

**WARNING**  
MACHINE IS TOP HEAVY AND CAN TIP OVER CAUSING SERIOUS INJURY OR DEATH. CAUTION SHOULD BE TAKEN WHILE MOVING.

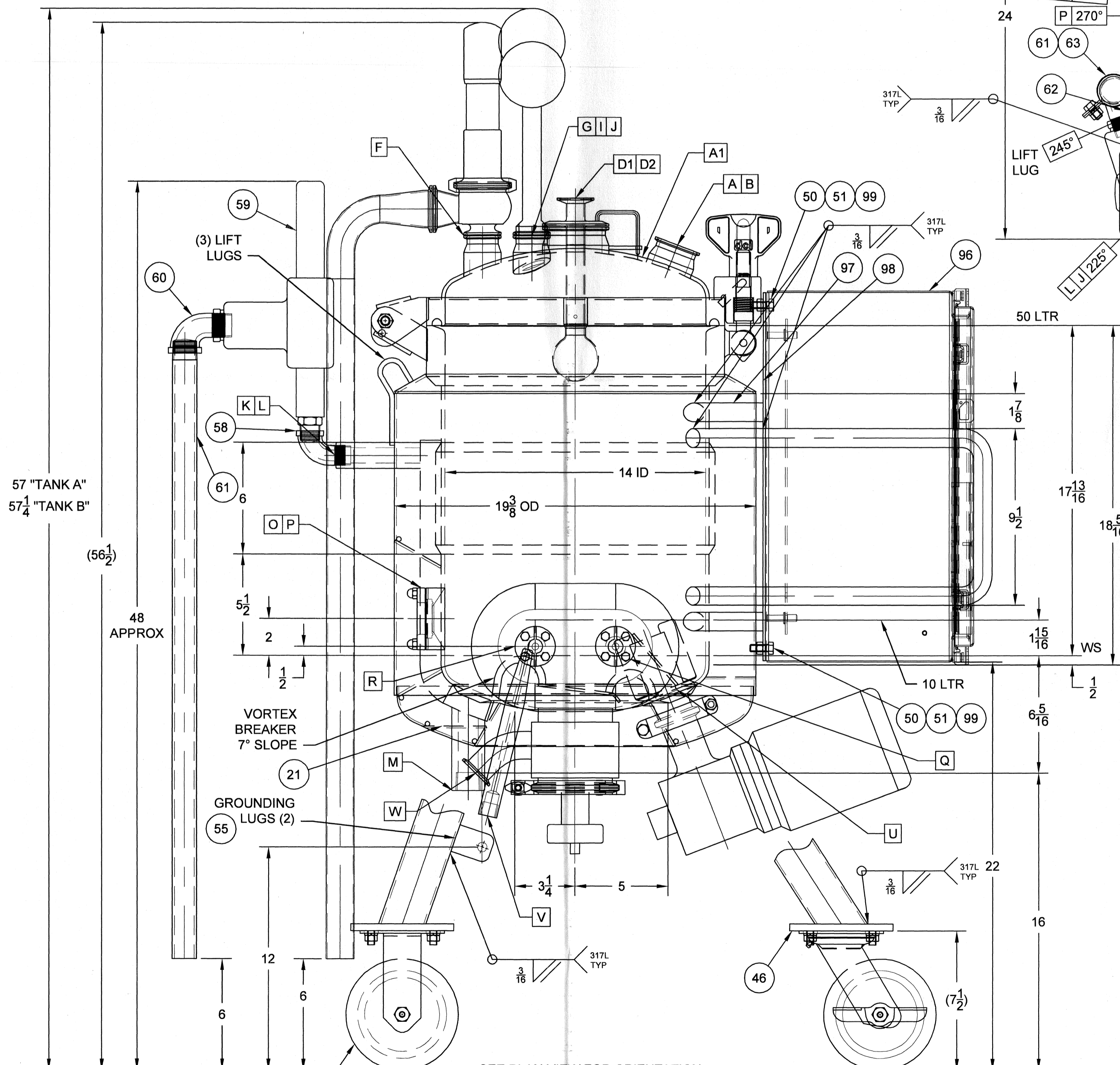
**ADDITIONAL DATA PLATE**

TANK NAME : 50 LITER PRODUCT POOL TANK  
EQUIPMENT TAG NUMBER : (SEE NOTE #33)  
OWNER PURCHASED ORDER NUMBER : 4001001989  
TANK DIAMETER : 14 ID  
SHELL NOMINAL THICKNESS : .1875  
VESSEL MATERIALS OF CONSTRUCTION : SA240, S31803/S32205  
DIMPLE JACKET MATERIALS OF CONSTRUCTION : SA240, S32101

**DCI** This drawing complies with Sect. VIII, Div.1 of the ASME Code and ASME BPE Standards.  
ENG. *Bob L...*  
Q.C. \_\_\_\_\_  
A.I. Acceptance \_\_\_\_\_

**IMPORTANT NOTICE**

PLEASE REVIEW THIS FINAL ASSEMBLY DRAWING. IF YOU HAVE ANY QUESTIONS OR CONCERNS, CONTACT DCI, INC. AS SOON AS POSSIBLE. EQUIPMENT FABRICATION IS PROCEEDING IN ACCORDANCE WITH THIS DRAWING. BE ADVISED THAT ANY CHANGES MADE DURING FABRICATION WILL BE SUBJECT TO REVIEW AND POSSIBLE PRICE AND/OR SHIPMENT REVISIONS.



