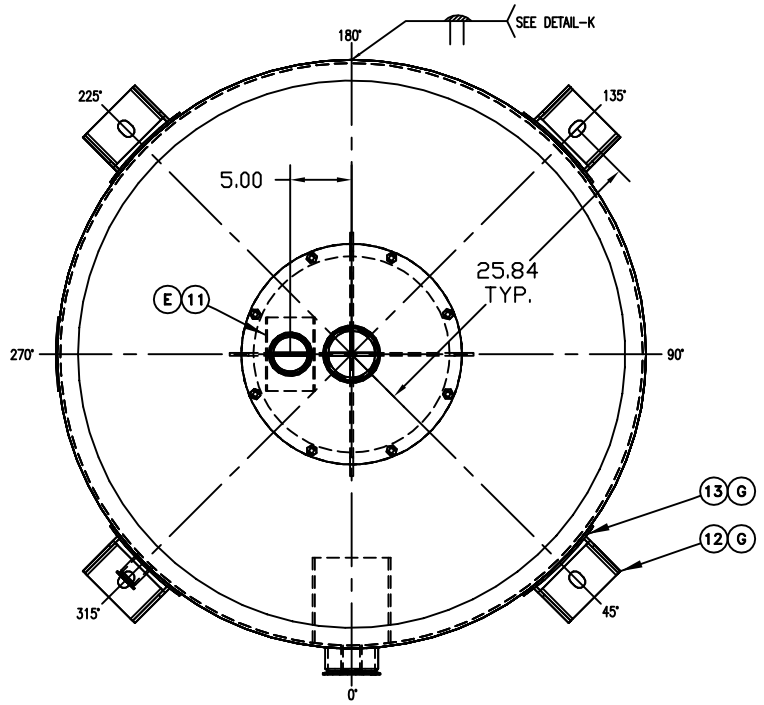

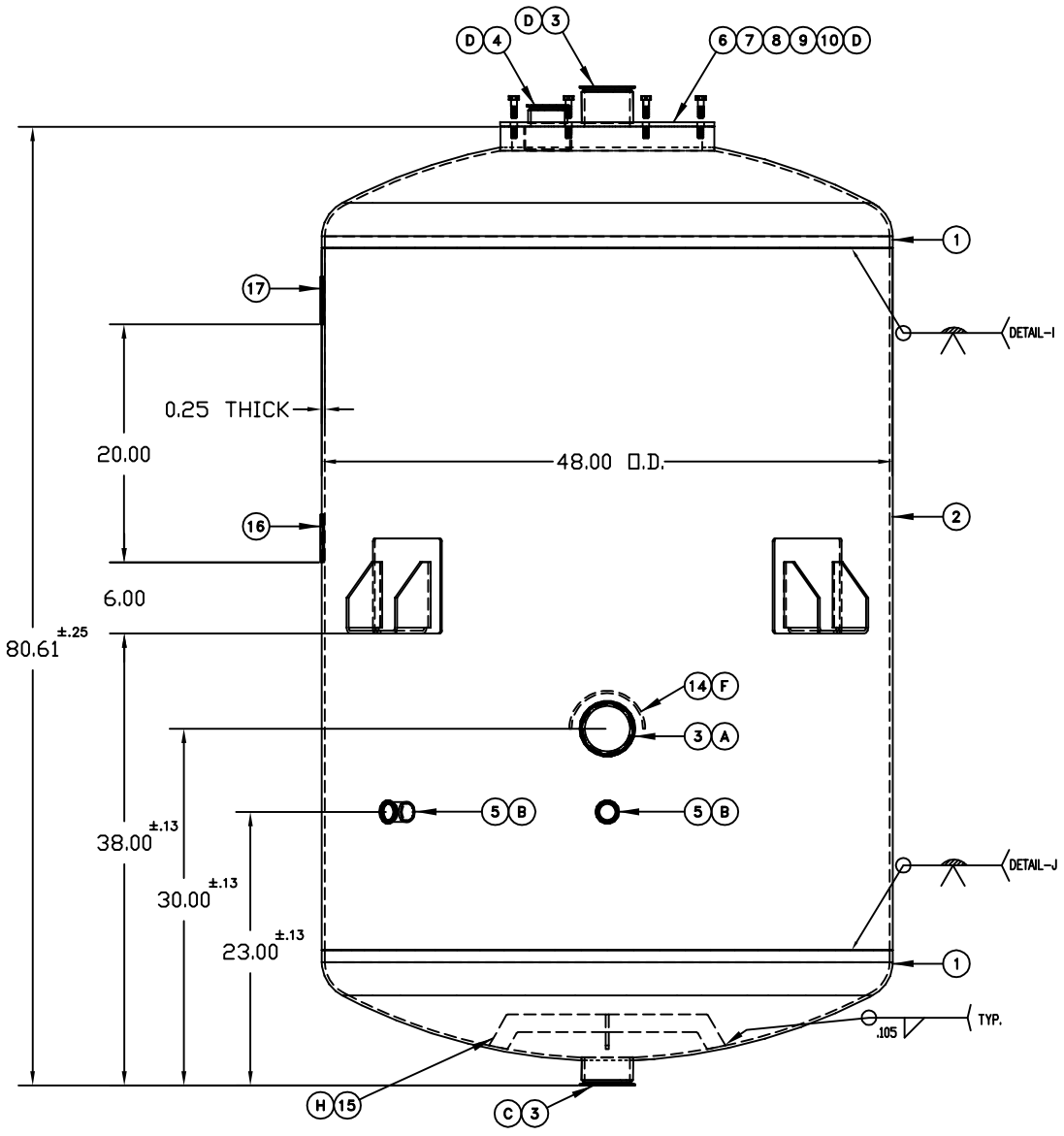

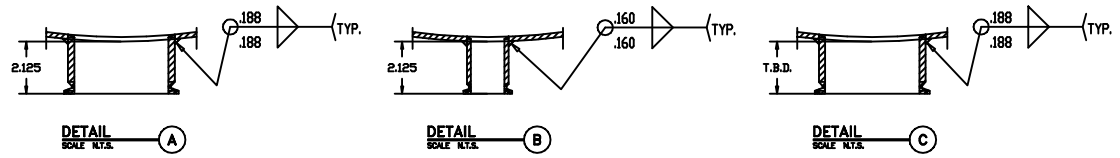

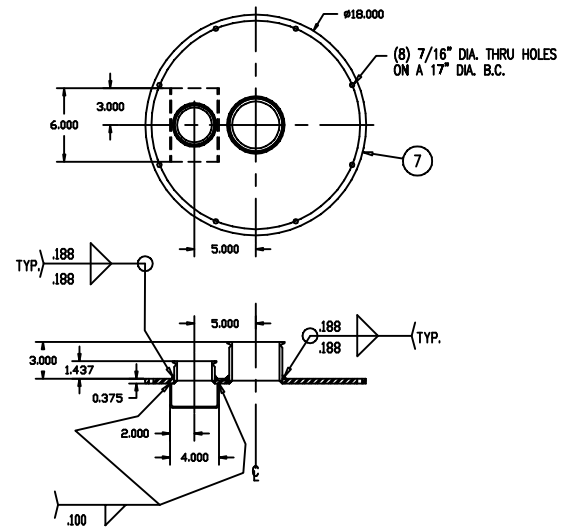

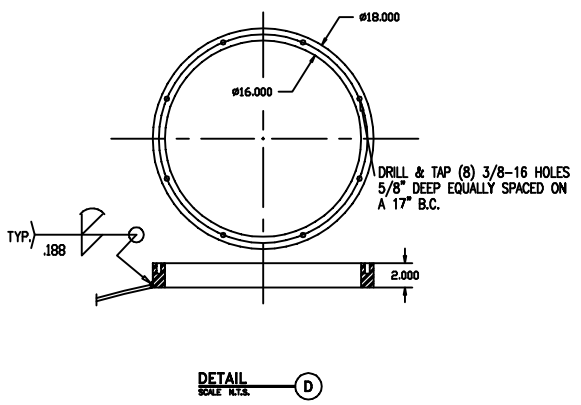

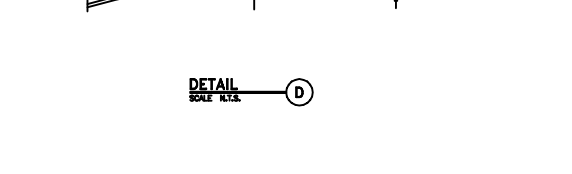

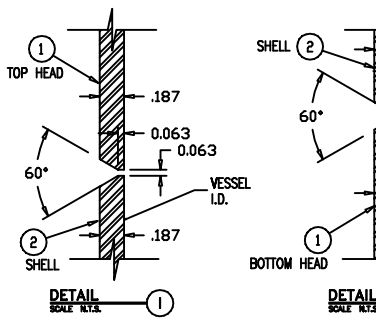

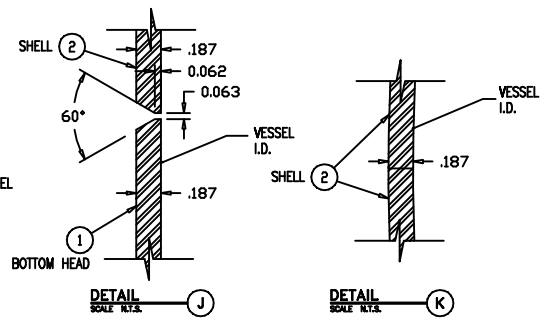

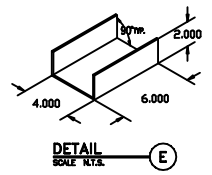

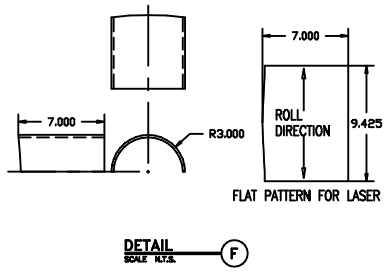

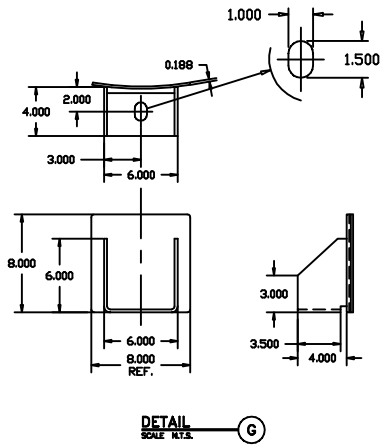

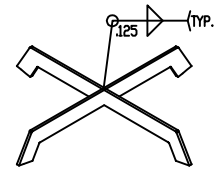

LONGITUDINAL AND CIRCUMFERENTIAL JOINT DETAILS

BILL OF MATERIAL

