

103324

DESIGN DATA			INTERNAL DRAWING APPROVAL																																	
I. DESIGN CRITERIA: PRESSURE: VESSEL 75/FV PSIG 302° F M.D.M.T. -49° F @ 75 PSI JACKET 150/FV PSIG 302° F M.D.M.T. -49° F @ 150 PSI IMPACT TEST EXEMPTIONS: UHA 51(a)			V. MISC. EMPTY WT. 544# EMPTY WT. 2055# HYDRO: SHELL 118 PSIG @ AMB F JACKET 225 PSIG @ AMB F			DESCRIPTION APPROVAL DRAWING REVISED APPROVAL FINAL CERTIFIED	DATE RLC/ 12/7/94 RLC/ 1/13/94	PE/DATE J.P. 12/14/94	QC/DATE M.B. 12/14/94																											
II. OPERATING CONDITIONS: PRESSURE: VESSEL 5 PSIG @ 84 F JACKET 65 PSIG @ -40 F			VI. MATERIALS: VESSEL: HEADS: SA-240-T316L SHELL: SA-240-T316L FLANGES: SA-182-F316L PIPE: SA-312-T316L JACKET: HEADS: SA-240-T304 SHELL: SA-240-T304 FLANGES: SA-182-F304L PIPE: SA-312-T304L FITTINGS: N/A CLADDING: N/A LINING: N/A BOLTS/NUTS: STUDS/ SA-193-B8 NUTS/SA-F467 ALLOY 400 GASKETS: TEFLON ENVELOPE INTERNALS: N/A SUPPORTS: SA-240-T304			GENERAL NOTES 1. ALL NOZZLE BOLT HOLES MUST STRADDLE 0°-180°, OR VERTICAL CENTER LINES AND THEIR PARALLELS UNLESS OTHERWISE NOTED. 2. ALL NOZZLE REPADS SHALL HAVE A MIN. OF (1) 1/4" Ø NPT. WEEP HOLE IN EACH SEGMENT. 3. ALL STAINLESS & NICKEL ALLOYS EXCEEDING 3/4" NOM. SHALL BE PT EXAMINED AT FINISH WELD. 4. ALL 3:1 TAPERS OBTAINED BY WELD MATERIAL SHALL BE PT EXAMINED AT FINISH WELD. 5. ALL DIP TUBES BOLTED IN FLANGE CONNECTIONS ARE NOT CODE STAMPED.																														
III. ASME CODE SECT VIII DIV.1: 1992 EDITION 93 AD VESSEL STAMPED: YES JACKET STAMPED: YES LETHAL SERVICE NO PWHT N/A F FOR HRS.			WELD PROCEDURES <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>WPS NO.</th> <th>PROCESS</th> <th>ELECTRODE</th> </tr> </thead> <tbody> <tr> <td>112</td> <td>GTAW</td> <td>ER-316L</td> </tr> </tbody> </table> FLUOR DANIEL DO NOT PROCEED DO NOT PROCEED, CHANGE AS NOTED AND RESUBMIT DO NOT PROCEED, CHANGE AS NOTED AND RESUBMIT DO NOT PROCEED, CHANGE AS NOTED AND RESUBMIT DO NOT PROCEED, CHANGE AS NOTED AND RESUBMIT AUTHORIZATION TO PROCEED DOES NOT RELIEVE CONTRACTOR OF ITS RESPONSIBILITY OR LIABILITY UNDER THE CONTRACT/PURCHASE ORDER. <i>Rad E. Adams</i> 28/11/94 SIGNATURE DATE			WPS NO.	PROCESS	ELECTRODE	112	GTAW	ER-316L	SHT-1 REVISIONS <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> <th>P.E.</th> <th>QC</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>12/7</td> <td>RLC</td> <td>FOR APPROVAL</td> <td>J.P.</td> <td>M.B.</td> <td>12/14/94</td> </tr> <tr> <td>1</td> <td>1/13</td> <td>RLC</td> <td>PER MARK-UPS</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				REV	DATE	BY	DESCRIPTION	P.E.	QC	DATE	0	12/7	RLC	FOR APPROVAL	J.P.	M.B.	12/14/94	1	1/13	RLC	PER MARK-UPS			
