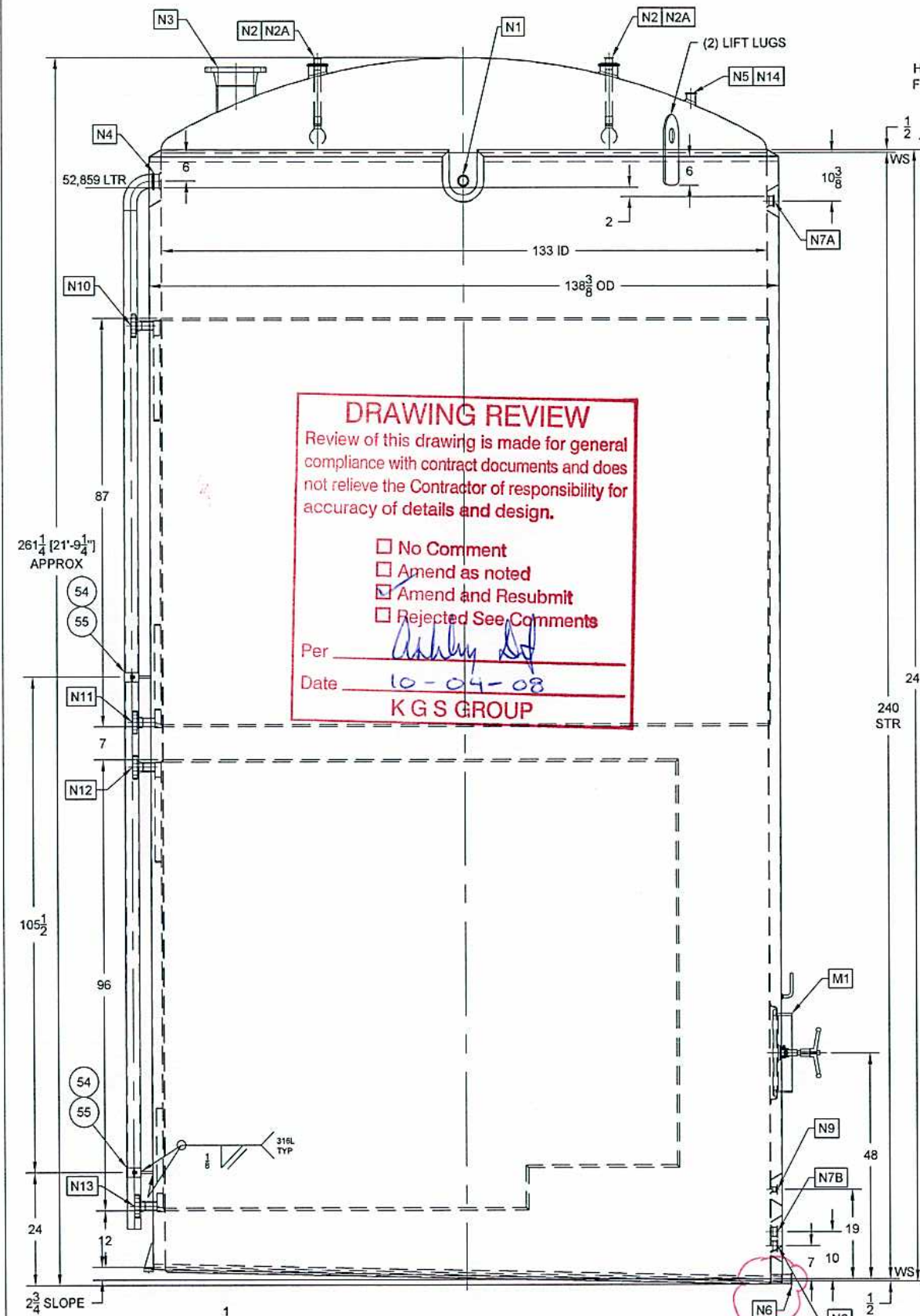
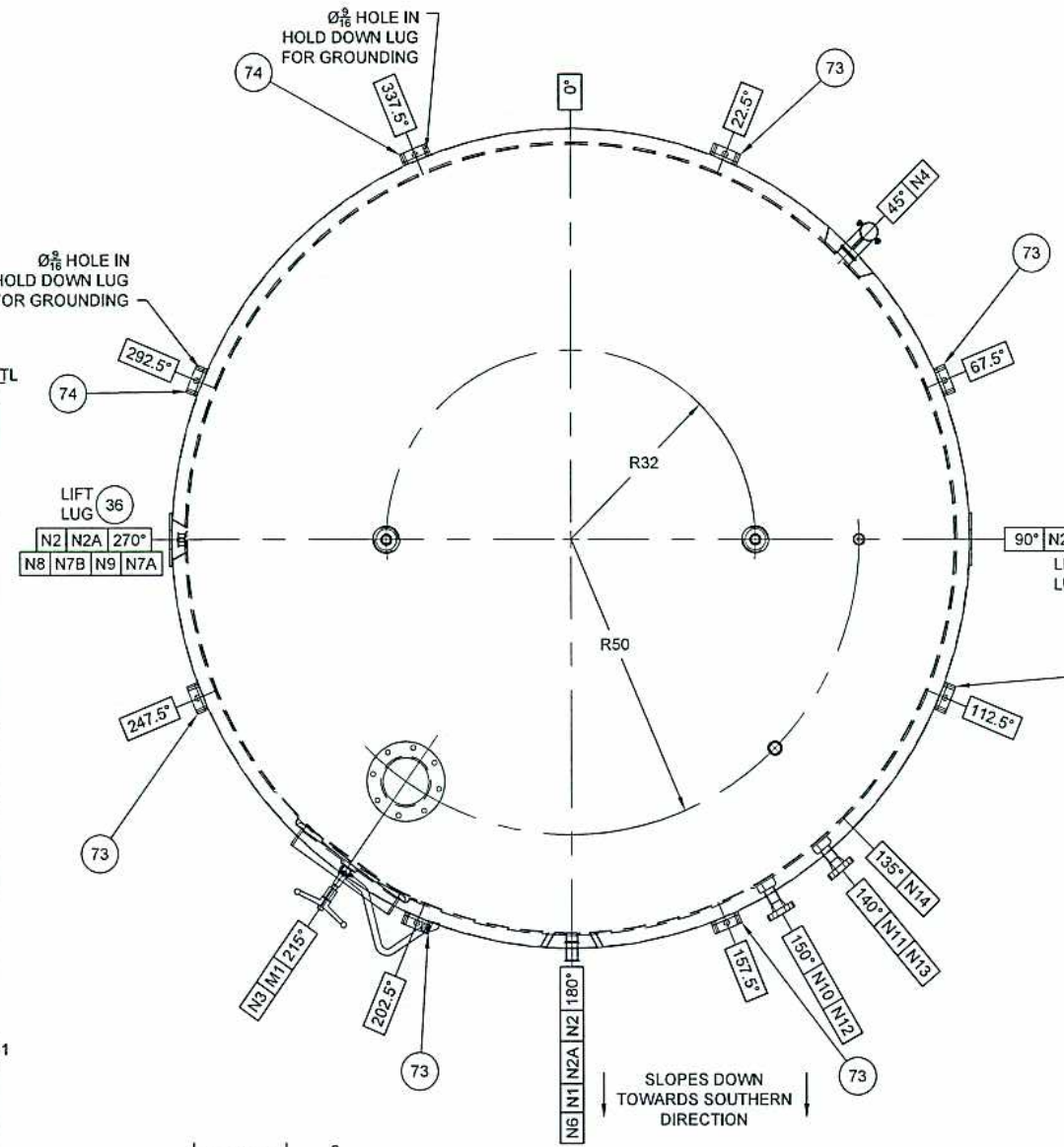
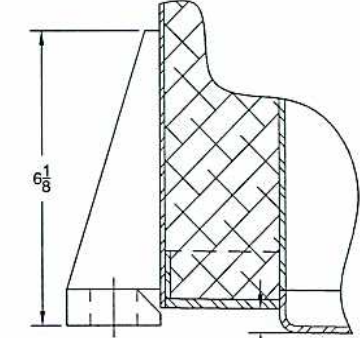
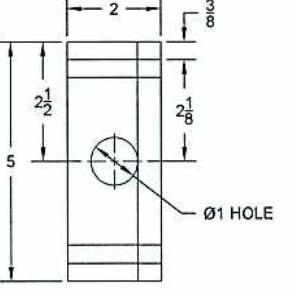