57" TANK A  
57 1/4" TANK B

48 APPROX

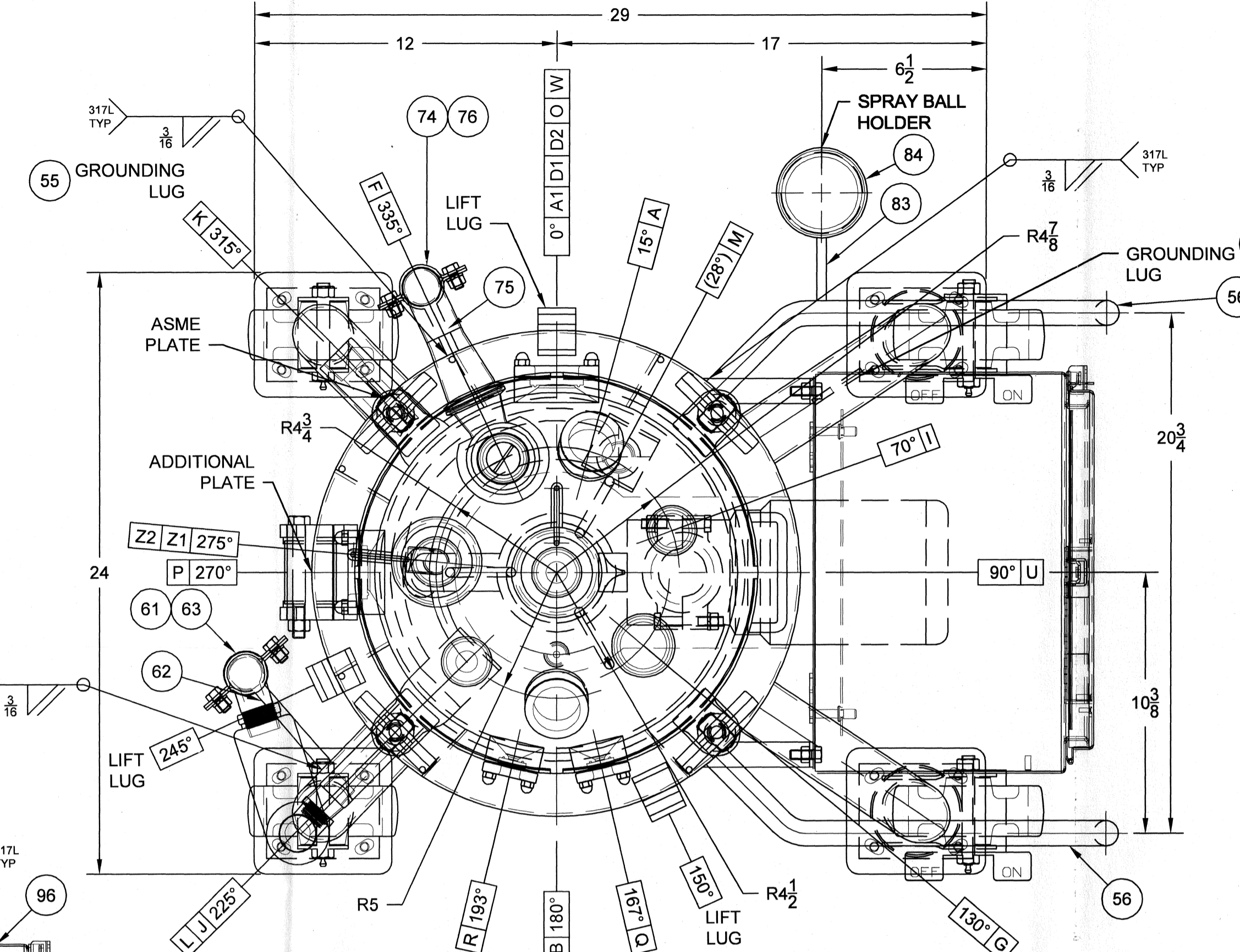
10 LTR

GROUNDING LUGS (2)

VORTEX BREAKER 7" SLOPE

SEE PLAN VIEW FOR ORIENTATION

COLSON #4.06108.929 RLR POLY, 6" X 2" RIGID, POLYURETHANE, 900# SS RIG, STD ROLLER BEARING, GREASE ZERK, SIDE LOCK BRAKE, TEMP RATING -45 TO 180 DEG F #4.06107.929 SS W/ #51000.75 / 51001.75 DIRT SEALS AND #5214.24 BRAKE POLYURETHANE = RED ON GREY CORE.



PLAN VIEW

- 25 BLOW DOWN TUBES TO EXTEND 6" ABOVE THE FLOOR.
- 26 THE LEGS HAVE BEEN DESIGNED TO SEISMIC ZONE IV, WITH THE ASSUMPTION THAT THE LEGS HAVE BEEN PROPERLY RESTRAINED TO THE FLOOR.
- 27 ALL COMPONENTS OF THE CIP SPRAY BALL ASSEMBLY AND MOUNTING NOZZLES WILL BE ETCHED FOR EASE OF ASSEMBLY. PRODUCT CONTACT = ETCH VERTICALLY ALONG THE CENTER LINE. EXTERIOR = STAMPED/ETCHED. THE LABELING WILL STATE AS FOLLOWS:  
D1/D2 = T-7743.01  
D1/D2 = T-7744.01
- 28 GENENTECH SPECIFICATIONS:  
A. SECTION 17380 REV 1.1 DATED 10/25/2006  
WDCI C&E TO SECTION 17380 REV 1.1 DATED 09/14/2007  
B. SECTION 17050 REV 5 DATED 05/15/2008  
WDCI C&E TO SECTION 17050 REV 5 DATED 05/15/2008  
C. SECTION 17055 REV 1.1 DATED 10/01/2009  
WDCI C&E TO SECTION 17055 REV 1.1 DATED 10/01/2009  
