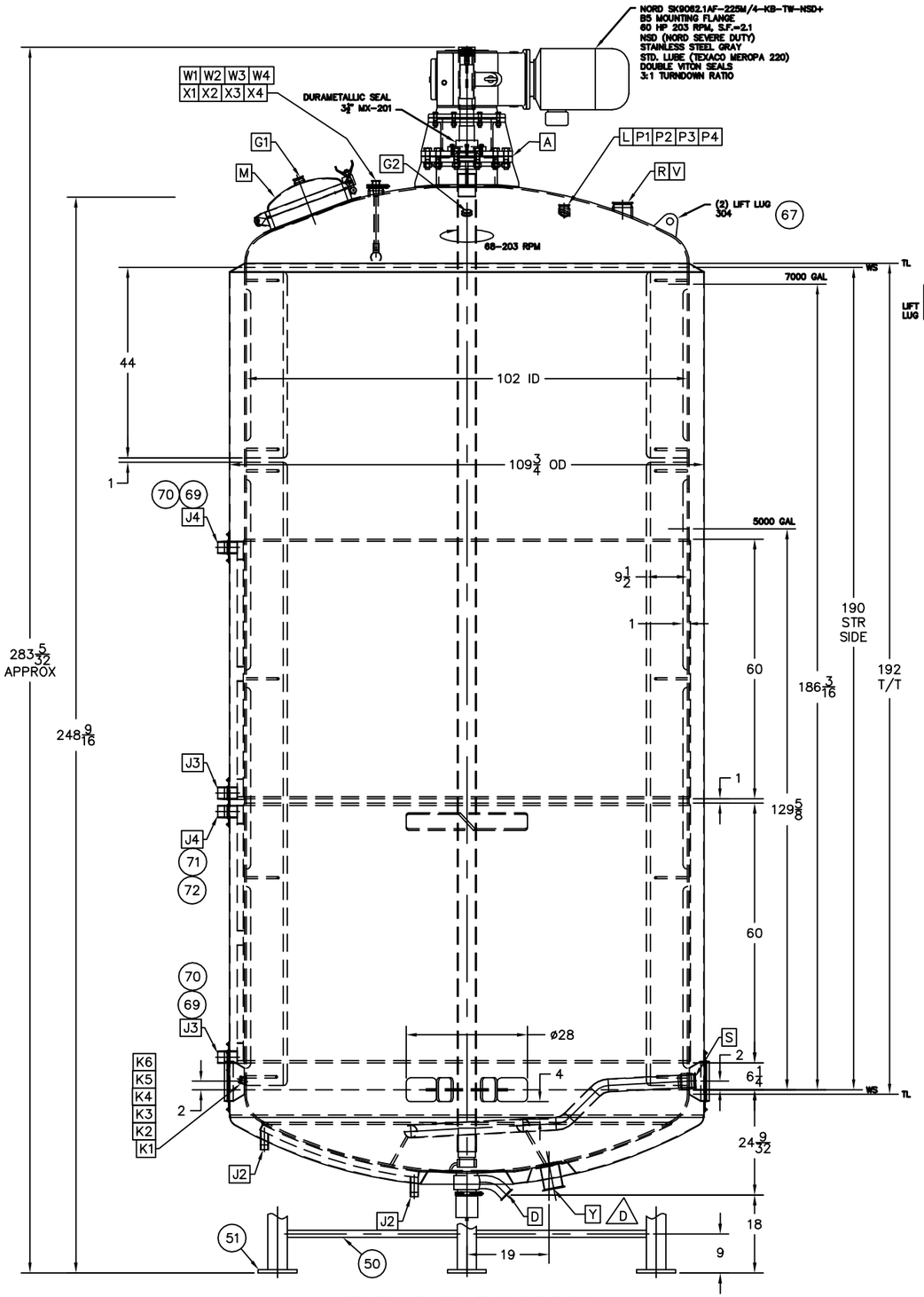
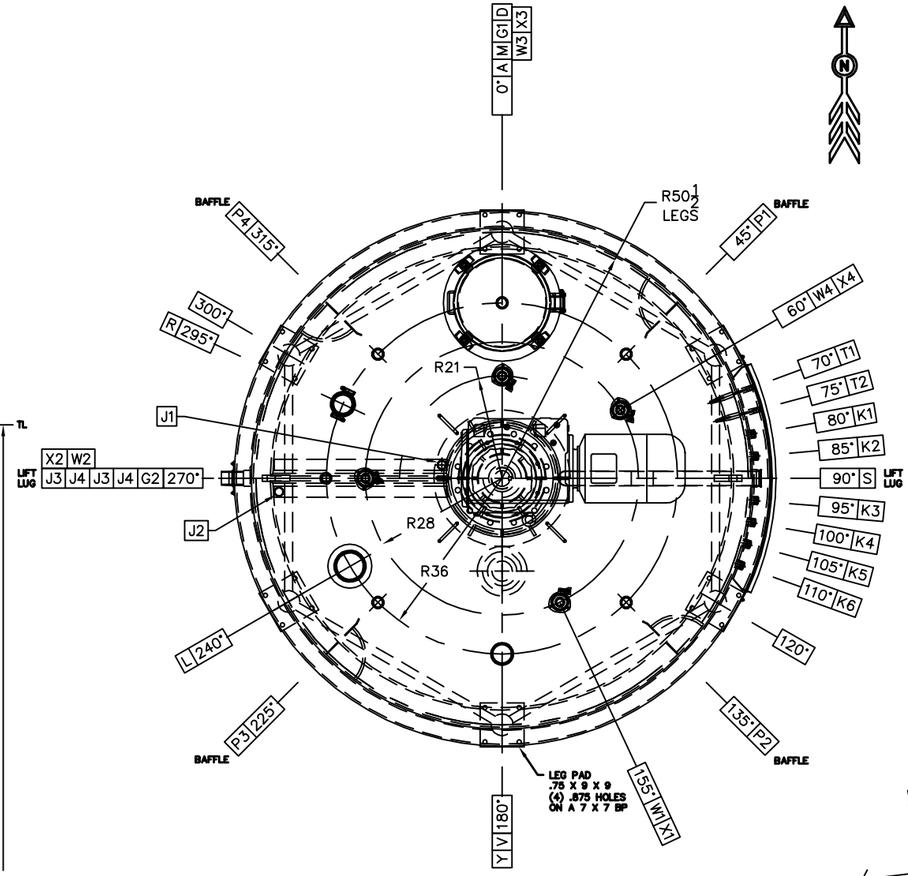
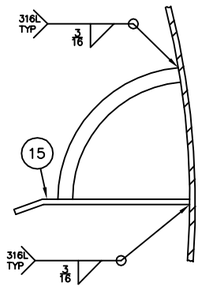


