDANCE WITH SPEC. V049-2-097.
 2. FOR FLANGE DETAILS SEE DWG V049-4-020.
 1. THESE FLANGES EACH INCLUDE AN ANNULUS CHANNEL BETWEEN O-RINGS, MANIFOLD TO A SINGLE PUMPOUT PORT ON EACH CHAMBER, SEE DWG V049-4-061

APPROX. WEIGHT: 3528#

TAG NO'S: WB-1A, WB-1B



SYMBOL	CHARACTERISTIC	UNLESS OTHERWISE SPECIFIED
	FLATNESS	INCHES ARE IN INCHES
	CYLINDRICITY	TOLERANCES & 1
	PARALLELISM	UNLESS OTHERWISE SPECIFIED
	PERPENDICULARITY	UNLESS OTHERWISE SPECIFIED
	ANGULARITY	UNLESS OTHERWISE SPECIFIED
	TRUE POSITION	UNLESS OTHERWISE SPECIFIED
	CONCENTRICITY	UNLESS OTHERWISE SPECIFIED

REV	DESCRIPTION	ISSUE DESCRIPTION
4	REISSUED FOR FAB/SHIPPING AS NOTED	
3	REISSUED FOR FABRICATION	
2	DESIGN UPDATE/ISSUED FOR FAB	
1	DESIGN UPDATE / FABRICATION (SHELL ONLY)	
0	ISSUED FOR FAB	
P1	PRELIMINARY	

DWG. NO.	DESCRIPTION	DWG. NO.	DESCRIPTION

DATE	BY	CHKD	DRWN	DATE	DESN
5/15/97	SPIDER				
11/22/96	PV				
10/9/96	PV				
10/1/96	PV				
4/29/96	DA				
4/13/96	NAA				

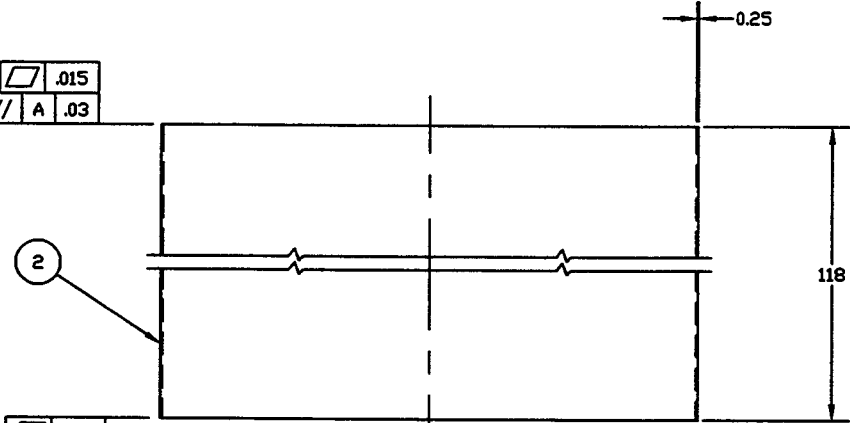
PROCESS SYSTEMS INTERNATIONAL INC. 20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA

SPOOL B-1 72.25" ID LIGO VACUUM EQUIPMENT

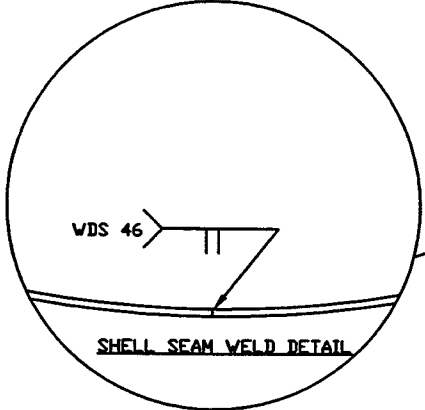
SCALE 1-1/2" = 1' SHEET 1 OF 3

LIGO-D961150-04-V

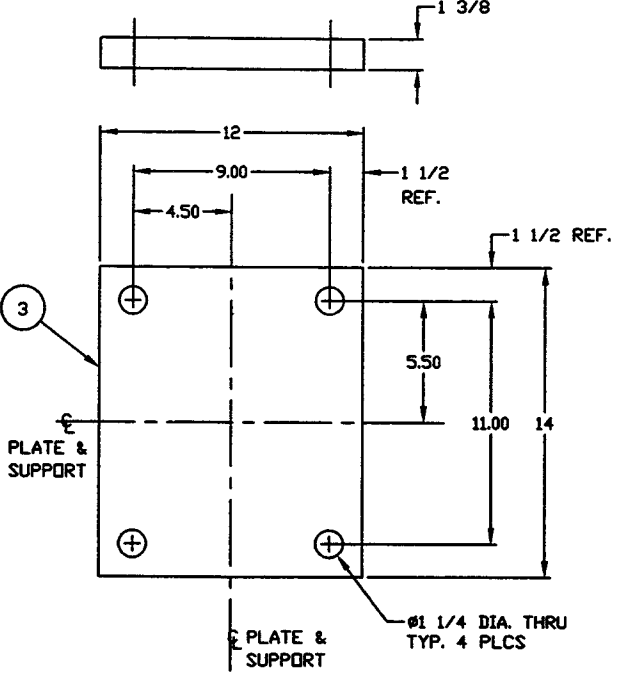
\square .015
// A .03



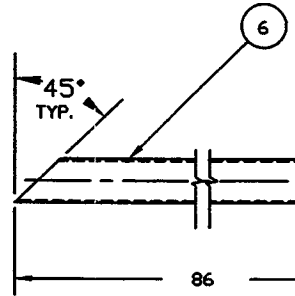
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-A-