D. SECTION 17051 REV 1 (N08022) MATERIAL  
E. SECTION 17090 REV 0.4 DATED 10/01/2009  
WDCI C&E TO SECTION 17090 REV 0.4 DATED 10/01/2009  
F. SECTION 17370 REV 4.0 DATED 04/12/2007  
WDCI C&E TO SECTION 17370 REV 4.0 DATED 09/14/07  
G. SECTION 17080  
H. SECTION 18600 REV 1 DATED 04/17/2006  
WDCI C&E TO SECTION 18600 DATED 08/12/2008
- 29 THE FOLLOWING LOCATIONS ARE TO BE SPOT X-RAYED AT A MINIMUM:  
A. TOP HEAD TO SHELL  
B. EACH SHELL CIRCUMFERENTIAL SEAM  
C. EACH LONGITUDINAL SHELL SEAM  
D. BOTTOM HEAD TO SHELL  
E. SPOT RADIOGRAPHY OF EACH SHELL TO HEAD  
F. JOINT IS 4 INCHES IN ALL DIRECTIONS, ANY ADDITIONAL "T" JOINTS SHALL BE THE SAME.
- 30 DCI TO PERFORM POSITIVE MATERIAL IDENTIFICATION AND PROVIDE CERTIFICATES ON THE FOLLOWING COMPONENTS:  
TOP HEAD  
BOTTOM HEAD  
SHELL  
DIMPLE JACKET
- 31 FARRIS RELIEF VALVE (ALL STAINLESS STEEL CONSTRUCTION)  
NO-FOAM INLET CONNECTION  
NO-FOAM INLET MOUNT  
OUTLET  
TEMPERATURE  
MIXER  
SAMPLE  
SAMPLE  
CONDUCTIVITY PROBE  
PH PROBE  
DIMPLE JACKET INLET  
DIMPLE JACKET VENT  
DIMPLE JACKET OUTLET  
PROCESS AIR  
PRESSURE GAUGE  
LEVEL TRANSMITTER  
RELIEF VALVE MOUNT  
CIP CONNECTION  
CIP MOUNT  
SIGHT GLASS  
SIGHT GLASS  
TANK ACCESS