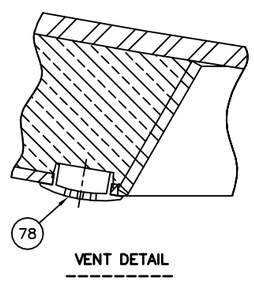


TOP VIEW

ROSEMOUNT WELD DETAIL



BAFFLE DETAIL



VENT DETAIL

NOTES:

1. ALL CUSTOMER SUPPLIED PARTS MUST HAVE PROPER IDENTIFICATION, PARTIAL DATA, AND MILL TEST REPORTS BEFORE BEING WELDED TO VESSEL.
2. IF THIS EQUIPMENT IS USED IN CONTACT WITH CORROSIVE MATERIALS (SALT, CHLORIDES, HALOGENS OR OTHER CORRODENTS) DCI, INC. WILL NOT BE RESPONSIBLE FOR THE CORROSION RESISTANCE, OR THE RESULTING DAMAGE, WITHOUT WRITTEN ACCEPTANCE OF SUCH CORROSIVE CONDITIONS BY DCI, INC. BASED UPON A SPECIFIC INTENDED USE AND/OR SERVICE.
3. ALL TOLERANCES ARE IN ACCORDANCE WITH THE LATEST EDITION OF THE "ASME" BOILER AND PRESSURE VESSEL CODE, SECTION VIII, DIVISION 1, JULY 1, 2002 ADDENDA AND DCI STANDARD VESSEL TOLERANCES DRAWING 020000.
4. ALL ASME WELDING TO BE DONE BY ASME CERTIFIED WELDERS.
5. ALL ASME WELDING PROCEDURES ARE IN ACCORDANCE WITH ASME CODE UW-28.
6. ASME CODE JURISDICTION ENDS AT THE FIRST SEALING SURFACE EXCLUDING MANWAY.
7. ALL FLANGES WILL HAVE BOLT HOLES STRADDLE THE 0°-180° & 90°-270° CENTERLINES, UNLESS SPECIFIED OTHERWISE.
8. VESSEL AND/OR HEAT TRANSFER SURFACE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE "ASME" BOILER AND PRESSURE VESSEL CODE, SECTION VIII, DIVISION 1, JULY 1, 2002 ADDENDA.
9. VESSEL AND/OR HEAT TRANSFER SURFACE TO BE HYDROSTATICALLY TESTED PER UG-99 AND DCI PROCEDURE X-7033-4. CHECK FOR DEFECTS, REPAIR AND RETEST IF NECESSARY.
10. SUITABLE PRESSURE AND/OR VACUUM RELIEF DEVICES MUST BE INSTALLED BY CUSTOMER FOR OPERATION OF VESSEL AND/OR HEAT TRANSFER SURFACE.
11. PRODUCTION TO PROVIDE PROTECTION FOR ALL NOZZLES AND FITTINGS PRIOR TO SHIPMENT. VESSEL MUST BE ADEQUATELY VENTED.
12. WELD SEAMS IN VESSEL HEAD AND SHELL SHOULD BE LOCATED WHERE POSSIBLE TO AVOID ALL NOZZLES, ACCESS OPENINGS, AND REINFORCEMENT PADS.
13. ALL REINFORCEMENT PADS MUST BE PROVIDED WITH (1) ONE 1/8" DIA. WEEP HOLE LOCATED AT THE LOWEST POINT WHEN THE VESSEL IS IN ITS NORMAL OPERATING POSITION.
14. REAM ALL 25MM INGOLD FITTINGS ID TO .985-.988 AFTER WELDING.
15. DCI SURFACE FINISH DEFINITIONS:
    AI = AS IS WELD OR MATERIAL
    CC = COLOR CLEANED WELD
    BB = BEAD BLASTED WELD OR MATERIAL
    HRAP = HOT ROLLED PLATE MATERIAL
    2B = COLD ROLLED MILL MATERIAL
    NUMERIC VALUE = RA MAXIMUM
    NUMERIC VALUE + "E" = RA AFTER FINAL ELECTRO-POLISH
16. CIP PROCEDURE #X-7036-3
    (DUE TO NO SIDEWALL SPRAYBALLS, CLEANING OF THE TURBINE BLADES AND LOWER SIDEWALL NOZZLES WILL NOT BE GUARANTEED.)

ITEM	MATERIAL DESCRIPTION	MATERIAL SPEC	INTERIOR RA FINISH	EXTERIOR RA FINISH
SHELL	PLATE 3/8"	SA240,316L	20	MILL
TOP HEAD	PLATE 3/8"	SA240,316L	20	32
BTM HEAD	PLATE 3/8"	SA240,316L	20	MILL
SHELL HEAT TRANS	SHEET 16 GA	SA240,304	MILL	MILL
HEAD HEAT TRANS	SHEET 16 GA	SA240,304	MILL	MILL
SHELL SHEATHING	SHEET 12 GA	SA240,304	MILL	32
TOP HD SHEATHING	N/A	N/A	N/A	N/A
BTM HD SHEATHING	SHEET 12 GA	SA240,304	MILL	32
BREAST RING	SHEET 10 GA	SA240,304	MILL	32
LEGS	PIPE 4" SCH 40	SA312,304	MILL	BB
FITTING GASKETS	WHITE SILICONE	N/A	N/A	N/A
MANWAY GASKET	WHITE SILICONE	N/A	N/A	N/A
LEG BRACING	TUBE 1-5/8" X .109 WALL	SA249,304	BB	BB

CIP DATA: (4) 2.5" OD DCI SPRAYBALLS CUSTOM PATTERN

FLOW RATE: TEXT 25 GPM TEXT 20 PSI (APPROX.)

INSULATION

SHELL: 3" FIBERGLASS & 3" X 36" WD PERLITE (3) PLS
BTM HEAD: 3" FIBERGLASS
TOP HEAD:

SURFACES COVERED WITH INSULATION TO RECEIVE A 5 MIL. COATING OF THURMALOX-- ALL: ☒ HEAT TRANSFER: ☐ NONE: ☐

PAINT, EXT: N/A

HEAD DIMENSIONAL INFO

TOP INNER HD: 102 ID,102 DR,7 KR,1 SF
BTM INNER HD: 102 ID,102 DR,7 KR,1 SF
TOP OUTER HD:
BTM OUTER HD: 109.31 ID,109 DR,2 KR,.5 SF

HEAT TRANSFER SURFACE INFO

DIMPLE JACKET ON THIS JOB IS DESIGNED FOR
☒NON-THERMAL SHOCK LOADING ☐NA
☐THERMAL SHOCK LOADING
"ONE BOX MUST BE CHECKED"

