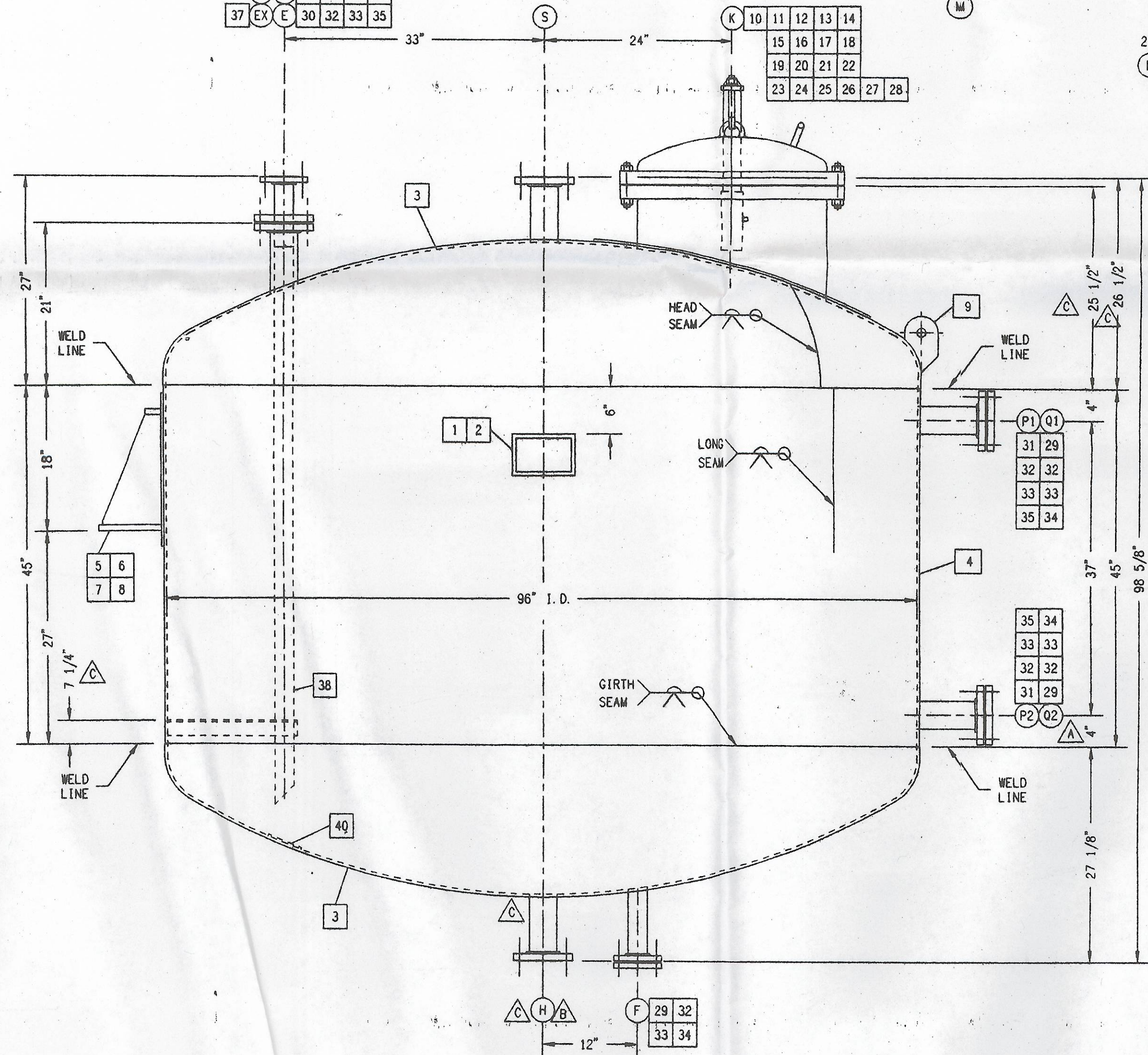
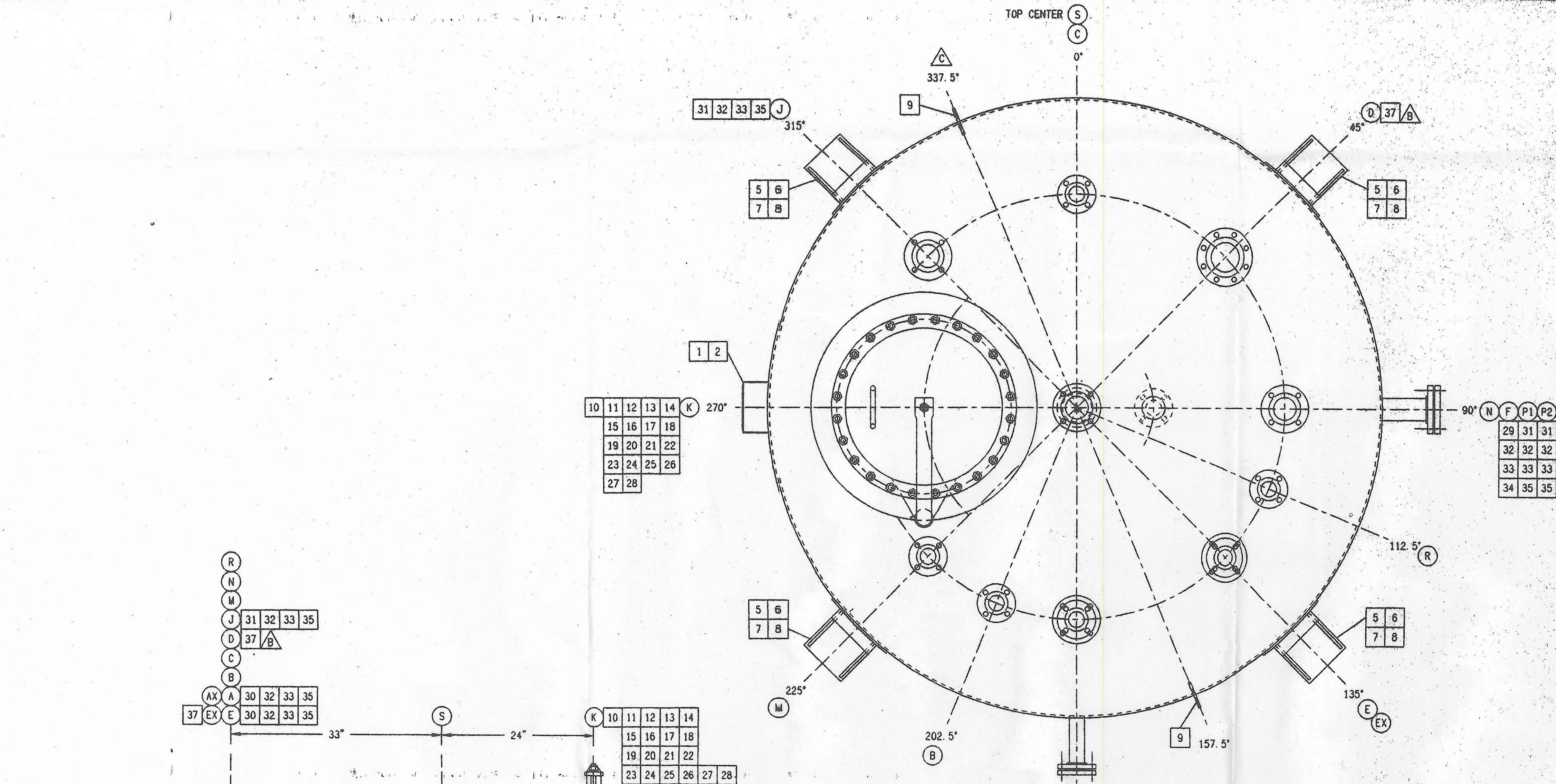