SEE PLAN VIEW FOR ORIENTATION
REVISE TO REFLECT CHANGE FROM 2" TO 3" TRICLAMP



PLAN VIEW



ANCHOR DETAIL
ANCHOR BOLTS BY OTHERS



- NOTES:
- 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 QUALIFIED PERSONNEL IN MATERIAL SELECTIONS IS HIGHLY RECOMMENDED.
 - 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.
 - ALL TOLERANCES ARE IN ACCORDANCE WITH THE LATEST EDITION OF THE "ASME" BOILER AND PRESSURE VESSEL CODE, SECTION VIII, DIVISION 1, 2007 EDITION, 2008 ADDENDA AND DCI STANDARD VESSEL TOLERANCES DRAWING 020000.
 - ALL ASME WELDING TO BE DONE BY ASME QUALIFIED WELDERS.
 - ALL ASME WELDING PROCEDURES ARE IN ACCORDANCE WITH ASME CODE UW-28.
 - ASME CODE JURISDICTION ENDS AT THE FIRST SEALING SURFACE EXCLUDING MANWAY.
 - 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, 2007 EDITION, 2008 ADDENDA.
 - VESSEL AND/OR HEAT TRANSFER SURFACE TO BE HYDROSTATICALLY OR PNEUMATICALLY TESTED PER UG-99, CHECK FOR DEFECTS, REPAIR AND RETEST IF NECESSARY.
 - SUITABLE PRESSURE AND/OR VACUUM RELIEF DEVICES MUST BE INSTALLED BY CUSTOMER FOR OPERATION OF VESSEL AND/OR HEAT TRANSFER SURFACE.
 - ALL FLANGES WILL HAVE BOLT HOLES STRADDLE THE 0°-180° & 90°-270° CENTERLINES, UNLESS SPECIFIED OTHERWISE.
 - 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 UW-14 REQUIREMENTS.
 - 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.
 - ALL CUSTOMER SUPPLIED PARTS MUST HAVE PROPER IDENTIFICATION, APPLICABLE CODE/STD INFORMATION (EXAMPLE: PARTIAL DATA), AND MILL TEST REPORTS BEFORE BEING WELDED TO VESSEL.
 - PRODUCTION TO PROVIDE PROTECTION FOR ALL NOZZLES AND FITTINGS PRIOR TO SHIPMENT. VESSEL MUST BE ADEQUATELY VENTED.
 - FINAL BORE OF 25MM (1000) FITTINGS ID TO .985"-.988" AFTER WELDING. (WHEN APPLICABLE)
 - NOZZLE END I.D. SURFACES HAVE A MINIMUM 1/16 RADIUS.
 - 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 = "R" = RA AFTER FINAL ELECTRO-POLISH WELD FINISH SAME AS BASE MATERIAL, UNLESS NOTED OTHERWISE, EX. 32/70 (BASEWELD).
 - DCI TO PERFORM THE FOLLOWING TESTS AND PROCEDURES:
X-7033-7 - HYDROSTATIC PRESSURE TEST
X-7038-4 - BASIC SURFACE FINISH TEST
X-7065-3 - BPE DRAINAGE TEST PROCEDURE
 - MATERIAL CERTS REQUIRED FOR THE FOLLOWING:
PRESSURE VESSEL COMPONENTS
REMOVABLE ACCESSORIES/WETTED PARTS
AGITATOR SEALS
*ADDITIONAL COSTS APPLY
 - CRN FOR DIMPLE JACKET TO BE DETERMINED.
 - TANK MAY BE LIFTED WITH HOLD-DOWN LUGS.
 - CUSTOMER TO INSTALL ON SLOPED PAD.
 - AGITATOR OPTION NOT TAKEN.

dcj
This drawing has been reviewed by DCI engineering.
ENG. *[Signature]*
2010-01-24 08:01:54 -0500

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.

dcj INC
ST CLOUD, MINNESOTA
VESSEL MAWP 0 PSI AT 150°F
MAEWP 0 PSI AT 150°F
MDMT -20°F AT 0/0 PSI
VESSEL VOLUME 14,529 GAL (55,000 LTR)
MFRS SERIAL NO JS4782
YEAR BUILT