SHELL:	☒ DIMPLED ☐ CONVENTIONAL	☐ HALF PIPE ☐ OTHER
HEAD:	☒ DIMPLED ☐ CONVENTIONAL	☐ HALF PIPE ☐ OTHER

AREA | SHELL: (2) 134 SF | HEAD: 49 SF

DIMPLE PATTERN TYPE: 2-1/4 X 2-1/4, TYPE AF

HEATING MEDIUM: STEAM

COOLING MEDIUM: WATER

NON-DESTRUCTIVE EXAMINATION

RADIOGRAPHY-VESSEL

TOP HEAD	TOP HEAD TO SHELL	SHELL LONG. SEAM	BOTTOM HEAD	BTM HEAD TO SHELL
NONE	NONE	NONE	NONE	NONE

RADIOGRAPHY-HEAT TRANSFER

TOP HEAD	TOP HEAD TO SHELL	SHELL	BOTTOM HEAD	BTM HEAD TO SHELL
NONE	NONE	NONE	NONE	NONE

OTHER:

U NB
CERTIFIED BY
W dci INC.
RT- ST. CLOUD, MINNESOTA

VESSEL M.A.W.P. 15/-15 P.S.I. AT 250 °F
MIN. DESIGN METAL TEMP.
-20 °F AT 15 P.S.I.
VESSEL VOLUME 7,000 GALLONS
JACKET M.A.W.P. 135/-15 P.S.I. AT 358 °F
MIN. DESIGN METAL TEMP.
-20 °F AT 150 P.S.I.
JACKET VOLUME 36.2 GALLONS
MFRS. SERIAL NO. JS2088
YEAR BUILT 2002

VESSEL TEST PRESSURE: 20 PSIG

JACKET TEST PRESSURE: 195 PSIG

PRODUCT DATA: WHEY BASED 4%-12% SOLIDS

VISCOSITY: 50 CPS | SPECIFIC GRAVITY: 1.02

EST. EMPTY WEIGHT: 15,900 LBS

EST. OPERATING WEIGHT: 75,500 LBS

SEISMIC ZONE: 1

REV	REVISION DESCRIPTION	REV BY/DATE
E	REVISED DUE TO DCI CHANGE FROM USING A RULON BEARING TO SUPPLING A NITRONIC #60 BEARING SUPPORT WITH NO BEARING.	11-15-02 CJB
D	REVISED DUE TO CUSTOMER CHANGE ORDER #4 ADDING ROSEMOUNT GAUGE SLEEVE AND CHANGING SPARGER TUBE FROM 3" OD TO 2-1/2" SCH-10	10-25-02 CJB
C	REVISED DUE TO CUSTOMER CHANGE ORDER #3 CHANGING VENT FROM A 3" TRI-CLAMP TO A 4" TRI-CLAMP	10-8-02 CJB
B	REVISED B.O.M.	10-4-02 CJB
A	REVISED AND READIED FOR PRODUCTION AFTER RECEIVING SIGNED APPROVAL DRAWING FROM THE CUSTOMER.	CJB 9-9-02

TITLE 7,000 GALLON FERMENTOR TANK

DCI ORDER NO.: CS7495 | QTY REQD: 1

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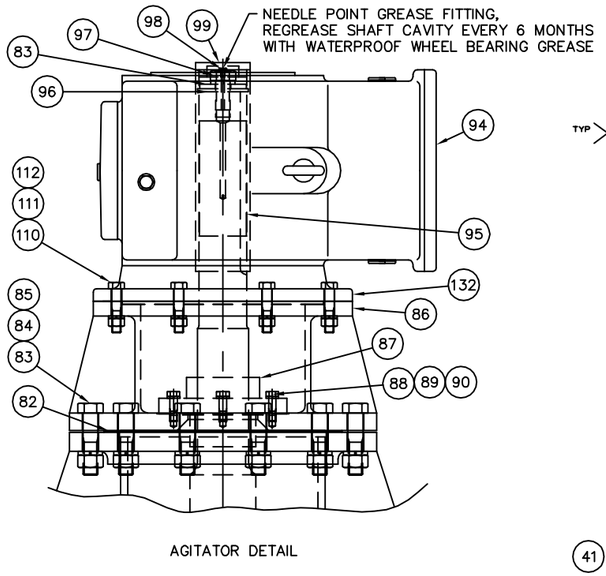
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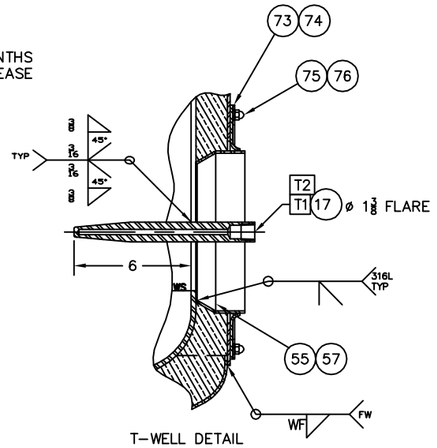
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PROD CJB	APPVL RDB	PROJ ENG SRB
DATE 9-9-02	DATE 07/23/02	SALES
PREFIX 014-04	DWG NO. JS2088	REV F