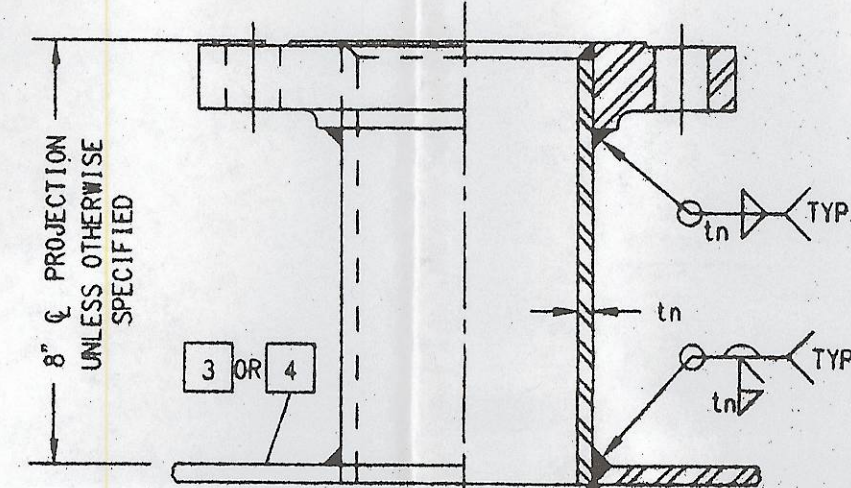