M1	SIDE	16 X 20 MANWAY	TANK ACCESS	1		12		
N14	TOP	2 TRI-CLAMP	SPARE	1				
N13	SIDE	1-1/2 150W RFWN FLANGE	LOWER DIMPLE JACKET OUTLET	1				
N12	SIDE	1-1/2 150W RFWN FLANGE	LOWER DIMPLE JACKET INLET	1				
N11	SIDE	1-1/2 150W RFWN FLANGE	UPPER DIMPLE JACKET OUTLET	1				
N10	SIDE	1-1/2 150W RFWN FLANGE	UPPER DIMPLE JACKET INLET	1				
N9	SIDE	1 TRI-CLAMP	THERMOWELL	1			.260 DIA X 6 LG STEM, THERMOMETER BY OTHERS	
N8	SIDE	2 TRI-CLAMP	LEVEL TRANSMITTER	1			TRANSMITTER BY OTHERS	
N7B	SIDE	2 TRI-CLAMP	LEVEL SWITCH	1			SWITCH BY OTHERS	
N7A	SIDE	2 TRI-CLAMP	LEVEL SWITCH	1			SWITCH BY OTHERS	
N6	SIDE	2 TRI-CLAMP	OUTLET	1			OUTLET VALVE BY OTHERS	
N5	TOP	1 TRI-CLAMP	PROCESS WATER INLET	1				
N4	SIDE	3 TRI-CLAMP	OVERFLOW	1	67	68	OVERFLOW LINE (52)	
N3	TOP	8 150W RFWN FLANGE	VENT	1			VENT ASSEMBLY BY OTHERS	
N2A	TOP	1-1/2 TRI-CLAMP	CIP CONNECTION	2				
N2	TOP	4 TRI-CLAMP	CIP MOUNT	2	69	70	MTG TUBE (27), BALL (28), PIN (29)	
N1	SIDE	2 TRI-CLAMP	PROCESS INLET	1				
MK	LOC.	DESCRIPTION	SERVICE	QTY.	CLAMP	CAP	GSKT	DESCRIPTION / (ITEM NO.)
NOZZLE SCHEDULE				ITEM NO.				NOZZLE ACCESSORIES

ITEM	MATERIAL DESCRIPTION	MATERIAL SPEC.	INTERIOR RA FINISH	EXTERIOR RA FINISH
SHELL	SHEET 10 GA	SA240.316219L	25	N/A
TOP HEAD	SHEET 12 GA	SA240.316219L	25	32
BTM HEAD	SHEET 10 GA	SA240.316219L	25	N/A
SHELL HEAT TRANS	SHEET 16 GA	SA240.304	N/A	N/A
HEAD HEAT TRANS	N/A	N/A	N/A	N/A
SHELL SHEATHING	SHEET 12 GA	SA240.316219L	N/A	32
TOP HD SHEATHING	N/A	N/A	N/A	N/A
BTM HEAT TRANS	SHEET 7 GA	SA240.316219L	N/A	32
BREAST RING	SHEET 10 GA	SA240.316219L	N/A	32
LEGS	N/A	N/A	N/A	N/A
FITTING GASKETS	FDA APPROVED	SILICONE	N/A	N/A
MANWAY GASKET	FDA APPROVED	NEOPRENE	N/A	N/A
ALL OTHER PRODUCT CONTACT SURFACES	N/A	316219L	25	25

CIP DATA: (2) 3-1/2 DCI SPRAY BALLS, 11,100 KG/HR
CIP FLOW RATE: 48 G.P.M. AT 20 P.S.I. (APPROX TOTAL)

INSULATION
SHELL: 2" CFCC & 2" X 24" WD EPS (2) PLACES
BTM HEAD: N/A
TOP HEAD: N/A
SURFACES COVERED WITH INSULATION TO RECEIVE A 5 MIL COATING OF THURMALOX - ALL: ☒ HEAT TRANSFER: ☐ NONE: ☐
PAINT, EXT: N/A

HEAD DIMENSIONAL INFORMATION
TOP INNER HD: 133 ID, 133 DR, 3 KR, 5 SF
BTM INNER HD: 133 ID, 25 KR, 5 SF, 25FT SLOPE
TOP OUTER HD: N/A
BTM OUTER HD: N/A

HEAT TRANSFER SURFACE INFORMATION
DIMPLE JACKET ON THIS JOB IS DESIGNED FOR
☒ NON-THERMAL SHOCK LOADING ☐ 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) 251 SF UPR ZONE, (1) 251 SF UPPER ZONE
DIMPLE PATTERN TYPE: 2-1/4 X 2-1/4, TYPE AF
HEATING MEDIUM: UNKNOWN
COOLING MEDIUM: CHILLED WATER, 2895 KG/HR EACH
4 PSIG PRESSURE DROP

NON-DESTRUCTIVE EXAMINATION
RADIOGRAPHY: ☐ VESSEL ☐ HEAT TRANSFER PER ☐ UHA-33 ☐ UNF-57
TOP HEAD: ☐ SHELL ☐ LONG. SEAM ☐ HEAD ☐ TO SHELL
N/A ☐ N/A ☐ N/A ☐ N/A
PT (DYE PEN): ☐ VESSEL ☐ HEAT TRANSFER PER ☐ UHA-34 ☐ UNF-58
SPOT X-RAY T-SEAMS(S) 12" IN ALL DIRECTIONS: ☐ YES ☐ NO
☐ OTHER:

U W
CERTIFIED BY
dcj INC
ST CLOUD, MINNESOTA
JACKET MAWP 150 PSI AT 150 °F
MAEWP 15 PSI AT 150 °F
MDMT -20 °F AT 150 / -15 PSI
JACKET VOLUME 57.25 GAL (216.7 LTR)
MFRS SERIAL NO JS4782
YEAR BUILT