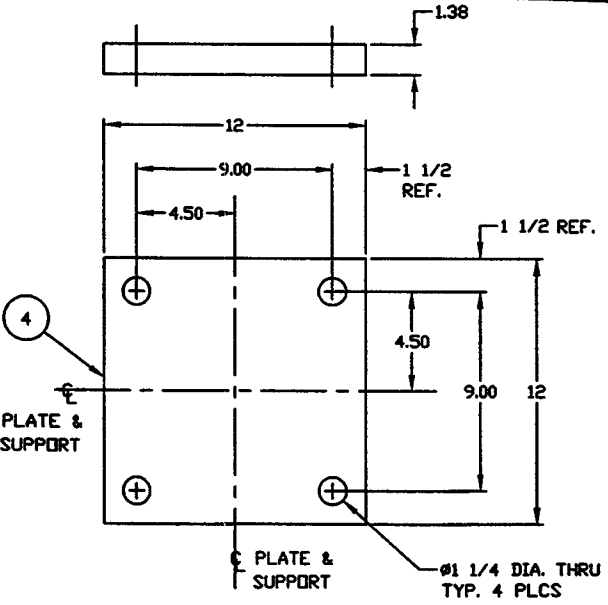
DETAIL "1"
QTY: 1
MAKE FROM V049M154-1



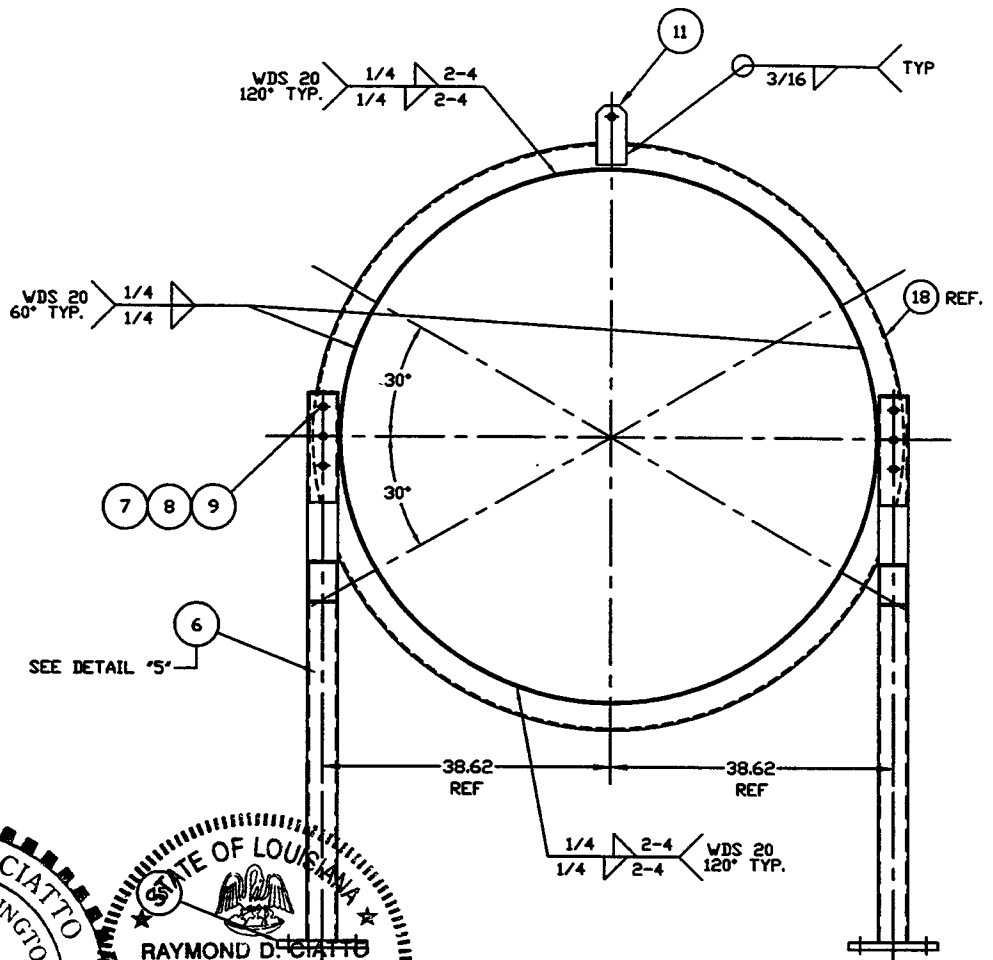
DETAIL "2"
QTY: 2



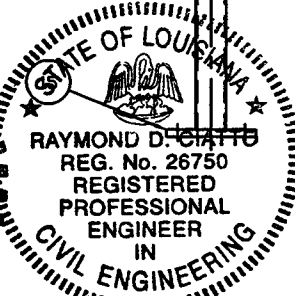
DETAIL "3"
QTY: 2



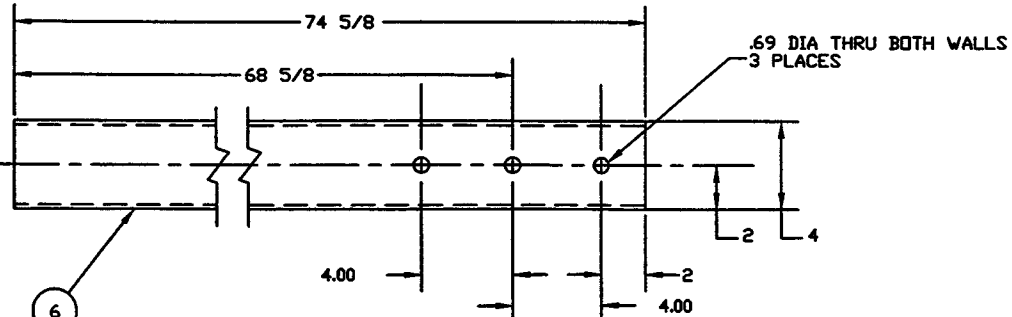
DETAIL "4"
QTY: 2



SECTION "A"-A"