ELEVATION VIEW



TYPICAL NOZZLE
DETAIL

NOZZLE SCHEDULE

MARK	QUAN	SIZE	SERVICE	DESCRIPTION	MATERIAL
AX	1	3	INSERTION	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
A	1	2	LIQUID W/ VENT	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
B	1	2	PRESS. TRANS.	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
C	1	2	RF	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
D	1	4	VENT	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
EX	1	3	INSERTION	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
E	1	2	COND.	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
H	1	2	STEAM OUT W/BLIND	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
J	1	3	SPARE W/BLIND	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
K	1	24	MANWAY	1/4" PL COLLAR AND COVER 1/4" X 3/4" PL	SA312-316L
L	1	2	LEVEL SWITCH	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
P1	1	3	REGCIRCULATION	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
P2	1	3	SPACE W/BLIND	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
Q1	1	2	LEVEL GA. W/BLIND	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
Q2	1	2	LEVEL GA. W/BLIND	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
S	1	3	SPACE W/BLIND	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L
	1	3	VENT	SCH. 40S PIPE AND SA182-150W R.F.S.D. FLANGE	SA312-316L

BILL OF MATERIAL

MARK	QUAN	ITEM	DESCRIPTION	MATERIAL
	1	DATA PLATE	#16 GA. X 4" X 7"	SA240-304
	2	DATA PLATE BRACKET	#12 GA. X 5" X 12 5/8" (BREAK 2 1/2" X 8" X 1 1/2" O.S.)	SA240-304
	3	HEADS	5/8" PL. X 95" I.D. X 90" D.R. X 8" K.R. X 1 1/2" S.F. X	SA240-316L
	4	1 SHELL	1/8 3/4" F.I.D. X 106 1/2" C.B. X STYLE "C" EDGING	SA240-316L
	5	1 LUG WELD PADS	5/16" PL. X 12" X 19" W/1/4" F.N.P.T.	SA240-304
△	6	4 LUG TOP PLATES	3/4" PL. X 2" X 8"	SA240-316L
	7	8 LUG GUSSETS	3/8" PL. X 13 1/2" X 7 1/2" (GUT AS SHOWN)	SA240-304
△	8	4 LUG BASE PLATES	3/4" PL. X 8" X 8"	SA240-304
	9	2 LIFTING LUGS	3/8" PL. X 4 3/4" X 7 1/4" W/1 1/2" DIA. HOLE CK	SA240-316L
	10	1 MANWAY COLLAR	1/4" PL. X 8 1/2" X 108 1/2" (ROLL TO 24" I.D.)	SA240-316L
	11	1 MANWAY COVER	1/4" PL. X 24" I.D. X 24" O.B. 1/2" C.F. X 1/2" S.F. X	SA240-316L