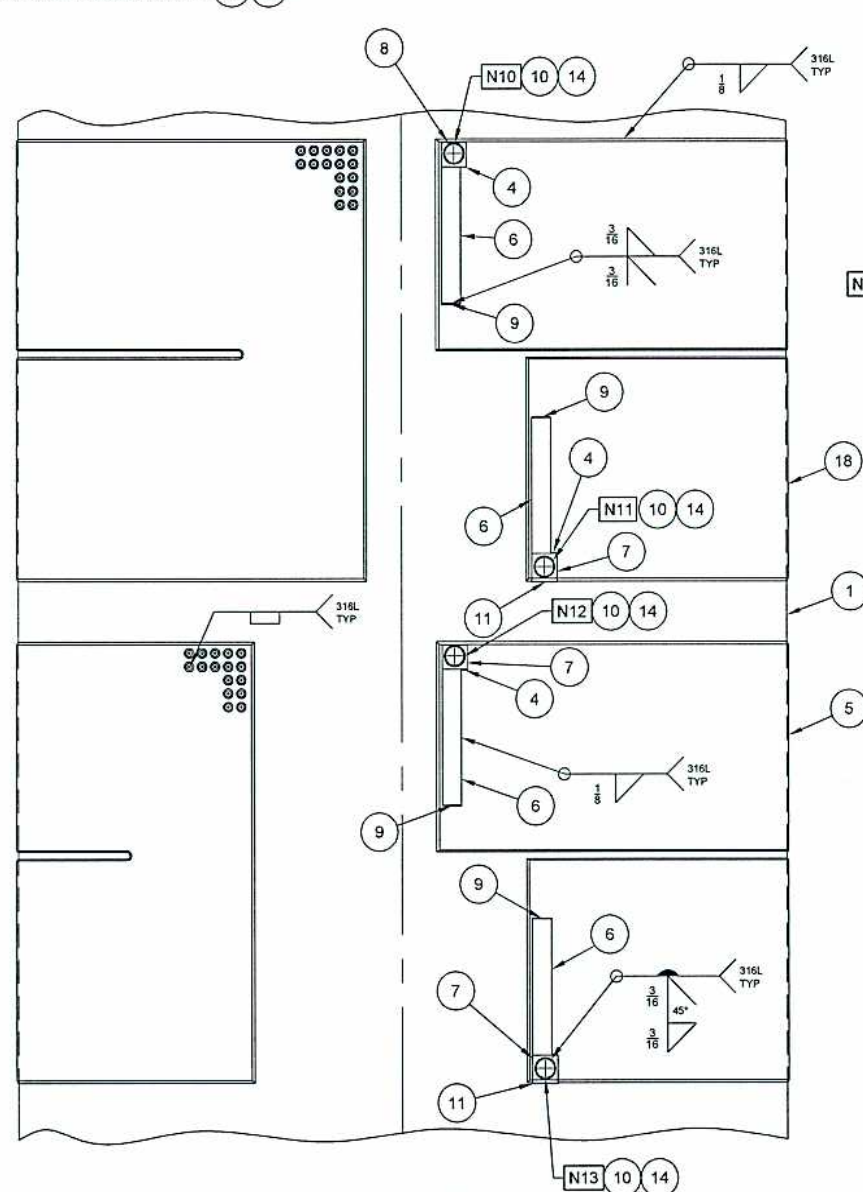
VESSEL TEST PRESSURE: N/A
JACKET TEST PRESSURE: 195 PSIG

PRODUCT DATA: SUGAR SYRUP
VISCOSITY: N/A SPECIFIC GRAVITY: 1.33
EST. EMPTY WEIGHT: 11,000 LBS
EST. OPERATING WEIGHT: 172,265 LBS (DESIGN)
EST. FULL FLOODED WEIGHT: N/A
SEISMIC ZONE: I

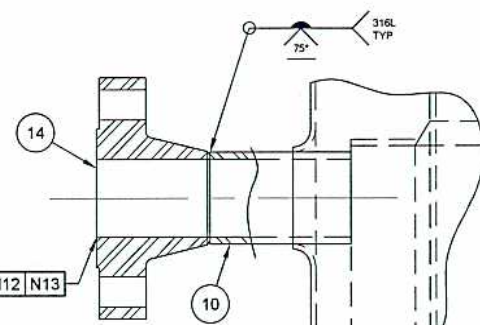
REV	REVISION DESCRIPTION	REV BY/DATE
E		
D		
C	ADDED SHEET 2 AND BOM, STARTED PRODUCTION PRINTS.	VAD 2/20/10
B	ROTATED NOZZLES N10, N11, N12 & N13 PER CUSTOMER REQUEST, RESUBMIT FOR PRECON.	VAD 2/20/10
A	MADE CHANGES PER CUSTOMER REQUEST, RESUBMIT FOR PRE-CON.	VAD 2/12/10

TITLE 55,000 LTR, SUGAR SYRUP SILO, TK-76002
DCI ORDER NO.: 0527312 QTY. REQD.: 1
This drawing is the property of DCI, INC. and is transmitted in confidence. The reproduction, use, or disclosure, in whole or part, of the design contained herein is prohibited without the written consent of DCI, Inc.
The drawing is not officially released if it does not contain an END electronic signature.
DIMENSIONS ARE IN INCHES UNLESS SPECIFIED
SCALE: 1/8" = 1'-0" DO NOT SCALE DRAWINGS
PRODUCTION VAD APPROVAL NRO
DATE 2/18/10 DATE 01/19/10
ST. CLOUD, MN PREFIX 014-01 DRAWING NO. JS4782 REV C
SHEET 1 OF 2