SHEET 1 OF 2

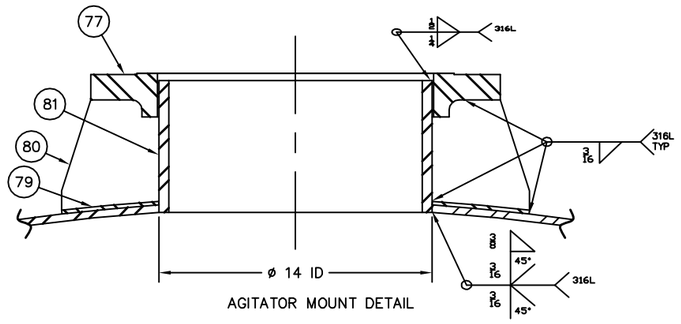
MK	LOC.	DESCRIPTION	SERVICE	QTY	CLAMP	CAP	GSKT	DESCRIPTION/(ITEM NO.)
NOZZLE SCHEDULE					ITEM NO.			NOZZLE ACCESSORIES
Y	BTM	GAUGE SLEEVE ROSEMOUNT #01199-0081-0002	LEVEL	1				
X4	TOP	1-1/2 TRI-CLAMP	CIP INLET	1				
X3	TOP	1-1/2 TRI-CLAMP	CIP INLET	1				
X2	TOP	1-1/2 TRI-CLAMP	CIP INLET	1				
X1	TOP	1-1/2 TRI-CLAMP	CIP INLET	1				
W4	TOP	3 TRI-CLAMP	CIP CONN	1	X		X	CIP DOWN TUBE,SPRAYBALL,CLIP,127,128,129,130,131
W3	TOP	3 TRI-CLAMP	CIP CONN	1	X		X	CIP DOWN TUBE,SPRAYBALL,CLIP,127,128,129,130,131
W2	TOP	3 TRI-CLAMP	CIP CONN	1	X		X	CIP DOWN TUBE,SPRAYBALL,CLIP,127,128,129,130,131
W1	TOP	3 TRI-CLAMP	CIP CONN	1	X		X	CIP DOWN TUBE,SPRAYBALL,CLIP,127,128,129,130,131
V	TOP	4 TRI-CLAMP	VENT	1				
T2	SIDE	1/2" NPT THERMOWELL	RECORDER	1				
T1	SIDE	1/2" NPT THERMOWELL	THERMOMETER	1				
S	SIDE	3 TRI-CLAMP	SPARGER	1				
R	TOP	4 TRI-CLAMP	RUPTURE DISC	1	X		X	CONTINENTAL 4" SANITRX RUPTURE DISC, 120,121,122
P4	TOP	2 TRI-CLAMP	INLET	1				
P3	TOP	2 TRI-CLAMP	INLET	1				
P2	TOP	2 TRI-CLAMP	INLET	1				
P1	TOP	2 TRI-CLAMP	INLET	1				
M	TOP	18" PV-1000 MANWAY (4) LUGS	TANK ACCESS	1				O-RING, 27
L	TOP	6 TRI-CLAMP	INLET	1				
K6	SIDE	25 mm INGOLD FITTING X 48 mm LG	INLET	1				
K5	SIDE	25 mm INGOLD FITTING X 48 mm LG	INLET	1				
K4	SIDE	25 mm INGOLD FITTING X 48 mm LG	INLET	1				
K3	SIDE	25 mm INGOLD FITTING X 48 mm LG	INLET	1				
K2	SIDE	25 mm INGOLD FITTING X 48 mm LG	INLET	1				
K1	SIDE	25 mm INGOLD FITTING X 48 mm LG	INLET	1				
J4	SIDE	2-1/2" NPT MALE PIPE	DIMPLE JACKET OUTLET	2				
J3	SIDE	2-1/2" NPT MALE PIPE	DIMPLE JACKET INLET	2				
J2	BTM	1-1/2" NPT MALE PIPE	DIMPLE JACKET OUTLET	1				
J1	BTM	1-1/2" NPT MALE PIPE	DIMPLE JACKET INLET	1				
G2	TOP	2 TRI-CLAMP	LIGHT GLASS	1	X		X	LJ STAR 2" USL 33 120V 50 WATT, 123,125,126
G1	TOP	2 TRI-CLAMP	SIGHT GLASS	1	X		X	LJ STAR 2" METACLAMP, 124,125,126
D	BTM	3 TRI-CLAMP	OUTLET	1				ASEPCO VALVE 3", 18,19,20
A	TOP	14" 150# RFSO FLANGE	AGITATOR	1				304 BOLTING, GASKET, 82,83,84,85