NOZZLE SCHEDULE	ITEM NO.	NOZZLE ACCESSORIES
Z2 TOP 1 TRI-CLAMP	67	NO-FOAM (80)
Z1 TOP 3 TRI-CLAMP	68	TD15-100-3-MN20-EP20 (11/8) (70)
W BTM 1-1/2 TRI-CLAMP	67	260 DIA X 9 LG STEM (12)
V BTM 1/2 FNPT THERMOWELL	1	LIGHTNIN #MBI205H25 (CUSTOMER SUPPLIED) (15)(16)
U BTM MIXER PLATE	1	BY OTHERS
R SIDE 1/2 NA-CONNECT	30	BY OTHERS
Q SIDE 1/2 NA-CONNECT	30	BY OTHERS
P SIDE 1-1/2 NA-CONNECT	31	BY OTHERS
O SIDE 1-1/2 NA-CONNECT	31	BY OTHERS
M BTM 1 NPT 3000# COUPLING	1	FARRIS RELIEF VALVE, SEE NOTE 25 & 31
L SIDE 3/4 NPT 3000# COUPLING	1	
K SIDE 1 NPT 3000# COUPLING	1	
J TOP 1 TRI-CLAMP	64	31
I TOP 1-1/2 TRI-CLAMP	1	
G TOP 2 TRI-CLAMP	66	
F TOP 1-1/2 TRI-CLAMP	64	
D2 TOP 1 TRI-CLAMP	1	
D1 TOP 3 TRI-CLAMP	68	67
B TOP 2 TRI-CLAMP	66	65
A TOP 2 TRI-CLAMP	66	65
A1 TOP 14 PV-1000 MANWAY (4) LUGS	1	