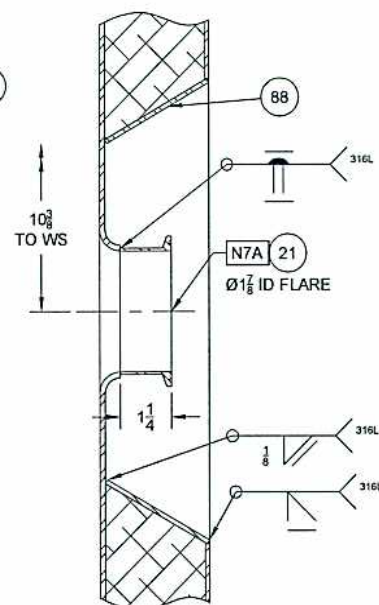
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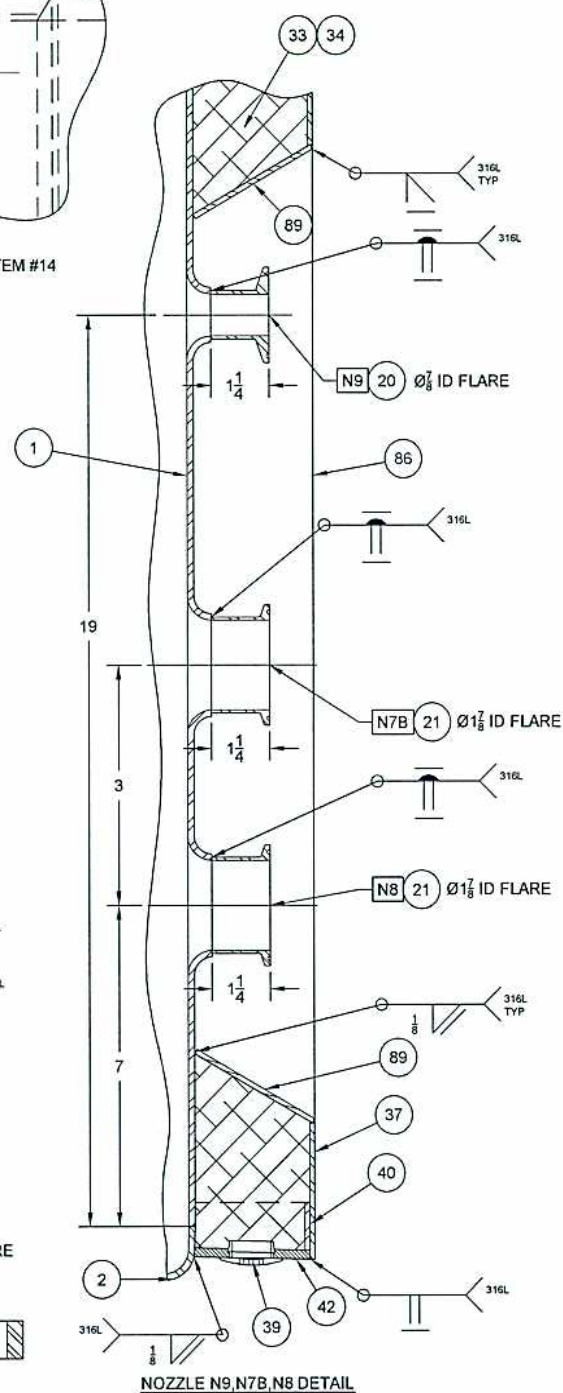
DIMPLE JACKET DETAIL
SEE SHEET 1 FOR ORIENTATION



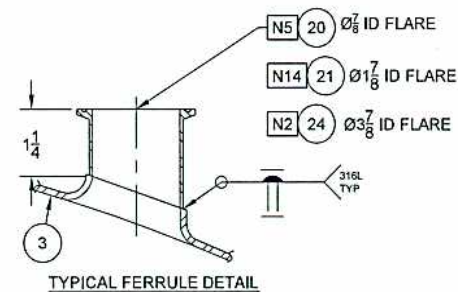
DO NOT REMOVE CRN MARK FROM ITEM #14



NOZZLE N7A DETAIL



NOZZLE N9,N7B,N8 DETAIL



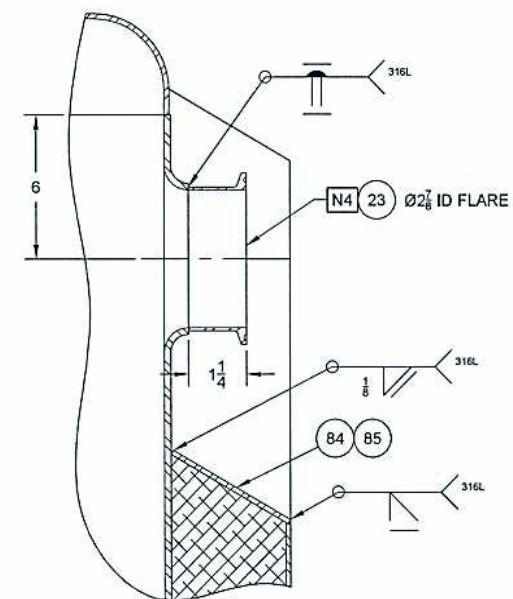
TYPICAL FERRULE DETAIL

DRAWING REVIEW

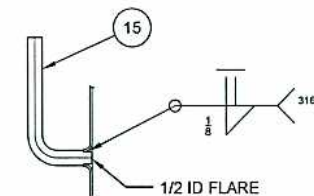
Review of this drawing is made for general compliance with contract documents and does not relieve the Contractor of responsibility for accuracy of details and design.