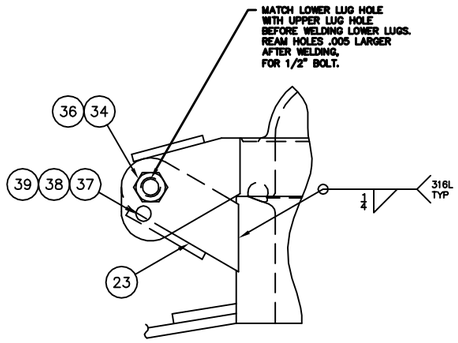
AGITATOR DETAIL

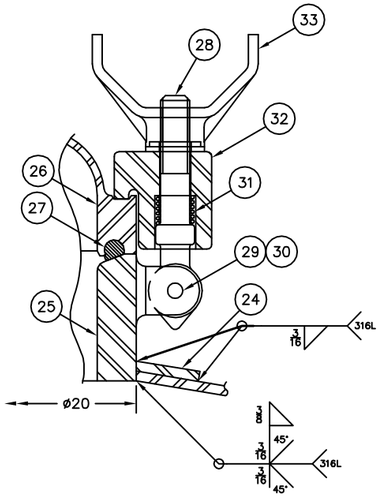


T–WELL DETAIL

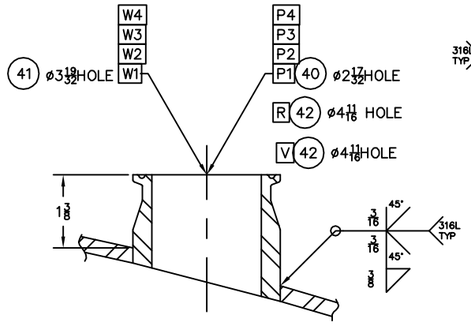


AGITATOR MOUNT DETAIL

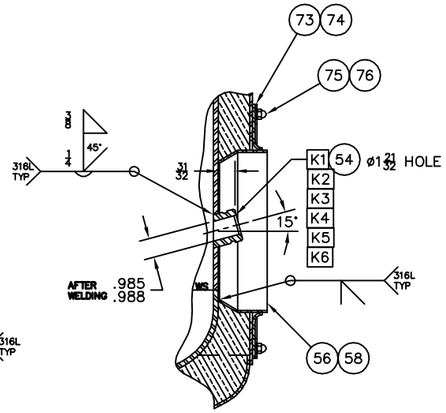




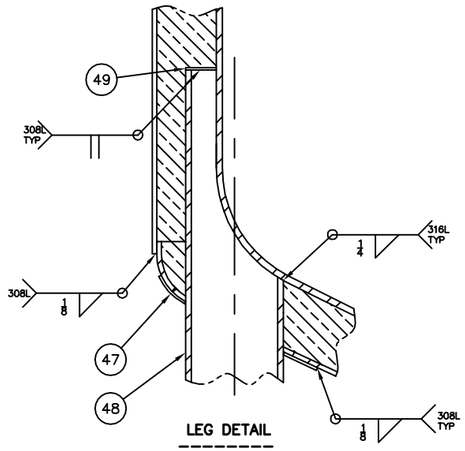
MANWAY DETAIL



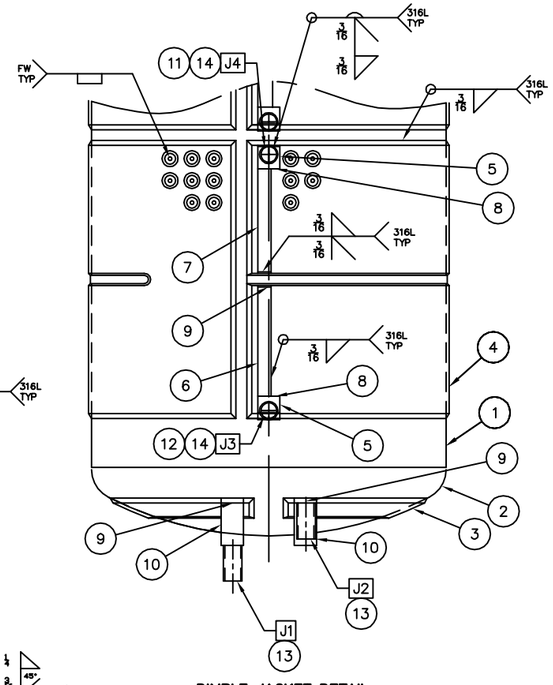
FERRULE WELDMENT DETAIL



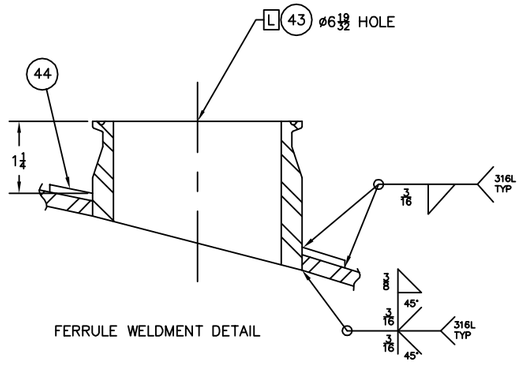
INGOLD WELDMENT DETAIL



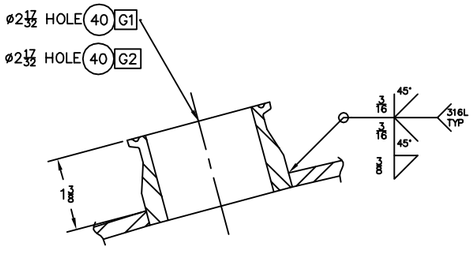
LEG DETAIL



DIMPLE JACKET DETAIL
BOX HEADERS

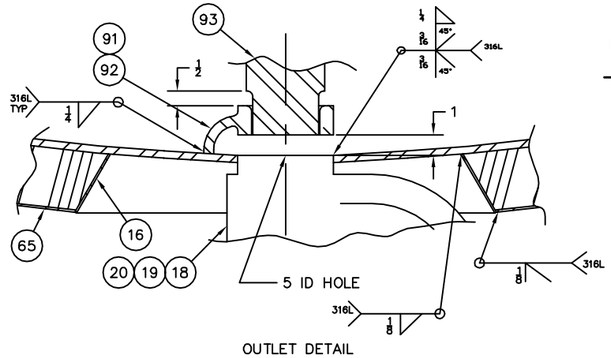


FERRULE WELDMENT DETAIL



FERRULE WELDMENT DETAIL

SPARGER WELDMENT DETAIL



OUTLET DETAIL

TITLE	7,000 GALLON FERMENTOR TANK
DCI ORDER NO.: CS7495	QTY. REQD.:1

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	PRODUCTION CJB	APPROVAL	PROJ. ENG.
	DATE 09/09/02	DATE	SALES SRB
SHEET 2 OF 2	PREFIX 014–04	DRAWING NO. JS2088S2	REV F

dci INC

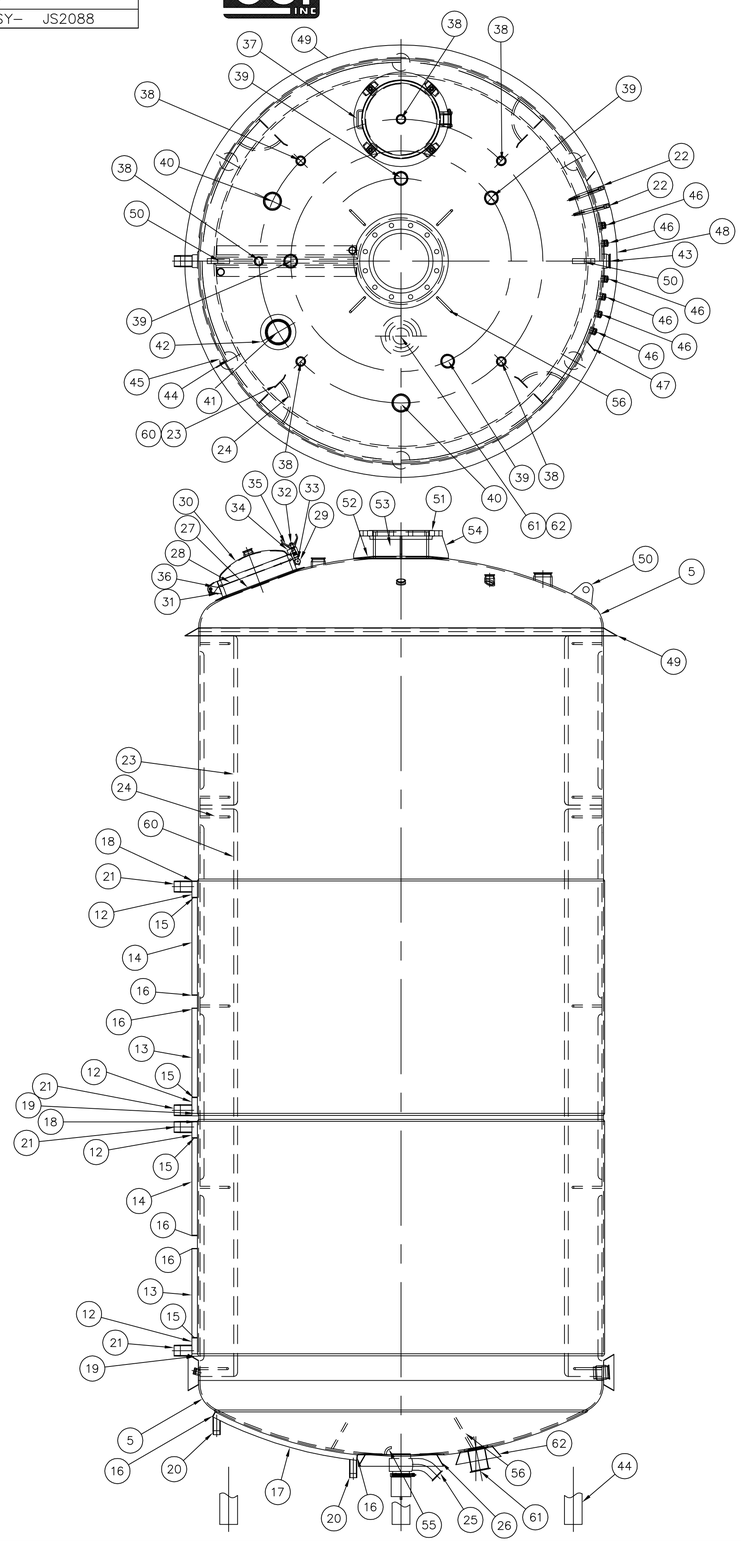
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(FOR REFERENCE USE ONLY)