- 32 MAGNETROL ECLIPSE GUIDED WAVE RADAR LEVEL TRANSMITTER P/N: X705-510A-110 POWER SUPPLY: 24V DC, 2 WIRE LOOP POWERED OUTPUT SIGNAL: 4-20 MA WHART GUIDED WAVE RADAR SINGLE ROD PROBE P/N: X7EF-440N-0308 MATERIAL: HASTELLOY, FINISH: 15E
- 33 EQUIPMENT SERIAL No. JS5282A= T-7743 JS5282B= T-7744
- 34 STAINLESS STEEL CONTROL PANEL (1) 20 X 16 X 10 NEMA 4X PANEL (1) ALLEN-BRADLEY 1/2 HP VFD POWER FLEX 4 WITH REMOTE DOOR MOUNTED HIM MODULE (1) RED LION MODEL PAK9000, 4.20 MA INPUT (1) INCOMING POWER CORD W/ CORP GRIP AND STAINLESS RELIEF, (10' LENGTH) (1) CABLE/WIRING/QUICK DISCONNECT TO MAGNETROL LEVEL SENSOR (1) CALBEWIRING/QUICK DISCONNECT TO MOTOR (1) CUB RATE INDICATOR W/ POWER SUPPLY TO RPM SENSOR INCOMING POWER CORD: 230V AC SINGLE PHASE 50 HZ, 10' LENGT
- 35 DUE TO THE VESSEL SIZE, OPERATING PARAMETERS, AND CUSTOMER REQUEST, EXCEPTION TO NOTE #2 HAS BEEN GRANTED.
- 36 MINISTRY OF MANPOWER, SINGAPORE, DCI CERTIFICATE X-7279-0 MUST BE PROVIDED.
- 37 TUCHENHAGEN RELIEF VALVE STERICOM TYPE 483 SET PRESSURE: 45 PSIG (3.1 BAR)
- 38 C-22 (N06022) MATERIAL TO BE PER GENENTECH SPEC 17050.
- 39 6 MOLY (N08367) MATERIAL TO BE PER GENENTECH SPEC 17050.
- 40 DUPLEX STAINLESS STEEL VESSEL: "DUPLEX 2205" PRODUCT CONTACT DUAL CERTIFIED UNS31803/S32205 TO COMPLY WITH ASME CODE (S31803) AND HAVE MAXIMUM CHEMISTRY FOR CORROSION RESISTANCE (S32205). FILLER WIRE "DUPLEX ER2209" (UNS338209) WITH NITROGEN CONTENT OF 0.14% MIN. ORBITAL TUBE WELDS MADE USING C22 INSERT RINGS. DIMPLE JACKET WILL BE "DUPLEX LDX2101" (UNS332101).
- NOTE: CIP SPRAYBALL AND PIN WILL BE 316/316L.
- 41 DUPLEX TO DUPLEX WELD GAS GMAW 69-301 (ArHeN) ONLY.