WPS NO.	PROCESS	ELECTRODE																																		
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IV. NON-DESTRUCTIVE EXAMINATION: PT EXAM: N/A MT EXAM: N/A OTHER: N/A RADIOGRAPHY RT-3 <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>VESSEL</th> <th>JACKET</th> </tr> </thead> <tbody> <tr> <td>LONGITUDINAL SEAMS</td> <td>SPOT</td> <td>N/A</td> </tr> <tr> <td>CIRCUMFERENTIAL SEAMS</td> <td>NONE</td> <td>N/A</td> </tr> <tr> <td>HEAD TO SHELL SEAMS</td> <td>SPOT</td> <td>N/A</td> </tr> <tr> <td>NOZ./MW > 10" NPS</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table>				VESSEL	JACKET	LONGITUDINAL SEAMS	SPOT	N/A	CIRCUMFERENTIAL SEAMS	NONE	N/A	HEAD TO SHELL SEAMS	SPOT	N/A	NOZ./MW > 10" NPS	N/A	N/A	VESEL NAME PLATE <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">NATIONAL BOARD #</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="text-align: center;"> CERTIFIED BY ADDISON FABRICATORS, INC. HWY. 278 E. ADDISON, AL 35540 </td> </tr> <tr> <td>MAMP. 75/FV</td> <td>PSIG 302° F</td> </tr> <tr> <td>MDMT -49</td> <td>°F @ 45 PSIG</td> </tr> <tr> <td>JKT 150/FV</td> <td>PSIG 302° F</td> </tr> </tbody> </table>			NATIONAL BOARD #		CERTIFIED BY ADDISON FABRICATORS, INC. HWY. 278 E. ADDISON, AL 35540		MAMP. 75/FV	PSIG 302° F	MDMT -49	°F @ 45 PSIG	JKT 150/FV	PSIG 302° F	DRAWING NO: 4D1149 addison fabricators, inc. HIGHWAY 278 EAST ADDISON, AL 35540 CUSTOMER: GLCC NOMENCLATURE: CN 1893 PROOF TANK P.O. NO. 4773-DI-50002 ITEM NO. TS-232 F.O.B. EL DORADO, ARK. SPECIAL TAGS/MARKS PROOF TANK (BHC-24) DWG. BY: RLC DATE: 12/7/94 SHT. 1 OF 9 JOB NO. 4J1149 PROJECT ENGINEER: JUD PHENY					
	VESSEL	JACKET																																		
LONGITUDINAL SEAMS	SPOT	N/A																																		
CIRCUMFERENTIAL SEAMS	NONE	N/A																																		
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NOTES: RECEIVED 50002 MAR 20 1995 FLUOR DANIEL TDC			NOTES:			MFR.'S SERIAL # 4J1149 YR. BUILT 1995 CUSTOMER GLCC EQUIP. # TS-232 P.O. # 4773-DI-50002																														