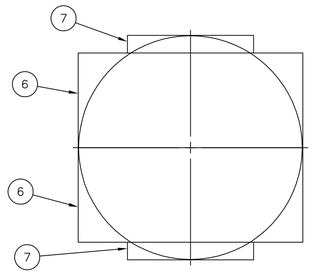
NAME	DWG NO.	REV
CJB	JS2088BM	E

ITEM NO.	PART NO.	QTY.	DESCRIPTION	MATL. SPEC.
85	913–	12	BOLT HEX HEAD 1"–8 UNC X 4–1/4" LG	SA193–B8
84	913–	12	NUT FULL HEX HD 1"–8 UNC	18–8SS
83	913–	13	1" LOCK WASHER	18–8SS
82	039–204079	1	GASKET,14" 150# RFSO FLG,.125 THK	WHITE SILICONE
81	935–911193	1	PIPE 14" SCH–40 (6–3/4" LG)	SA312,316L
80	214–204066	4	GUSSET,FLG SPRT,14" 150#,RFSO,5.565 H,5 WD,102.563 IDR,.5 THK	SA240,304
79	211–204061	1	PAD,REINF,24 OD,14 ID,102.375 IDR,7 GA	SA240,304
78	975–942436	1	VENT PLUG WHITE (A016309)	NYLON
77	914–	1	FLANGE 14" 150# RFSO ANSI	SA182,316L
76	913–909000	42	NUT ACORN 1/4–20 TIEX (MCMASTER–CARR 91855A350)	18–8SS
75	928–908996	42	STUD WELD 1/4–20 X 1/2" FLANGED/302SS FSS00602	18–8SS
74	208–204077	1	RETAINING RING,ISLN SEAL,OBLONG,14 X 52.5,12 GA	SA240,304
73	207–204078	1	ISOLATION SEAL,OBLONG,14 X 52.5,.125 THK	WHITE SILICONE
72	208–027706	1	RETAINING RING,ISLN SEAL,10 ID,12 OD,12 GA	SA240,304
71	207–088916	1	ISOLATION SEAL,0 ID,12 OD,.12 THK	WHITE SILICONE
70	208–027694	2	RETAINING RING,ISLN SEAL,5 ID,7 OD,12 GA	SA240,304
69	207–088825	2	ISOLATION SEAL,0 ID,7 OD,.12 THK	WHITE SILICONE
68	.	·	.	.
67	066–200081	2	LIFT LUG,FLAT,1.25X5.75,4.37 LG,1.62 HOLE	SA240,316L
66	.	·	.	.
65	051–200202	1	HD,TS,RF,109.313.ID,109 DR,2 KR,.5 SF,12 GA	SA240,304
64	122–204072	1	OUTER JKT,109.75 OD,195.25 H,12 GA	SA240,304
63	950–	1	SHT 12 GA (1" X 344–1/8" LG)	SA240,304
62	185–204062	1	BREAST RING,102.75 ID,109.75 OD,2.094 H,30 DEG,10 GA	SA240,304
61	928–909268	250	3" PERLITE	.
60	969–922333	2	PAINT BLACK THURMALOX DAMPNEY	#70
59	928–916327	275	INS 3" X 48" X 52'	FIBERGLASS
58	199–204068	1	TAPER SLEEVE,54.063 RAD,56.125 RAD,12 GA,42 DEG	SA240,304
57	185–204065	1	BREAST RING,102.75 ID,108.125 OD,12 GA,44 DEG	SA240,304
56	950–	2	SHEET 12 GA,150/150, 2" X 14–5/16" LG, (ROLL TO 9 ID)	SA240,304
55	133–185089	1	TAPER,60 DEG,6 ID,9 ID,2.656 H,12 GA	SA240,304
54	206–091968	6	ADPTR,1–9/16,INGOLD 00764–1015 48 MM 15 DEG	SA479,316L
53	.	·	.	.
52	.	·	.	.
51	244–500169	6	LEG PAD,.75X9X9,(4).87 HOLES,7X7 BP	SA240,304
50	960–903883	6	TUBE,1–5/8" OD X .109 WALL, 46–1/2" LG	SA249,304
49	950–	6	SHT 10 GA (1–1/2" X 4–1/2")	SA240,316L
48	158–204067	6	LEG SECT,UPR,4–40,7 KR,48 LG,FLAT TOP	SA312,304
47	211–204080	6	REINF PAD,7 OD X 4.5/5.063 ID,12 GA	SA240,304
46	.	·	.	.
45	119–204069	1	FERRULE,TC,HW,3,2.870 ID,3.579/3.000 OD,4 LG	SA479,316L
44	211–204064	1	PAD,REINF,9 DIA,6.563 X 7 OBLONG HOLE,7 GA	SA240,304
43	119–087975	1	FERRULE,TC,HW,6,5.782 ID,6.570 OD,5.00 LG	SA312,316L
42	119–157208	2	FERRULE,TC,HW,4,3.834 ID,4.682 OD,4.50 LG	SA479,316L
41	119–155188	4	FERRULE,TC,HW,3,2.870 ID,3.579 OD,4.00 LG	SA479,316L
40	119–157221	6	FERRULE,TC,HW,2,1.870 ID,2.516 OD,3.25 LG	SA479,316L
39	923–906669	1	BEAD CHAIN 4" LG W/.25 ID EYELETS (AEROFAST INC)	ST. STL
38	923–906668	1	FASPIN MODEL C 6–12–R (AREOFAST INC)	303
37	913–916672	1	BOLT HEX HD 10–24 UNC X 1/2" LG	18–8SS
36	140–156557	1	BOLT HEX HD 1/2" X 4–1/2" W/10–24 UNC TAP X .5 LG,TOP HEX HD	18–8SS
35	120–026848	1	HANDLE,4.75 W,1.87 H,.37 DIA	SA479,304
34	913–905198	1	LOCKNUT W/NYLON INSERT 1/2" NC	18–8SS
33	170–091209	4	WINGNUT ASSEMBLY,MC,3/4	SA351,CF8M
32	109–143987	4	HOLDDOWN LUG,MH COVER,CASTING,.75 SCR	SA351,CF8M
31	923–905209	4	SPRING,COMP,ENDS SQ&GRD,.975 OD,.085 WIRE,DWC–085K–10 SS	STAINLESS
30	913–917701	8	RETAINING RING #3100–37–SS2	18–8SS
29	131–087551	4	PIN,HOLDDOWN LUG,.37 DIA,2.12 LG,(2) SNAP RING GROOVES	SA564,630
28	196–143989	4	CLAMP SCREW,FORGED,W/STOP & SHLDR,.75–10 UNC,5 LG	SA193,B8
27	946–905103	1	O–RING 18 ID X 19 OD X .5 DIA	WHITE SILICONE
26	130–183740	1	MANWAY COVER,PV,18,.7 GA COV,HNG	SA182,316L/SA240,316L
25	304–183739	1	MH FR,PV,18,3.25 H,20 OD	SA182,316L
24	211–204060	1	PAD,REINF,24 DIA,20.063 HOLE,.7 GA	SA240,304
23	152–177124	1	HINGE ASSEMBLY,MANHOLE FRAME,PV1000	304
22	.	·	.	.
21	.	·	.	.
20	961–910582	1	ASEPCO #SL30 3.0" SILICONE DIAPHRAGM	.
19	961–910568	1	ASEPCO #PN30 3.0" PNEUMATIC OPERATOR,3A	.
18	961–911121	1	VALVE 3" ASEPCO #MF30–200–2	SA479,316L
17	087–104828	2	THERMOWELL,1/2–14NPT,.260 X 9.87 BULB,1.37 OD,10.125 LG	SA479,316L
16	133–178715	1	TAPER,60 DEG,18 ID,22.5 ID,4 H,12 GA	SA240,304
15	027–204058	4	BAFFLE,FLAT,W/BREAK,8.5X188,4 WD TAB,7 GA,5 BRACES	316L
14	150–	4	PIPE,TOE,2–1/2"–40 NPT, 4–1/2" LG	SA312,304
13	150–	2	PIPE,TOE,1–1/2"–40 NPT, 4–1/2" LG	SA312,304
12	041–107734	2	END CAP,HDR,3,FULL DRAINAGE	SA240,316L
11	041–020483	2	END CAP,HDR,3.12X1.37,10 GA	SA240,316L
10	041–029464	2	HDR,2X1.25X144 LG,10 GA (38–1/2" LG)	SA240,316L
9	041–020482	8	END CAP,HDR,2.25X1.37,10 GA	SA240,316L
8	041–020507	4	END CAP,HDR,1.37X1,10 GA	SA240,316L
7	041–029464	2	HDR,2X1.25X144 LG,10 GA (26–1/2" LG)	SA240,316L
6	041–029464	2	HDR,2X1.25X144 LG,10 GA (24–1/4" LG)	SA240,316L
5	041–188989	4	HDR,3X1.25X144 LG,10 GA (3" LG)	SA240,316L
4	139–204059	2	DIMPLE JKT,AF,102 ID,60 H,321.75 LG,3/2 HDR,1 BAF,16 GA	SA240,304
3	303–204063	1	DIMPLE JKT,AF,DH,102.37 IDR,47.5 R,10.75 R,16 GA	SA240,304
2	326–911123	2	HD,TS,102 ID,102 DR,7 KR,1 SF,.375 THK	SA240,316L
1	125–204057	1	LINER,FLAT/FLAT,102 ID,190 H.375 THK	SA240,316L