△	12	2 MANWAY FLANGES	4 15/16" F.I.D. X 27 1/2" C.B. X STYLE "C" EDGING 1 3/4" X 2 5/8" SAVED HAN X 83 3/8" LG. (ROLL H.W. TO 24" I.D. DRILL (24) 0.88 HOLES X 27 25" B.C.)	SA240-316L
	13	1 MANWAY HANDLE	3/4" ROUND X 10 1/2" LG. (BREAK 3" X 3" C.T.)	SA193-304
	14	24 MANWAY BOLTING	3/4" -10UNC-2B HEAVY HEX NUTS	SA193-304
	15	48 MANWAY BOLTING	3/4" -10UNC-2B HEAVY HEX NUTS	SA194-GR8
	16	1 MANWAY GASKET	0.063" THK. X 24.00" I.D. X 26.50" O.D. GARLOCK FAWN	3500
△	17	1 MANWAY TEST GASKET	0.125" THK. X 6.00" I.D. X 26.50" O.D.	RPBM
	18	2 SLEEVE BRACKET	1/2" PL. X 14" X 10" LONGS GROUT TO FIT FLANGE AND COLLAR	SA240-304
	19	1 DAVIT ARM SLEEVE	2 1/2" SCH. 80S PIPE X 7 1/2" L/G. (REAM TO FIT 2" PIPE)	SA312-304
	20	1 U LOOP	5/8" DIA. ROUND X 8 1/2" L/G.	SA312-304
△	21	1 DAVIT ARM	2 SCH. 80S PIPE X 35 1/8" +/- LG. (FORM AS SHOWN)	SA312-304
	22	1 DAVIT EYEBOLT	3/4" -10UNC-2B X 0.766" I.D. X 1.50" O.D. X 6 1/2" LONG	SA182-316
	23	1 EYEBOLT NUT	3/4" -10UNC-2B HEAVY HEX NUTS	SA194-GR8
	24	1 DAVIT ARM WASHER	0.125" THK. X 0.766" I.D. X 1.25" O.D.	18-4 S.S.
	25	1 GREASE FITTING	1/4" -18 M.N.P.T. GREASE FITTING	SA240-304
	26	1 SLEEVE PLUG	1/4" PL. X 1" I.D. X 2 7/16" O.D.	SA240-304
△	27	1 W/ COVER PLUG	1/4" PL. X 1" DIA. +/-	SA240-316L
△	28	1 MANWAY REPAO	1/2" PL. X 24 5/8" I.D. X 38" O.D. W/1/4" F.N.P.T.	SA240-316L
△	29	4 NOZZLE BLIND	2" -150R R.F. BLIND FLANGE	SA182-316L
	30	2 DIP PIPE BLIND	3" -150R R.F. BLIND FLANGE W/2.41" DIA. BORE	SA182-316L
	31	3 NOZZLE BLIND	3" -150R R.F. BLIND FLANGE	SA182-316L
	32	32 BLIND BOLTING	5/8" -11UNC-2A X 1 1/2" LG. CL. #1 STUDS	SA193-GR8
	33	64 BLIND BOLTING	5/8" -11UNC-2B HEAVY HEX NUTS	SA194-GR8
△	34	3 BLIND GASKET	0.063" THK. X 2.38" I.D. X 4.13" O.D. GARLOCK FAWN	3500
△	35	3 BLIND GASKET	0.063" THK. X 3.50" I.D. X 5.39" O.D. GARLOCK FAWN	3500
△	36	1 DELETED		
△	37	2 4 NOZZLE REPADS	5/16" PL. X 4 5/8" I.D. X 8 1/2" O.D. W/1/4" F.N.P.T.	SA240-316L
△	38	2 DIP PIPE BRACKET	1/4" PL. X 4 3/4" X 16 7/8" W/2.63" DIA. HOLE/ENR 3 1/4" X 2" O.S.)	SA240-316L
△	39	1 DELETED		
△	40	2 EROSION PADS	3/16" PL. X 5 1/2" DIA.	SA240-316L