FINAL CERTIFIED

103324

LEGEND

SHIPPING PREP.

PAINT SPECIFICATIONS

DESCRIPTION

SHT

DESIGN INFO, ETC.

1

ADDITIONAL QC SPECIFICATIONS

2

ORIENTATION & ELEVATION

3

NOZZLE SCHEDULE

4

NOZZLE DETAILS

5

NOZZLE DETAILS

6

NOZZLE DETAILS

7

LIFTING LUG, & LEG SUPPORT & GR. LUG DETAILS

8

ANTI-FOAM NOZZLE DETAIL

9

1. PUT PLASTIC OR WOOD COVERS ON ALL UNBLINDED OPENINGS.

GENERAL NOTES

1. ALL INTERNAL SURFACES TO HAVE 150 (35 RA) GRIT POLISH.
2. ALL WELDS GROUND SMOOTH ROUND ALL SHARP EDGES & CORNERS.

WELDING PROCEDURE LIMITATION

1. WPS. 001
 - a) BACKING REQ'D. FOR ALL E7018 WELDS.
 - b) NO DOWNHILL WELDING PERMITTED.
 - c) MAX INTERPASS TEMP 700°F.
 - d) NO P1 GRADE 3 UTILIZED.
2. WPS. 002
 - a) NO DOWNHILL WELDING PERMITTED.
 - b) MAX INTERPASS TEMP 700°F.
 - c) ARGON BACKING NOT REQ'D.
 - d) NO P1 GRADE 3 UTILIZED.
3. WPS. 003
 - a) MAX INTERPASS TEMP 700°F.
 - b) NO P1 GRADE 3 UTILIZED.
 - c) DO NOT REUSE FLUX SLAG.
4. WPS. 101
 - a) BACKING REQ'D. FOR ALL E3XX WELDS.
5. WPS. 103
 - a) DO NOT REUSE FLUX SLAG.
6. WPS. 501
 - a) BACKING REQ'D. FOR ALL E309 WELDS.
7. WPS. 112
 - a) MAX GROOVE THICKNESS SHOULD BE 3/4".
 - b) 316L FILLER MUST BE USED FOR 316L-BASE MATERIAL.

SAND BLAST: SANDBLAST ENTIRE VESSEL
EXTERIOR TO SP-5
(CLEAN SAND ONLY.)

FIRST COAT: N/A

INTERMEDIATE COAT: N/A

FINAL COAT: N/A

FINAL DRY FILM THK.: N/A

CLEANING & SURFACE PREP.

1. STEAM CLEAN VESSEL I.D. PRIOR TO SHIPMENT.

SHT-2

REVISION RECORD

REV	DATE	BY	DESCRIPTION	P.E.	Q.C.	DATE
0	12/7	RLC	FOR APPROVAL	J.P.	M.B.	12/14/94
1	1/13	RLC	PER MARK-UPS			1/17/95

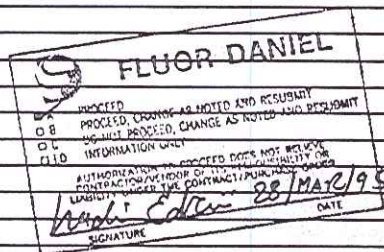
CUSTOMER: GLCC

JOB NO.: 4J1149

ITEM NO.: TS-232

SHT. 2 OF 9

PROJECT ENGINEER: JUD PHENY



FINAL CERTIFIED



*** DIMPLE JACKET DISHED TO FIT A ASME F&D HEAD
30" D.R. SA-240-T304. (CRIMP EDGES)

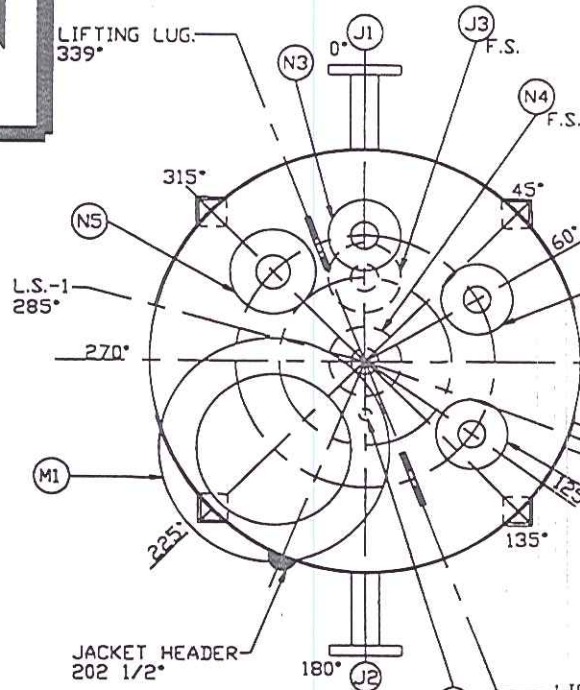
INSULATION SUPPT. RING
PL. 3/16" X 3 1/2" F.B.
ROLLED H.W. TO A 30 1/2"
I.D. T304L
S/S.