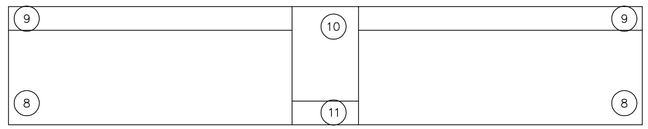
ITEM NO.	PART NO.	QTY.	DESCRIPTION	MATL. SPEC.
141	097–174400	1	INFO LABEL, AGITATOR GEARBOX PLUG	.
140	097–148336	1	INFO LABEL,DANGER,MOVING AGITATOR	.
139	097–148335	1	INFO LABEL,DANGER,CONFINED SPACE	.
138	097–164003	1	INFO LABEL,EXTERIOR STAINLESS STEEL SURFACE	.
137	097–162341	1	INFO LABEL,INTERNAL SURFACES	.
136	976–908948	1	LABEL UNION MADE 2.937X3.25 .002 WHT POLY .0015 LAM BLUE/YEL	.
135	976–908949	1	LABEL AMERICAN FLAG 2.75X5 2MIL WHT POLY RED/BLUE .0015 LAM	.
134	097–005436	2	INFO PLATE,ASME PRESSURE RATING,6.25 W,6.25 LG	.
133	097–010000	1	INFORMATION PLATE,DCI,SAINT CLOUD,MN	.
132	976–943006	1	ROTATION LABEL	.
131	131–190169	4	PIN,CIP CONN	18–8SS
130	094–179360	4	SPRAYBALL.2.5 OD,1.00 SLEEVE,20 GPM @ 20 PSI	316L
129	094–160764	4	CIP TUBE,3 TC CAP,1.5 TC INLET,16 LG	316L
128	917–	4	CLAMP HVY DUTY 3" #13MHHS	304
127	919–	4	GASKET 3" FERRULE	WHITE SILICONE
126	917–930426	2	CLAMP HVY DUTY 2" #13MHHS	304
125	919–	2	GASKET 2" FERRULE	WHITE SILICONE
124	965–910648	1	LIGHT GLASS #USL–33–50 WATT 120 VOLT	LJ STAR
123	965–910629	1	SIGHT GLASS 2" METAGLASS METACLAMP #180	LJ STAR
122	917–930429	1	CLAMP HVY DUTY 4" #13MHHS	304
121	919–	1	GASKET 4" FERRULE	WHITE SILICONE
120	910–911200	1	4" SANITRX RUPTURE DISC	CONTINENTAL
119	.	·	.	.
118	.	·	.	.
117	.	·	.	.
D 116	133–151338	1	TAPER,60 DEG,8 ID,12.75 OD,4.125 H,12 GA	SA240,304
115	910–901911	1	ROSEMOUNT GAUGE SLEEVE #01199–0061–0002	SA479,316L
114	.	·	.	.
113	.	·	.	.
112	913–906281	8	BOLT HEX HEAD 5/8"–11 UNC X 3" LG	SA193–B8
111	913–917257	8	NUT FULL HEX HD 5/8"–11 UNC	18–8SS
110	913–	8	5/8" LOCK WASHER	18–8SS
109	.	·	.	.
108	.	·	.	.
107	.	·	..	.
106	.	·	.	.
105	.	·	.	.
104	945–901407	4	RD 1/2" 9" LG	SA479,316L
103	960–904442	1	TUBE 3" OD X .083 WALL, POL ID/OD, 16–5/32" LG	316L
102	960–904442	1	TUBE 3" OD X .083 WALL, POL ID/OD, 8–11/32" LG	316L
101	915–	2	ELBOW TUBE 3" OD X 45 DEG,.065 WALL	316L
100	270–204081	1	SPARGER ASSY,22.25 ID,28 OD,(140).25 ID HOLES,2.5–10 RING,3 OD OUT	316L
99	266–204074	1	CAP,HOLLOW SHAFT,3.250 DIA	NYLON
98	923–932012	1	ALEMITE GREASE FITTING FLUSH	STAINLESS
97	175–100818	1	AGITATOR SHAFT RETAINING BOLT,1"–8 UNC X 2" LG	ZPMS GR8
96	205–204073	1	WASHER,1.0625 ID,3.370 OD,.3125 THK	SA240,304
95	123–028870	1	KEY,SQ,.75,9 LG	SA479,416
94	939–911122	1	NORD #SK9062.1AF–225M/4–TW–NSD,60 HP,203 RPM	
93	053–204076	1	TURB ASSY,AXL/RUSHTON,2 STG,BRG,28,3.25 US,3.375 LWR	316L
E 92	193–156386	1	BRG,BTM,3.395 ID,3.878 OD,4.37 DIA FLG,1.75 LG	RULON J
91	105–186395	1	BRG SPRT,3.875 ID,4.87 OD,1.5 THK,FLAT,2 R,.75 STR	316L
90	913–	4	NUT FULL HEX HD 1/2"–13 UNC	18–8SS
89	913–	4	LOCK WASHER 1/2"	18–8SS
88	913–	4	STUD 1/2"–13 UNC X 2–1/2" LG	SA479,304
87	946–905128	1	SEAL 3–1/2" MX–201	
86	237–204056	1	DURAMETALLIC SEAL HOUSING 14" 150# FLG	316L/304