☐ No Comment
☐ Amend as noted
☒ Amend and Resubmit
☐ Rejected See Comments

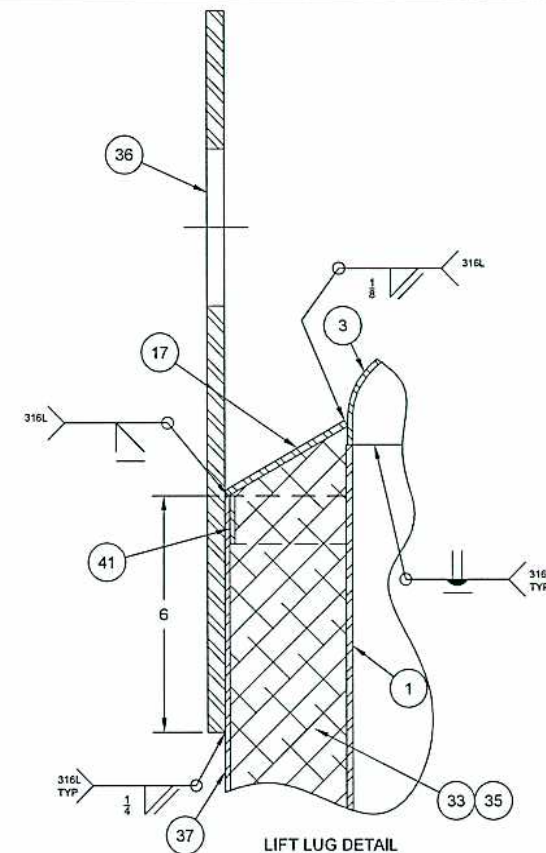
Per Wahley
Date 10-04-08
K G S GROUP



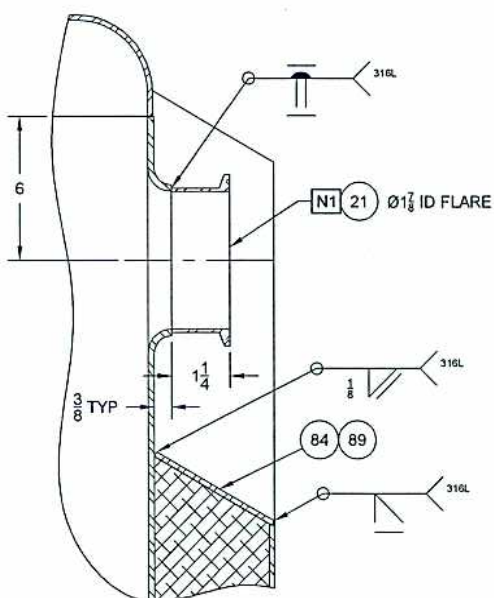
NOZZLE N4 DETAIL



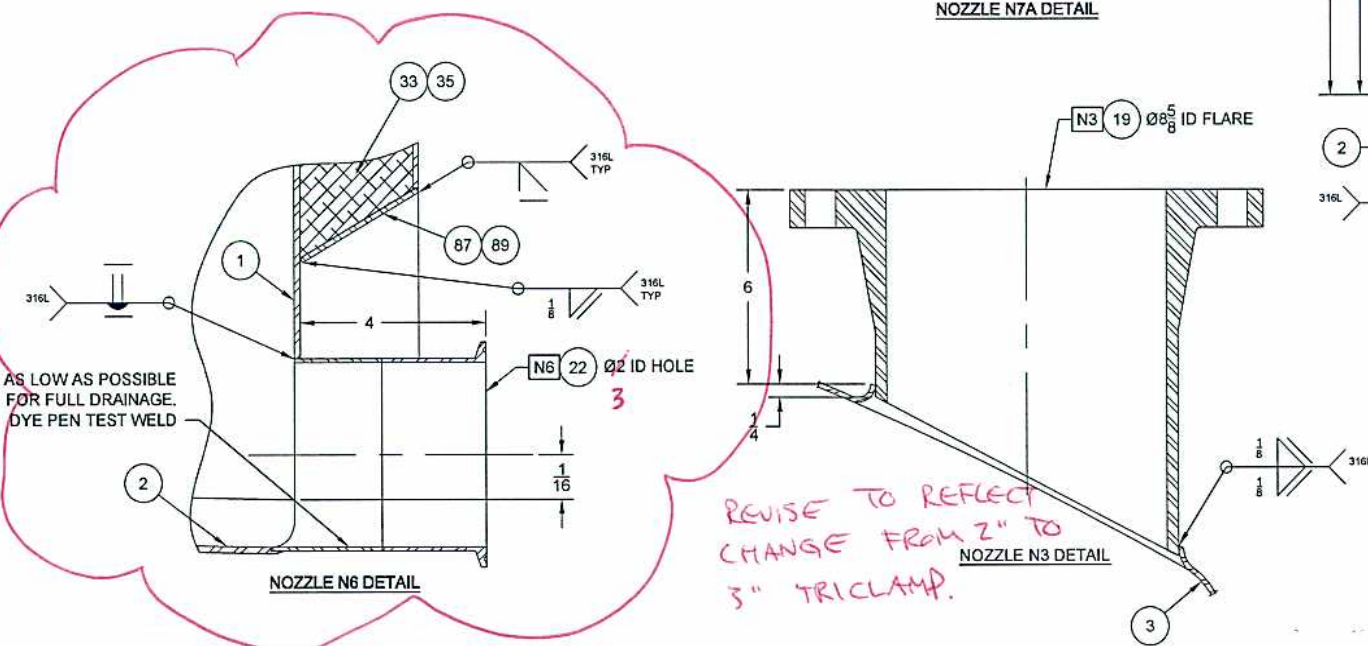
HANDLE DETAIL



LIFT LUG DETAIL

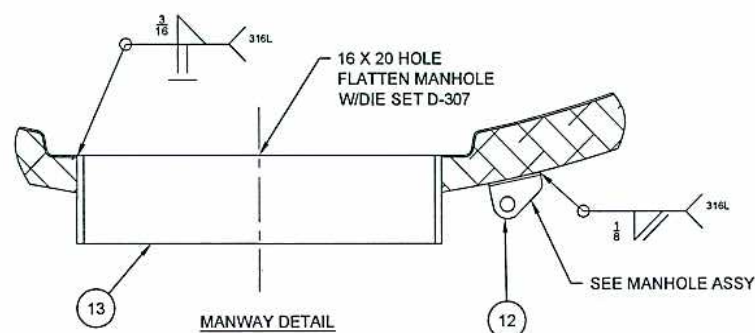


NOZZLE N1 DETAIL



REVISE TO REFLECT
CHANGE FROM 2" TO
3" TRICLAMP. NOZZLE N3 D

NOZZLE N6 DETAIL



MANWAY DETAIL

— SEE MANHOLE ASSY

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.

dcl INC. This drawing complies with Sect.
VIII, Div.1 of the ASME Code
ENCL. Signature *My initials*
ENG. _____ Date certifying the document:
DCL Inc. 2010.02.25 14.52.00 -06'00'
Q.C. _____
A.I. Acceptance _____

TITLE 55,000 LTR,SUGAR SYRUP SILO, TK-76002			
DCI ORDER NO.: C573212		QTY. REQD.: 1	
This drawing is the property of DCI, Inc. and is transmitted in confidence. The reproduction, use, or disclosure, in whole or part, of the design contained herein is prohibited without the written consent of DCI, Inc.			
This drawing is not officially released if it does not contain an END electronic signature.			
DIMENSIONS ARE IN INCHES UNLESS SPECIFIED			
	SCALE	DO NOT SCALE DRAWING	
	PRODUCTION	APPROVAL	PROJ. ENG.
	DATE	DATE	PROJ. MAN.
	2/22/10		SAH
ST. CLOUD, MN	PREFIX	DRAWING NO.	REV C
SHEET 2 OF 2	014-01	JS4782	

WPS 1.001

LEGEND

WELD WIRE HEAT NUMBERS

PRODUCT CONTACT (WIRE TYPE)

HEAT TRANSFER (WIRE TYPE)

OTHER (WIRE TYPE)

RECORD ALL WELDS IN SKETCH

SPECIAL NOTES (PRODUCT CONTACT)

GTAW ONLY

GTAW ONLY 99.999 ARGON

NO STICK WELDING (SMAW)

NO PLASMA WELDING (PAW)

NO GMAW WELDING (GMAW-P ALLOWED)