ITEM	QTY.	DESCRIPTION	MATERIAL	HEAT No.
1	2	HEAD ASME F&D 3/16" THK. x 48" O.D.	SA-240-Tp316L	
		48" DR., 3" KR., 1" S.F.		
2	1	SHELL 3/16" THK. x 48" O.D.. x CUT TO SUIT	SA-240-Tp316L	
3	3	FERRULE 4" HEAVY WALL x 4"LNG.	SA-312-Tp316L	
4	1	FERRULE 3" HEAVY WALL x 3-3/4"LNG.	SA-479-Tp316L	
5	2	FERRULE 1-1/2" HEAVY WALL x 3" LNG.	SA-479-Tp316L	
6	1	FLANGE 16" I.D. X 18" O.D. X 2" THICK	SA-240-Tp316L	
7	1	COVER 3/8" THK. x 18"OD.	SA-240-Tp316L	
8	1	GASKET .125" TH X 16" I.D. X 18" O.D.	VITON	
9	8	WASHER 3/8"	F436	
10	8	BOLT 3/8"-16 x 3/4" LG.	MONEL 400	
11	1	FORMED CHANNEL (7 GA.)	SA-479-Tp316L	
12	4	SUPT. LUGS 1/4" THK. x 4" x 6"	SA-240-Tp316L	
13	4	PLATE 7 GA. x 8" x 8" ROLLED TO FIT SHELL	SA-240-Tp316L	
14	1	DEFLECTOR PLATE 7GA X 3" RAD. X 7" LONG	SA-240-Tp316L	
15	1	VORTEX BREAKER 1/4" THK X 17"ø TOP HEAD CUTOUT	SA-240-Tp316L	
16	1	ASME NAMEPLATE	SA-240-Tp316L	
17	1	H.A.T. TANK ID TAG	SA-240-Tp316L	

NOZZLE SCHEDULE

I.D.	QTY	SIZE	NECK THK.	NECK O.D.	DESCRIPTION	SERVICE	COMMENTS
A	2	4"	.255	4.350	TRI-CLAMP FERRULE	X	X
B	2	1.5"	.160	1.690	TRI-CLAMP FERRULE	X	X
C	1	4"	.255	4.350	TRI-CLAMP FERRULE	X	X
D	1	3"	.235	3.310	TRI-CLAMP FERRULE	X	X