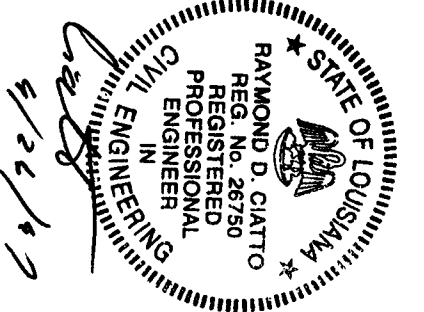
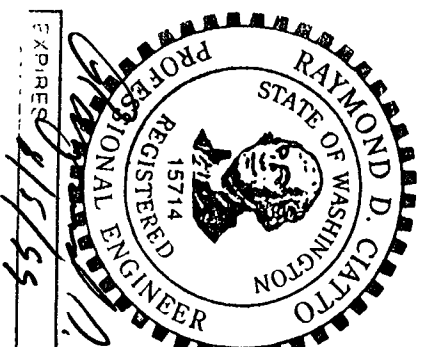
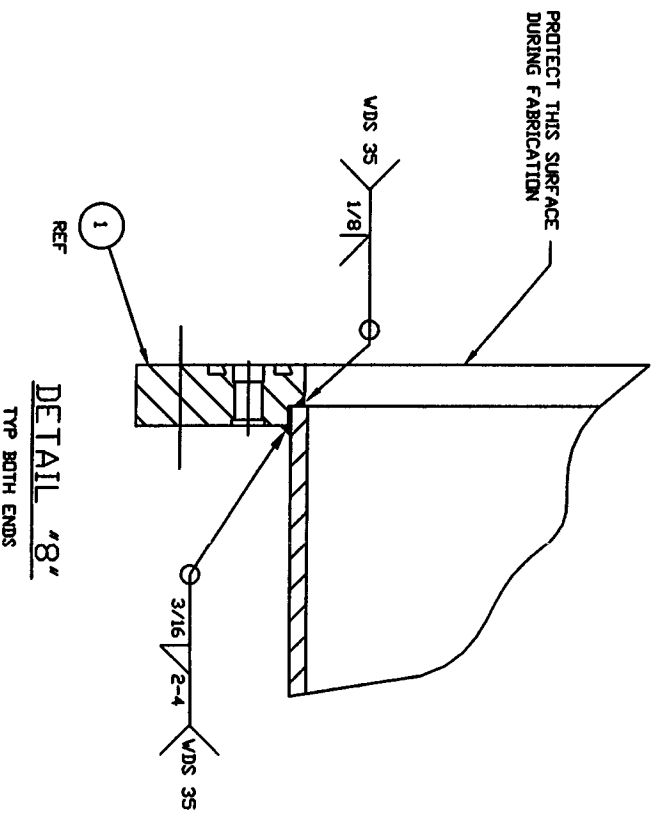
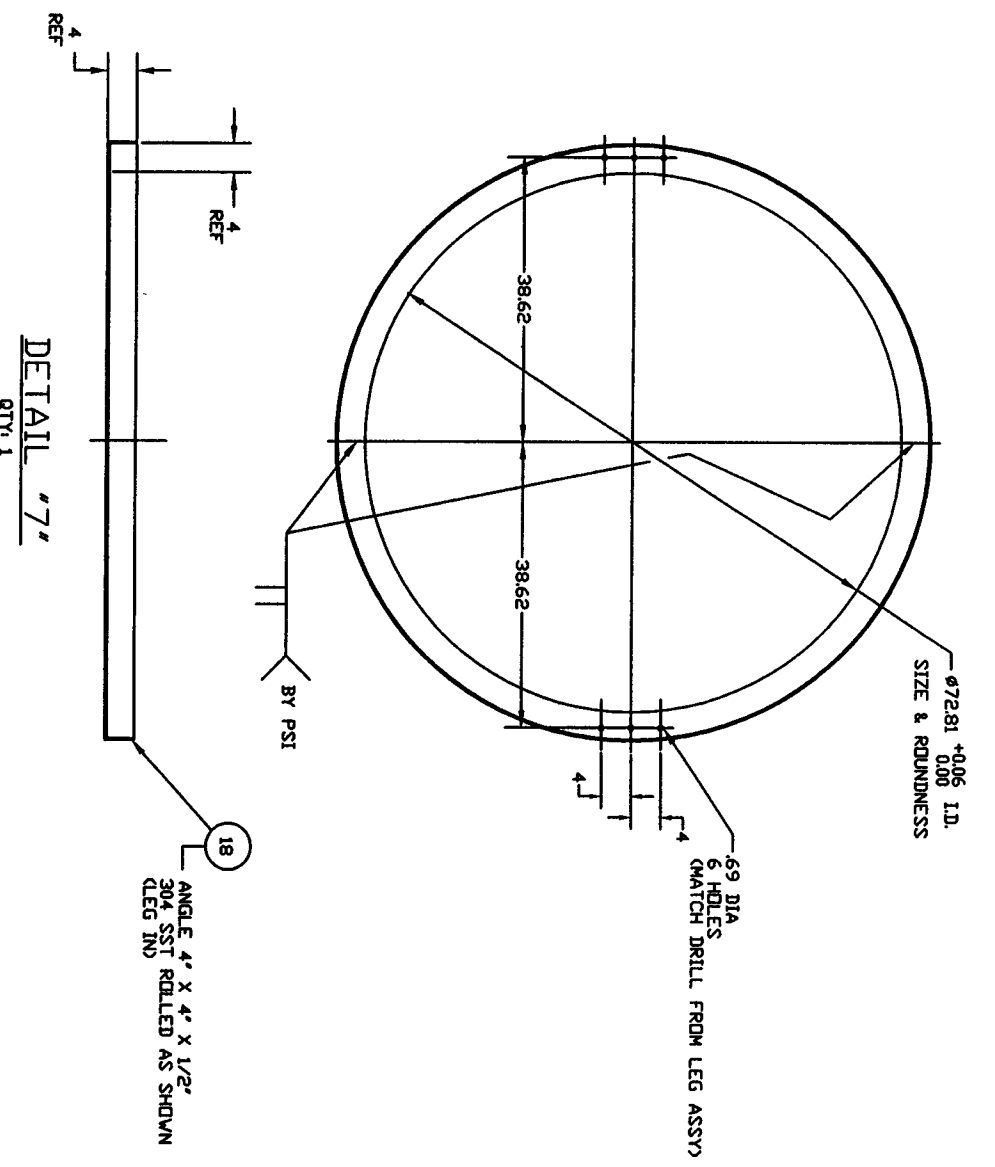
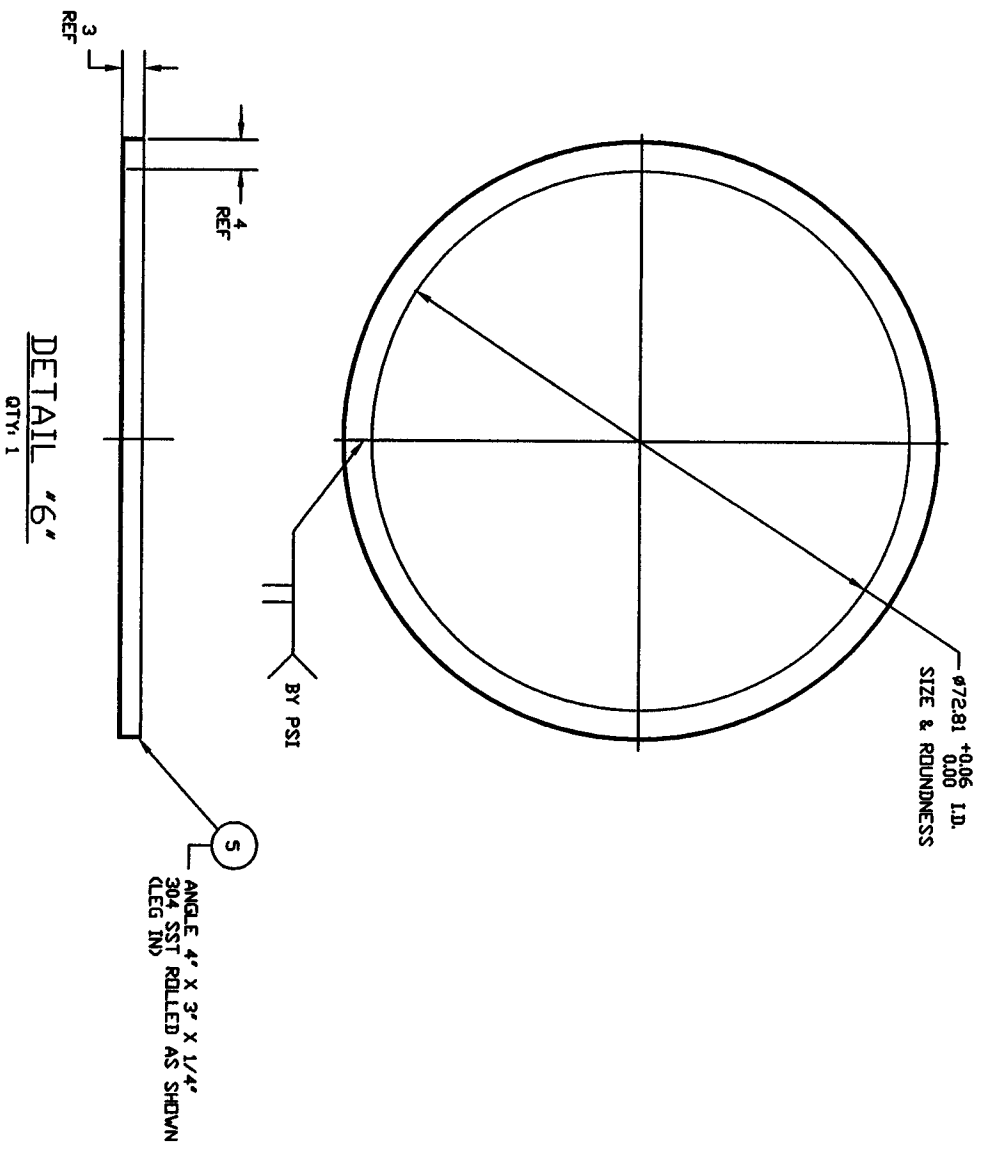
Raymond D. Ciatto
EXPIRES 4/5/99



DETAIL "5"
QTY: 2

PROCESS SYSTEMS INTERNATIONAL INC. 30 WALSH DR. WESTBOROUGH, MASSACHUSETTS 01581 USA			
SPOOL B-1 72.25" ID LIGO VACUUM EQUIPMENT			
CAD FILE V0494B1/4B1S2	SIZE D	DWG. NO. V049-4-B1	REV. 4
SCALE AS NOTED	SHEET 2 OF 3		

NOV 25, 1996 - 140610



PROCESS SYSTEMS INTERNATIONAL, INC. 20 BUILDING DR. WASHINGTON, MASSACHUSETTS 01981 USA	
SPQ01L B--1 72.25" I.D. LIQD VACUUM EQUIPMENT	REV. 4 DATE 1/24/99
CDR FILE V0494B/4B153 SIZE D SHEET NO. V049-4-B1 AS NOTED	SHEET 3 OF 3