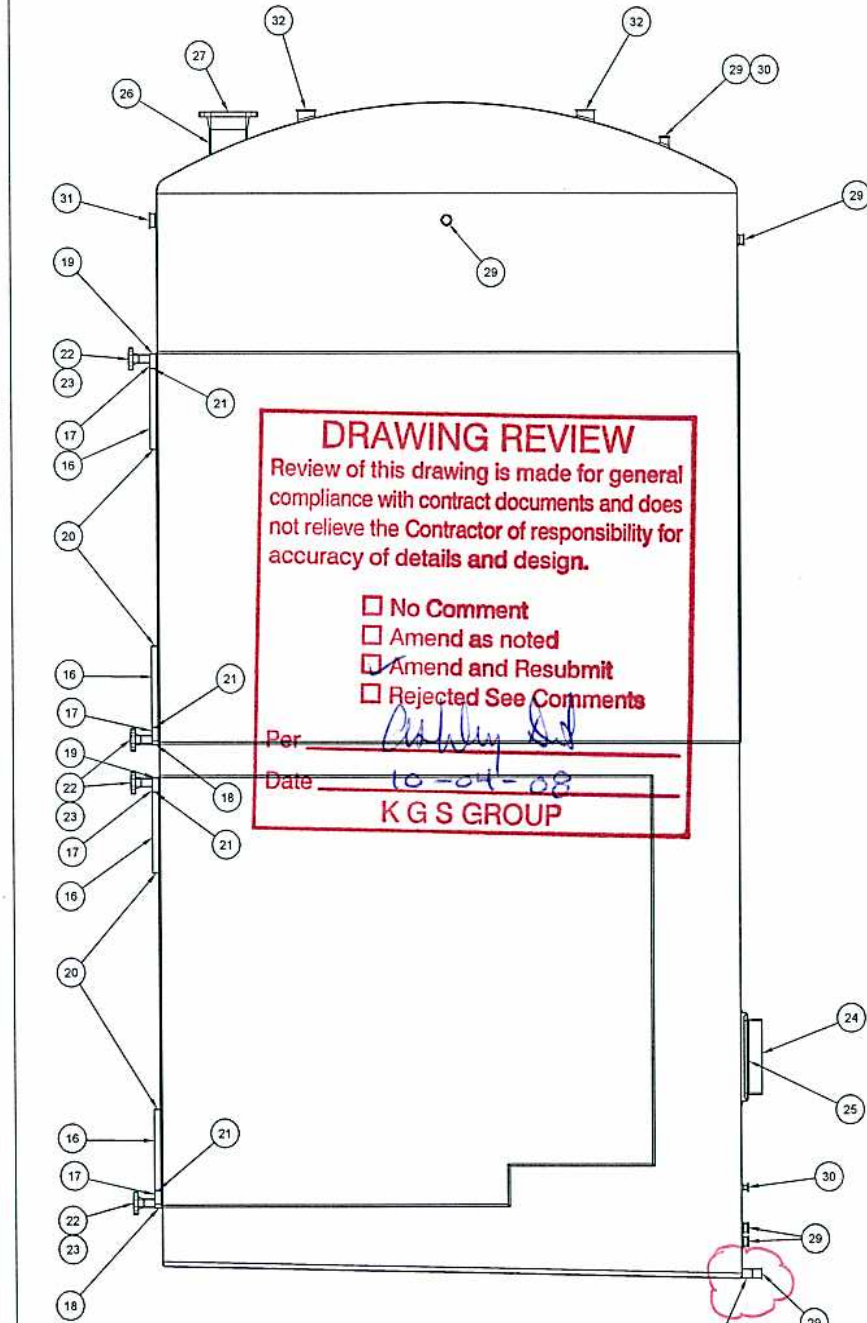
NO GMAW-P WELDING

NO AUTOGENOUS WELDING

OTHER

RECORD WELD WIRE HEAT NOS.

NO CO2 GAS ALLOWED



DRAWING REVIEW

Review of this drawing is made for general compliance with contract documents and does not relieve the Contractor of responsibility for accuracy of details and design.

☐ No Comment

☐ Amend as noted

☒ Amend and Resubmit

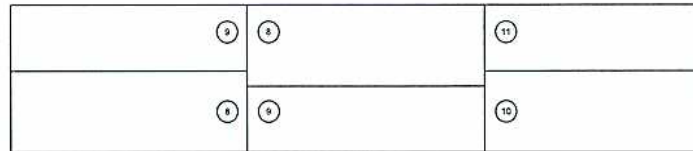
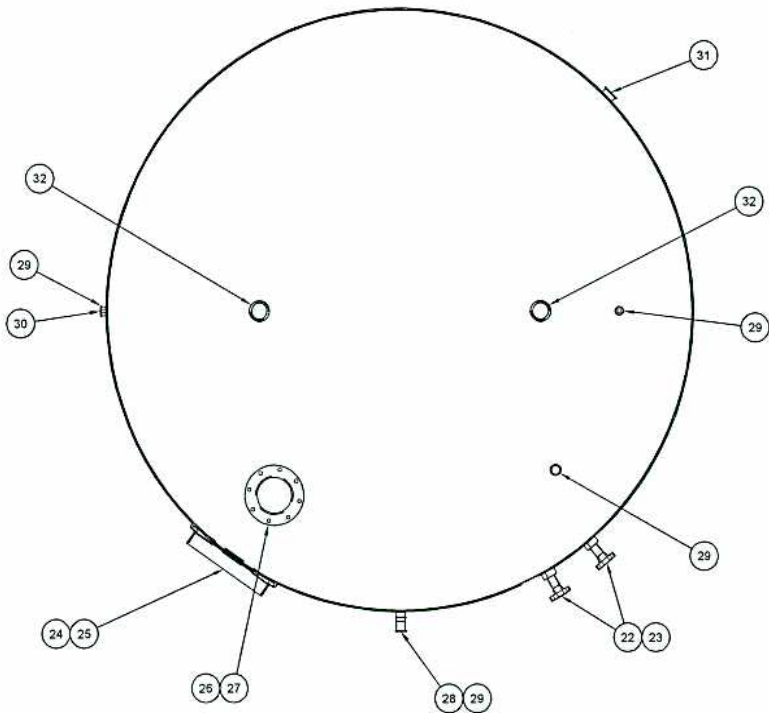
☐ Rejected See Comments