GENERAL NOTES

1. ALL CUSTOMER SUPPLIED PARTS MUST HAVE PROPER IDENTIFICATION, PARTIAL DATA REPORT (AS REQUIRED) AND CERTIFIED MILL TEST REPORTS BEFORE BEING WELDED TO VESSEL.
2. THE BOLT HOLES ON ALL FLANGED NOZZLES ARE TO STRADDLE THE NORMAL CENTERLINES (U.N.O.)
3. ALL TOLERANCES ARE IN ACCORDANCE WITH THE LATEST EDITION OF THE " ASME " BOILER AND PRESSURE VESSEL CODE, SECTION VIII, DIVISION 1, 1998, CURRENT ADDENDA.
4. DIMENSIONAL TOLERANCE SHALL BE ±.125" (U.N.O.)
5. VESSEL SHALL BE THROUGHLY CLEANED OF MILL SCALE, OIL, GRINDING DUST, WELD SPLATTER AND ANY OTHER FOREIGN MATTER PRIOR TO HYDROTESTING
6. SUITABLE PRESSURE AND/OR VACUUM RELIEF DEVICES MUST BE INSTALLED BY CUSTOMER FOR OPERATION OF VESSEL AND/OR HEAT TRANFER SURFACE.

DESIGN DATA	TANK	JACKET & COIL
DESIGN PRESSURE	ATMOS. / FULL VACUUM	X
DESIGN TEMPERATURE	250° F	X
MIN. DESIGN METAL TEMP. & PRESSURE	-20°F AT ATMOS.	X
HYDROSTATIC TEST PRESSURE	N/A	X
A.S.M.E. "U" STAMPED REQ'D	NO	X
NATIONAL BOARD No. REQ'D	NO	X
RADIOGRAPHY	NONE	X
JOINT EFF.	N/A N/A	X
CORROSION ALLOWANCE	NONE	X

FINISH NOTES

INTERNAL:

20 RA WITH THE WELDS GROUND SMOOTH TO MATCH

EXTERNAL:

32 RA WITH THE WELDS GROUND SMOOTH TO MATCH

WELDING NOTES

1. USE WELDING PROCEDURE WPST8-2. AND/OR WPSM8-6.
2. ALL WELDING TO BE DONE BY " ASME " CERTIFIED WELDERS.
3. WELDING PROCEDURES ARE IN ACCORDANCE WITH " ASME " SECTION VIII, DIVISION 1, UW-28.
4. WELD SHALL BE NEAT IN APPERANCE, FREE OF SLAG, UNDERCUT AND OTHER DEFECTS.
5. WELD SIZES SHOWN ARE THE REQUIRED MINIMUM SIZES AFTER ALL POLISHING IS COMPLETED.

EMPTY WT: 1200# SERIAL NUMBER:

FULL WT: 5800# NATIONAL BOARD NUMBER: N/A

WIND LOAD: NONE SEISMIC ZONE: N/A

M	AS-BUILTS	11-11-02	CD	E	CHANGED ITEM 1 TO 14MPV-1 1/2"	11-27-95	CD
L	IMPROVED VORTEX BREAKER	07-11-01	SM	D4	REVISED MOUNTING PAD DESCRIPTION	11-02-95	CD
K	CHANGED FROM 316L TO 304 S.S.	09-22-99	SM	D3	CHANGED ITEM C TO 14MPV-4"	10-17-95	CD
J	ADJUSTED TANK LUG DIMENSIONS / U.T.	09-22-99	SM	D2	ADDED 1/2" HALF COUPLING	10-17-95	CD
I	ADDED 1 1/2-14MPV FERRULE PER CUST.	09-18-98	SM	D1	ADDED 7GA DEFLECTOR	10-17-95	CD
H	CORRECTED IB/OB DIMENSIONS	04-06-98	MT	C	ADDED 11GA. CHANNEL TO MOUNTING PLATE	07-26-95	CD
G2	REVISED BOM	01-10-97	CD	B	ADDED 2" FERRULE AT TOP	02-27-95	CD
G1	REMOVED (2) 14MPV-2-S	01-10-97	CD	A	WAS 24.000"	01-19-95	CD
F	MODIFIED VORTEX BREAKER	06-13-96	CD	REV		DATE	BY

P	UPDATED	2-23-2006	SM
O	CHANGED MATERIAL TO 316L	2-18-2004	SM
N	UPDATED DRAWING	12-13-02	SM

48" O.D. TANK

MAT'L	INTERIOR FINISH	EXTERIOR FINISH
316L	32 RA (150 GRIT)	32 RA (150 GRIT)

Holland APPLIED TECHNOLOGIES
BURR RIDGE, ILLINOIS 60527
(630) 325-5130 (630) 654-2518 FAX

DESIGNED BY	Moore
DRAWN BY	Moore
DATE DRAWN	7/24/2001
APPROVED BY	Moore
SCALE	1
SHEET #	01
REVISION #	P
DRAWING NUMBER	95011