AS BUILT SKETCH	REV.	E
SERIAL NO.– JS2088		
N.B. NO.–		
FINAL ASSY– JS2088		





DIMPLE JACKET BTM HEAD,B204063



DIMPLE JACKET SIDEWALL,D204059 (TYP 2)



LINER,FLAT/FLAT,C204057

TRAVELER, CHECK LIST

SHEET 1 OF 1

DRAWN CJB	DATE 9-9-02	
CHECKED	DATE	
Q.C. DWG REVIEW		
A.I. DWG REVIEW		

ITEM NO.	NO. REQD	MATL SPEC	DESCRIPTION	HEAT NO.	P.O. NO.	SUPPLIER	Q.C.	A.I.
1	2	SA240,316/316L	PLATE 3/8"					
2	1	SA240,316/316L	PLATE 3/8"					
3	1	SA240,316/316L	PLATE 3/8"					
4								
5								
6	2	SA240,304	SHEET 16 GA					
7	2	SA240,304	SHEET 16 GA					
8	4	SA240,304	SHEET 16 GA					
9	4	SA240,304	SHEET 16 GA					
10	2	SA240,304	SHEET 16 GA					
11	2	SA240,304	SHEET 16 GA					
12	4	SA240,316/316L	SHEET 10 GA					
13	2	SA240,316/316L	SHEET 10 GA					
14	2	SA240,316/316L	SHEET 10 GA					
15	4	SA240,316/316L	SHEET 10 GA					
16	8	SA240,316/316L	SHEET 10 GA					
17	2	SA240,316/316L	SHEET 10 GA					
18	2	SA240,316/316L	SHEET 10 GA					
19	2	SA240,316/316L	SHEET 10 GA					
20	2	SA312,304	PIPE 1–1/2" SCH 40					
21	4	SA312,304	PIPE 2–1/2" SCH 40					
22	2	SA479,316/316L	ROUND 1–3/8"					
23	4	SA240,316/316L	SHEET 7 GA					
24	24	SA479,316/316L	ROUND 1/2"					
25	1	SA479,316/316L	VALVE 3" ASEPCO					
26	1	SA240,304	SHEET 12 GA					
27	1	SA240,304	SHEET 7 GA					
28	2	SA182,316/316L	RING 24"					
29	4	SA351,CF8M	CASTING A143988					
30	1	SA240,316/316L	SHEET 7 GA					
31	2	SA240,304	PLATE 1/2"					
32	4	SA193,B8	FORGED SCREW A143989					
33	4	SA564,630	ROUND 3/8"					
34	4	SA351,CF8M	CASTING A143987					
35	4	SA351,CCF 105–MnN	CASTING B028713					
36	2	SA240,304	PLATE 1/2"					
37	1	SA479,304	ROUND 3/8" DIA					
38	6	SA479,316/316L	FERRULE,TC,HW,2"					
39	4	SA479,316/316L	FERRULE,TC,HW,3"					
40	2	SA479,316/316L	FERRULE,TC,HW,4"					
41	1	SA312,316L	FERRULE,TC,HW,6"					
42	1	SA240,304	SHEET 7 GA					
43	1	SA479,316/316L	FERRULE,TC,HW,3"					
44	6	SA312,304	PIPE 4" SCH 40					
45	6	SA240,304	SHEET 10 GA					
46	6	SA479,316/316L	25 mm INGOLD					
47	1	SA240,304	SHEET 12 GA					
48	1	SA240,304	SHEET 12 GA					
49	1	SA240,304	SHEET 10 GA					
50	2	SA240,316/316L	PLATE 1–1/4"					
51	1	SA182,316L	FLANGE 14" #150 RFSO					
52	1	SA240,304	SHEET 7 GA					
53	1	SA312,316L	PIPE 14" SCH 40					
54	4	SA240,304	PLATE 1/2"					
55	3	SA479,316/316L	ROUND 5/8"					
56	4	SA479,316/316L	ROUND 1/2"					
57	1	SA240,316/316L	PLATE 3/8"					
58	1	SA240,316/316L	PLATE 3/8"					
59	1	SA240,316/316L	PLATE 3/8"					
60	4	SA240,316/316L	SHEET 7 GA					
61	6	SA479,316L	ROSEMOUT #01199–0061–0002					
62	1	SA240,304	SHEET 12 GA					
63								
64								
65								

MANUFACTURING STEPS DCI JOB No.	Q.C.DATE	A.I.DATE
1.) Draw Material Record Mill Stamp ht# & transfers		
2.) Layout,shear & forms		
3.) Weld preperation		
4.) Inspect Welded Seams of shell,heads,dimple jacket		
5.) Visual & Dimensional inspection		
6.) Bottom Head fit up & tack,weld prep		
7.) Bottom Head Nozzle fit up & tack,weld prep, & layout		
8.) Bottom Head welding appearance Nozzles & girth seam		
9.) Visual & Dimensional inspection		
10.) Top Head fit up & tack,weld prep		
11.) Top Head Nozzle fit up & tack,weldprep, & layout		
12.) Top Head welding appearance Nozzles & girth seam		
13.) Visual & dimensional inspection		
14.) Shell Nozzles, attachments, Manway weld prep & layout		
15.) Shell Nozzles, attachments, Manway welding appearance		
16.) Dimple Jacket Weld Macro–Section Results Satisfactory		
17.) Visual & Dimensional inspection		
18.) Non Destructive Examination		
19.) Internal Visual inspection		
20.) Preliminary Pressure Test		
21.) Final Pressure Test		
22.) Final visual & Dimensional inspection		
23.) Stamping		
24.) Calculation & Mill Test Report Review		
25.) Sign Data Report		
26.) Non–Conformance		

* Indicates inspection points required by Authorized Inspector.

Form No. X6088