ASME F&D ONE-PCE. HEADS 30" I.D. X .1247
MIN. 3/16" NOM: 1 1/2" S.F. SA-240-T316L
(150 GRIT (35 RA) POLISH ON I.D. TYP.)

*(SEE LEG SUPPT. DETAIL
SHEET 8.)

PL. 3/16" X 33" X
94 13/16"
SA-240-T316L

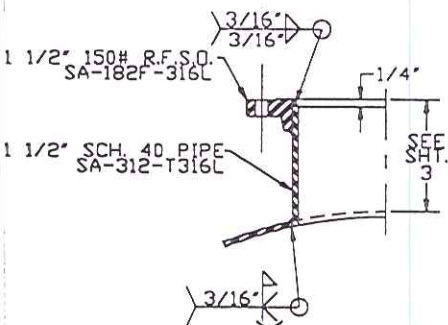
LIFTING LUG.
339"



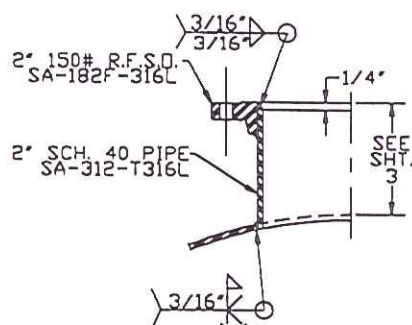
NOZZLE SCHEDULE

NOZZLE SCHEDULE												NZL REINF. PADS		NZL BOLTING		NZL GSKT'S		REMARKS OR ATTACHMENTS	
Mk.	SIZE (NPS)	O.D.		SERVICE	REF. SHT.	NOZZLE FLANGE			NECK		STUB END		DESCRIPTION	MAT'L	STUDS NUTS	MAT'L			
		IN.	MM.			RTG.	TYPE	MAT'L	SCH.	MAT'L	TYP	MAT'L							
N1	3 1/2"	3.5	88.9	ANTI-FOAM INLET-FEED	9	150#	R.F.S.D.	SA-182F-316L	SCH. 10	SA-312-T316L			N/A		(4) 5/8" X 4" STUDS SA-193-B8 W/ 2 NUTS EA. SA-F467 ALLOY 400	3" 150# TEFLON ENVELOPE GASKET	W/ BLIND FLANGE		
N2	3 1/2"	3.5	88.9	ANTI-FOAM INLET-FEED	9	150#	R.F.S.D.	SA-182F-316L	SCH. 10	SA-312-T316L			N/A		(4) 5/8" X 4" STUDS SA-193-B8 W/ 2 NUTS EA. SA-F467 ALLOY 400	3" 150# TEFLON ENVELOPE GASKET	W/ BLIND FLANGE		
N3	1 1/2"	1.9	48.3	VENT	5	150#	R.F.S.D.	SA-182F-316L	SCH. 40	SA-312-T316L			N/A						
N4	1 1/2"	1.9	48.3	OUTLET	5	150#	R.F.S.D.	SA-182F-316L	SCH. 40	SA-312-T316L			N/A						
N5	2"	2.373	60.3	VENT-RELIEF	5	150#	R.F.S.D.	SA-182F-316L	SCH. 40	SA-312-T316L			N/A						
N6	2"	2.373	60.3	SPARE	5	150#	R.F.S.D.	SA-182F-316L	SCH. 40	SA-312-T316L			N/A		(4) 5/8" X 3 1/4" STUDS SA-193-B8 W/ 2 NUTS EA. SA-F467 ALLOY 400	2" 150# TEFLON ENVELOPE GASKET	W/ BLIND FLANGE		
K1	1 1/2"	1.9	48.3	TEMPERATURE	6	150#	R.F.S.D.	SA-182F-316L	SCH. 40	SA-312-T316L			N/A						
K2	3"	3.5	88.9	LEVEL	6	150#	R.F.S.D.	SA-182F-316L	SCH. 40	SA-312-T316L			N/A						
J1	1 1/2"	1.9	48.3	JACKET INLET	7	150#	R.F.S.D.	SA-182F-304L	SCH. 40	SA-312-T304L			N/A						
J2	1 1/2"	1.9	48.3	JACKET OUTLET	7	150#	R.F.S.D.	SA-182F-304L	SCH. 40	SA-312-T304L			N/A						
J3	1 1/2"	1.9	48.3	JACKET INLET	7	150#	R.F.S.D.	SA-182F-304L	SCH. 40	SA-312-T304L			N/A						
J4	1/2"	.840	0.9	JACKET DRAIN	7	HALF 3000#	CPLG.	T304L					N/A						
M1	12"	12.75	323.9	MANWAY	5	150#	R.F.S.D.	SA-182F-316L	SCH. 40	SA-312-T316L			N/A		(12) 7/8" X 5" STUDS SA-193-B8 W/ 2 NUTS EA. SA-F467 ALLOY 400	12" 150# TEFLON ENVELOPE GASKET	W/ BLIND FLANGE		
										</									