- 1 DCI, INC. SHALL NOT BE RESPONSIBLE FOR THE CORROSION RESISTANCE OF EQUIPMENT OR ANY RESULTING DAMAGES. IT IS THE PURCHASER'S RESPONSIBILITY TO SPECIFY THE CORRECT MATERIAL OF CONSTRUCTION SPECIFICATION FOR THE INTENDED APPLICATION(S). CONSULTATION WITH A QUALIFIED PERSONNEL IN MATERIAL SELECTIONS IS HIGHLY RECOMMENDED.
- 2 WHERE "COMPLETE SEAL WELDS" VS. THE USE OF "EXPANSION ISOLATION SEALS" ON THE OUTER SHEATHING ARE USED, CRACKING WILL BE EXCLUDED FROM THE WARRANTY DUE TO THE EXPECTED THERMAL EXPANSION STRESSES OF THE EQUIPMENT UNDER NORMAL OPERATING CONDITIONS.
- 3 ALL TOLERANCES ARE IN ACCORDANCE WITH THE LATEST EDITION OF THE "ASME" BOILER AND PRESSURE VESSEL CODE, SECTION VIII, DIVISION 1, 2010 EDITION, AND DCI STANDARD VESSEL TOLERANCES DRAWING G20000.
- 4 ALL ASME WELDING TO BE DONE BY ASME QUALIFIED WELDERS.
- 5 ALL ASME WELDING PROCEDURES ARE IN ACCORDANCE WITH ASME CODE UW-28.
- 6 ASME SECTION VIII, DIVISION 1 CODE JURISDICTION ENDS AT THE FIRST SEALING SURFACES OF GASKETED CONNECTIONS EXCLUDING MANWAYS AND REMOVABLE HEADS.
- 7 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, 2010 EDITION.
- 8 VESSEL AND/OR HEAT TRANSFER SURFACE TO BE HYDROSTATICALLY OR PNEUMATICALLY TESTED PER UG-99 CHECK FOR DEFECTS, REPAIR AND RETEST IF NECESSARY.
- 9 SUITABLE PRESSURE AND VACUUM RELIEF DEVICES MUST BE INSTALLED BY CUSTOMER FOR OPERATION OF VESSEL AND/OR HEAT TRANSFER SURFACE.
- 10 ALL FLANGES WILL HAVE BOLT HOLES STRADDLE THE 0°-180° & 90°-270° CENTERLINES, UNLESS SPECIFIED OTHERWISE.
- 11 NOZZLES AND/OR OPENINGS IN VESSELS, SHALL NOT BE LOCATED IN OR WITHIN 5" OF WELD SEAMS IN HEADS AND/OR SHELLS WITHOUT PRIOR ENGINEERING APPROVAL. IF NOZZLE OR OPENING IS IN OR WITHIN 0.5" OF WELD SEAM, AN ADDITIONAL ENGINEERING CALCULATION AND/OR X-RAY MAY BE REQUIRED TO MEET UG-14 REQUIREMENTS.
- 12 ALL REINFORCEMENT PADS MUST BE PROVIDED WITH (1) 1/8" DIA. WEEP HOLE LOCATED AT THE LOWEST POINT WHEN THE VESSEL IS IN ITS NORMAL OPERATING POSITION. SEGMENTED REPAIRS MUST HAVE A WEEP HOLE IN EACH SEGMENT AT THE LOWEST POINT.
- 13 ALL CUSTOMER SUPPLIED PARTS MUST HAVE PROPER IDENTIFICATION. APPLICABLE CODES AND IDENTIFICATION (EXAMPLE: PARTIAL DATA), AND MILL TEST REPORTS BEFORE BEING WELDED TO VESSEL.
- 14 PRODUCTION TO PROVIDE PROTECTION FOR ALL NOZZLES AND FITTINGS PRIOR TO SHIPMENT. VESSEL MUST BE ADEQUATELY VENTED.
- 15 FINAL BORE OF 25MM INGOLD FITTINGS ID TO .985"-.988" AFTER WELDING. (WHEN APPLICABLE)
- 16 NOZZLE END I.D. SURFACES HAVE A MINIMUM 1/16" RADIUS.
- 17 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 BRIGHT MILL MATERIAL.  
2D = COLD ROLLED DULL MILL MATERIAL.  
NUMERIC VALUE = RA.  
NUMERIC VALUE + "E" = RA AFTER FINAL ELECTRO-POLISH. WELD FINISH SAME AS BASE MATERIAL UNLESS NOTED OTHERWISE, EX. 32/70 (BASE/WELD).
- 18 DCI TO PERFORM THE FOLLOWING TESTS AND PROCEDURES:  
X-7030-3 - STATIC SALINE TEST (FILL & HOLD)  
X-7032-3 - LIQUID PENETRANT EXAMINATION (INCLUDES OUTLET VALVE TO VESSEL WELD)  
X-7033-8 - HYDROSTATIC PRESSURE TEST  
X-7039-6 - ELECTROPOLISHING & PASSIVATION  
X-7040-4 - VESSEL FINAL INTERNAL CLEANING  
X-7051-8 - BPE CIP COVERAGE TEST  
X-7055-3 - BPE DRAINAGE TEST PROCEDURE  
X-7211-0 - GENENTECH SURFACE FINISH REPORT AND PROCEDURE  
X-7283-1 - PMI BY XRF FINAL VESSEL PROCEDURE & REPORT  
X-7234-0 - FERRISCOPE PROCEDURE & REPORT (FERRITE MEASURING) 30-70%
- 19 MATERIAL CERTS REQUIRED FOR THE FOLLOWING:  
PRESSURE VESSEL COMPONENTS  
REMOVABLE ACCESSORIES/WETTED PARTS  
FILLER WIRE  
AGITATOR SEALS  
\*ADDITIONAL COSTS APPLY
- 19 WELD WIRE:  
2209 - ON DUPLEX MATERIAL  
ON DUPLEX TO 316/316L MATERIAL  
317L - ON 316/316L TO 316/316L MATERIAL
- 20 DESIGN MEETS ASME BPE PER DCI X-7108-4
- 21 ALL PRODUCT CONTACT SURFACES USING THE GTAW PROCESS ARE TO BE WELDED USING 99.999% ARGON. NO HELIUM ALLOWED.
- 22 NO PLASMA WELDING ALLOWED UNLESS FULLY AUTOMATED.
- 23 ALUMINUM OXIDE ABRASIVE CAN BE USED TO 240 GRIT. SILICON CARBIDE MUST BE USED ON FINAL POLISHING PASSES.
- 24 NO ANIMAL FAT, OIL OR GREASE POLISHING COMPOUNDS (ROUGE) TO BE USED.