CODE / CERTIFIED STAMP

CERTIFIED BY
LETCO INCORPORATED
BY *rw hile*
DATE 1-8-98

GENERAL NOTES AND SPECIFICATIONS

- D1 VESSEL DESIGN PRESSURE = 60 PSIG AT -20°F. THRU 370°F. HYDRO. TEST PRESS. = 102 PSIG AT A.M.D.
- D2 VESSEL EXTERNAL PRESSURE RATING = 15 PSI AT -20°F. THRU 370°F.
- D3 PRODUCT SPECIFIC GRAVITY = 1.03; CORROSION ALLOWANCE = 0.000"
- D4 DESIGN EFFICIENCY OF HEADS = 100%; OF SHELL = 100%; OF FABRICATED COLLARS = 100%.
- D5 VESSEL NOMINAL CAPACITY = 2115 GALLONS; ESTIMATED EMPTY WEIGHT = 4350 LBS.
- C1 VESSEL TO BE DESIGNED, FABRICATED, AND CODE STAMPED PER A.S.M.E. SECTION VIII, DIVISION 1, 1995 EDITION, APP. ADDENDA.
- C2 MATERIAL AS SHOWN ABOVE AND PER THE FOLLOWING: WELDING WIRE = ER316L ER309L
- C3 WELDING PER LETCO PROCEDURES: #WPS1AA-22; #WPS3AM-22; #WPS10B-22; #WPS72CM-22; #WPS5CA-22.
- C4 MATERIAL TO BE WELT FINISH.
- C5 INTERIOR AND EXTERIOR WELDS TO BE STAINLESS STEEL WIRE BRUSHED OR BUFFED CLEAN.
- C6 BOLT HOLES TO STRADDLE VESSEL VERTICAL AND HORIZONTAL CENTER LINES UNLESS OTHERWISE SPECIFIED.
- C7 CLOSE OPENINGS FOR SHIPMENT, APPLY ANTI-SEIZE LUBRICANT TO ALL BOLTING.
- C8 PRESSURE RELIEF DEVICE(S) TO BE DESIGNED, SUPPLIED AND INSTALLED BY OTHERS.
- C9 FOR DETAILS REF. DRAWING W-1769-2-D.
- C10 DELETED.

ITEM NO. B-877
SERIAL NO. 3113-08
CUSTOMER PURCHASE ORDER NO. 861601

CHANGES MADE PER CUSTOMER MARKED UP DRAWING	K.M.B. 8/27/97
REVISIONS PER CUSTOMER FAX DATED 8/25/97 & CUSTOMER APPROVAL DRAWINGS DATED 9/18/97	K.S. 8/25/97 9/18/97
REVISIONS PER AS BUILT CONDITIONS	R.M. 1/7/98
SYN.	REVISION
BY	DATE

CUSTOMER: BASF CORPORATION ROUTE 4, BOX 327 BEAUMONT, TX 77705	LETCO INCORPORATED 851 NORTH BELCREST SPRINGFIELD, MISSOURI 65802 417/831-1528
ITEM: 2195 GALLON VACUUM RECEIVER ONE (1) UNIT REQUIRED	WORK ORDER NO. 3113 SCALE: NONE
DRAWN BY K. SMITH ACAD FN 3113061	CHECKED BY C.W. WILSON DATE 1-8-98
DATE 1/7/97	DRAWING NO. W-1769-1-D

B-877