Per Ashtley

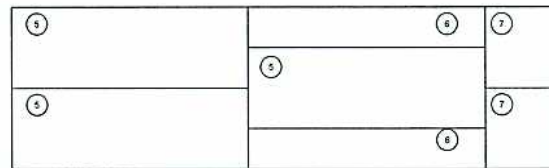
Date 10-04-08

K G S GROUP

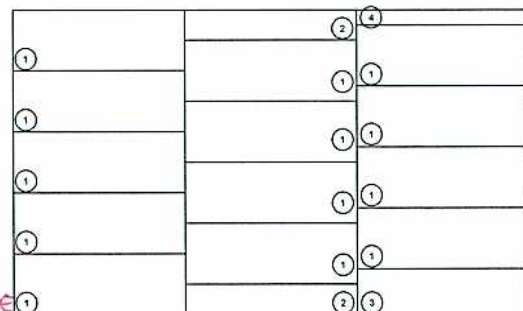
REVISE TO
REFLECT CHANGE
FROM 2" TO 3"
TRICLAMP



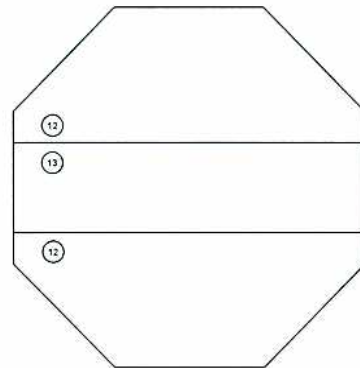
UPPER DJ LAYOUT



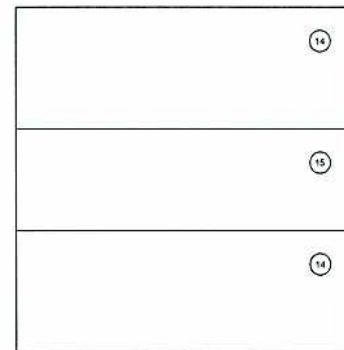
LWR DJ LAYOUT



LINER LAYOUT



TOP HD LAYOUT



BTM HD LAYOUT

dcj This drawing complies with Sect. VIII, Div. 1 of the ASME Code

ENG. Ashtley

Q.C. Ashtley

A.I. Acceptance

TRAVELER, CHECK LIST

SHEET 1 OF 1

dcj INC

DRAWN VAD

CHECKED

Q.C. DWG REVIEW

A.I. DWG REVIEW

DATE 2/22/10

DATE

AS BUILT SKETCH

SERIAL NO.- JS4782

N.B. NO.-

FINAL ASSY- JS4782

REV. C

ITEM NO.	NO. RECD	MATL SPEC	DESCRIPTION	HEAT NO.	P.O. NO.	SUPPLIER	Q.C.
1	13	SA240.316/316L	SHEET 10 GA (LINER)				
2	2	SA240.316/316L	SHEET 10 GA (LINER)				
3	1	SA240.316/316L	SHEET 10 GA (LINER)				
4	1	SA240.316/316L	SHEET 10 GA (LINER)				
5	3	SA240.304	SHEET 16 GA (LWR DJ)				
6	2	SA240.304	SHEET 16 GA (LWR DJ)				
7	2	SA240.304	SHEET 16 GA (LWR DJ)				
8	2	SA240.304	SHEET 16 GA (UPPER DJ)				
9	2	SA240.304	SHEET 16 GA (UPPER DJ)				
10	1	SA240.304	SHEET 16 GA (UPPER DJ)				
11	1	SA240.304	SHEET 16 GA (UPPER DJ)				
12	2	SA240.316/316L	SHEET 12 GA (TOP HD)				
13	1	SA240.316/316L	SHEET 12 GA (TOP HD)				
14	2	SA240.316/316L	SHEET 10 GA (BTM HD)				
15	1	SA240.316/316L	SHEET 10 GA (BTM HD)				
16	4	SA240.316/316L	SHEET 10 GA (2 HDR)				
17	4	SA240.316/316L	SHEET 10 GA (3 HDR)				
18	2	SA240.316/316L	SHEET 10 GA (3 FULL DRN END CAP)				
19	2	SA240.316/316L	SHEET 10 GA (3 END CAP)				
20	4	SA240.316/316L	SHEET 10 GA (2 END CAP)				
21	4	SA240.316/316L	SHEET 10 GA (2 END CAP)				
22	4	SA182F.316/316L	FLANGE 1-1/2 RFVN 150# (PURCH)				
23	4	SA312.TP316/316L	PIPE 1-1/2 SCH 40				
24	1	SA240.316/316L	PLATE 3/8 (MV FRAME)				
25	1	SA240.316/316L	SHEET 10 GA (MV COVER)				
26	1	SA182F.316/316L	FLANGE 8 FFVN 150# (PURCH)				
27	1	SA312.TP316/316L	PIPE 8 SCH 40				
28	1	SA240.316/316L	TUBE 2.065W				
29	6	316/316L	FERL.TC.2".BPE (PURCH)				
30	2	316/316L	FERL.TC.1".BPE (PURCH)				
31	1	316/316L	FERL.TC.3".BPE (PURCH)				
32	2	316/316L	FERL.TC.4".BPE (PURCH)				
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INSPECTION STEPS	DCI JOB No.	Q.C. DATE	A.I. DATE
1.) Inspect Welded Seams of shell, heads, dimple jacket			
2.) Top Head Min. Thickness: _____ in. (Calculated)			
3.) Shell Min. Thickness: _____ in. (Calculated)			
4.) Bottom Head Min. Thickness: _____ in. (Calculated)			
5.) Bottom Head fit up & tack weld prep			
6.) Bottom Head welding appearance Nozzles & girth seam			
7.) Top Head fit up & tack weld prep			
8.) Top Head welding appearance Nozzles & girth seam			
9.) Nozzles, attachments, Manway weld prep & layout			
10.) Shell Nozzles, attachments, Manway welding appearance			
11.) Dimple Jacket Weld Macro-Section Results Satisfactory			
12.) Non Destructive Examination (if required)			
13.) Internal Visual inspection			
14.) Preliminary Pressure Test			
15.) Final Pressure Test			
16.) Final Visual & Dimensional inspection			
17.) Stamping			
18.) Calculation & Mill Test Report Review			
19.) Sign Data Report			
20.) Non-Conformance (if applicable)			

* Indicates inspection points required by Authorized Inspector.

Form No. X6088-2