ITEM	MATERIAL DESCRIPTION	MATERIAL SPEC.	INTERIOR FINISH	EXTERIOR FINISH
SHELL	PLATE 1875 (7 GA)	S31803/S32205	15E	N/A
TOP HEAD	PLATE 1875 (7 GA)	S31803/S32205	15E	30
BTM HEAD	PLATE 1875 (7 GA)	S31803/S32205	15E	30
SHELL HEAT TRANS	SHT 18 GA	SA240/S32101	N/A	N/A
HEAD HEAT TRANS	SHT 18 GA	SA240/S32101	N/A	N/A
SHELL SHEATHING	SHT 12 GA	SA240/S31691L	N/A	30
TOP HD SHEATHING	N/A	N/A	N/A	N/A
BTM HD SHEATHING	SHT 12 GA	SA240/S31691L	N/A	30
BREAST RING	SHT 10 GA	SA240/S31691L	N/A	30
LEGS	PIPE 2 SCH 10	SA312/TP316/316L	N/A	30
FITTING GASKETS	BLK EPDM USP CL VI	EPDM PEROXIDE CURED	N/A	N/A
MANWAY GASKET	BLK EPDM USP CL VI	EPDM PEROXIDE CURED	N/A	N/A

CIP DATA: 2-1/2 DCI SPRAY BALL  
CIP FLOW RATE: 20 G.P.M. AT 20 P.S.I. (EACH)

INSULATION  
SHELL: 2" CHLORIDE-FREE CERAMIC FIBER  
BTM HEAD: N/A  
TOP HEAD: N/A

SURFACES COVERED WITH INSULATION TO RECEIVE (1)  
COAT OF THURMALOX-70 ALL:  HEAT TRANSFER:  NONE:   
PAINT, EXT: N/A

HEAD DIMENSIONAL INFORMATION  
TOP INNER HD: 14 ID, 14 DR, 1 KR, 25 SF  
BTM INNER HD: 14 ID, 14 DR, 1 KR, 5 SF  
TOP OUTER HD: N/A  
BTM OUTER HD: 18.87 ID, 19 DR, 1.5 KR, 5 SF

HEAT TRANSFER SURFACE INFORMATION  
DIMPLE JACKET ON THIS JOB IS DESIGNED FOR  
 NON-THERMAL SHOCK LOADING  N/A  
 THERMAL SHOCK LOADING:  MODERATE  EXTREME  
\*ONE BOX MUST BE CHECKED\* REFERENCE DCI DOCUMENT #X-7141

SHELL:  DIMPLED, PLUG WELD  HALF PIPE  N/A  
 DIMPLED, LASER WELD  CONVENTIONAL

HEAD:  DIMPLED, PLUG WELD  HALF PIPE  N/A  
 DIMPLED, LASER WELD  CONVENTIONAL

AREA SHELL: 1.41 SF HEAD: 0.297 SF

HEATING MEDIUM: N/A  
COOLING MEDIUM: CHILLED WATER

NON-DESTRUCTIVE EXAMINATION  
RADIOGRAPHY:  VESSEL  HEAT TRANSFER PER UHA-33  UNF-57  
TOP HEAD TO SHELL SHELL LONG SEAM TO SHELL  
BTM HEAD TO SHELL BTM HEAD TO SHELL

SMLS  N/A  SPOT  SMLS  SPOT

PT (DYE PEN):  VESSEL  HEAT TRANSFER PER UHA-34  UNF-58  
SPOT X-RAY T-SEAMS 12" IN ALL DIRECTIONS:  YES  NO  
 OTHER-SEE NOTE 29

CERTIFIED BY DCI INC  
ST. CLOUD, MINNESOTA

RT-4

VESSEL MAWP 45 PSI AT 350 °F  
MAEWP 15 PSI AT 350 °F  
MDMT -20 °F AT 45 / -15 PSI

VESSEL VOLUME 13.2 GAL (50 LTR)

JACKET MAWP 150 PSI AT 350 °F  
MAEWP 15 PSI AT 350 °F  
MDMT -20 °F AT 150 / -15 PSI

JACKET VOLUME 27 GAL (1 LTR)

MFRS SERIAL NO JS5282  
YEAR BUILT 2011

VESSEL TEST PRESSURE: 63 PSIG  
JACKET TEST PRESSURE: 210 PSIG

PRODUCT DATA: PRODUCT POOL  
VISCOSITY: 0.45 - 1.6 cP SPECIFIC GRAVITY: 1.1

EST. EMPTY WEIGHT: 325 LBS (DESIGN)  
EST. OPERATING WEIGHT: 445 LBS (DESIGN)  
EST. FULL FLOODED WEIGHT: 525 LBS

SEISMIC ZONE: IV (UBC 1997)

E CORRECTED OVERALL HEIGHT DIMENSIONS, AND ADDED YEAR BUILT DATE TO NAME. CCH 8/30/11

D CORRECTED HEIGHT DIMS. VAD 7/28/11

C CHANGED NOTE 27 (LABELING). VAD 7/18/11

B STARTED PRODUCTION PER SIGNED RETURNED APPROVAL. NRD 05/02/11

A REVISED PER RETURNED APPROVAL DRAWING AND RESUBMITTED. CCH 3-21-11

REV REVISION DESCRIPTION REV BY/DATE

TITLE: 50L PORTABLE PRODUCT POOL TANK T-7743 & T-7744

DCI ORDER NO.: C539675 QTY. REQD.: 2

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ST. CLOUD, MN SHEET 1 OF 2

DATE: 05/02/11  
PREFIX: 272-04  
DRAWING NO.: JS5282

PRODUCTION NRD  
DATE: 03/31/11  
PROJ. MAN. SAH

APPROVAL  
DATE: 03/31/11  
REV: E

NOZZLE SCHEDULE	ITEM NO.	NOZZLE ACCESSORIES
Z2 TOP 1 TRI-CLAMP	67	NO-FOAM (80)
Z1 TOP 3 TRI-CLAMP	68	TD15-100-3-MN20-EP20 (11/8) (70)
W BTM 1-1/2 TRI-CLAMP	67	260 DIA X 9 LG STEM (12)
V BTM 1/2 FNPT THERMOWELL	1	LIGHTNIN #MBI205H25 (CUSTOMER SUPPLIED) (15)(16)
U BTM MIXER PLATE	1	BY OTHERS
R SIDE 1/2 NA-CONNECT	30	BY OTHERS
Q SIDE 1/2 NA-CONNECT	30	BY OTHERS
P SIDE 1-1/2 NA-CONNECT	31	BY OTHERS
O SIDE 1-1/2 NA-CONNECT	31	BY OTHERS
M BTM 1 NPT 3000# COUPLING	1	FARRIS RELIEF VALVE, SEE NOTE 25 & 31
L SIDE 3/4 NPT 3000# COUPLING	1	
K SIDE 1 NPT 3000# COUPLING	1	
J TOP 1 TRI-CLAMP	64	31
I TOP 1-1/2 TRI-CLAMP	1	
G TOP 2 TRI-CLAMP	66	
F TOP 1-1/2 TRI-CLAMP	64	
D2 TOP 1 TRI-CLAMP	1	
D1 TOP 3 TRI-CLAMP	68	67
B TOP 2 TRI-CLAMP	66	65
A TOP 2 TRI-CLAMP	66	65
A1 TOP 14 PV-1000 MANWAY (4) LUGS	1	