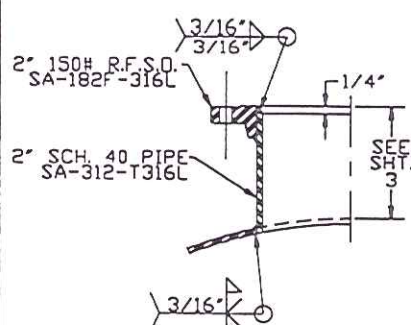
FINAL CERTIFICATE



NZL'S-N3 & N4

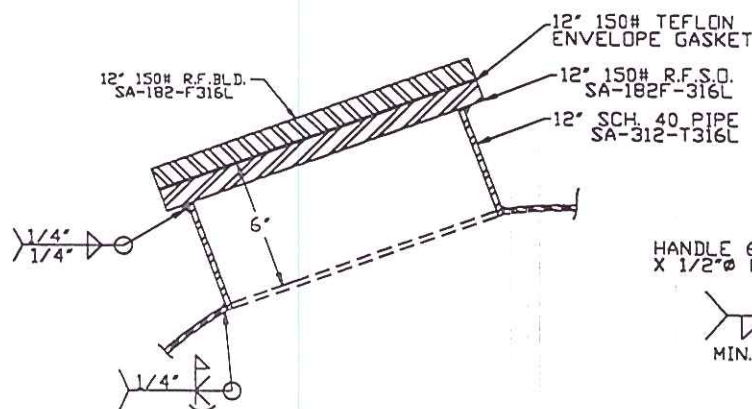


NZL'S-N5



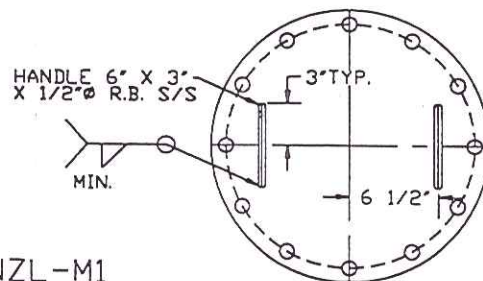
NZL'S-N6

W/BLD. & GASKET & (4)
5/8" X 4" STUDS W/2 NUTS EA.



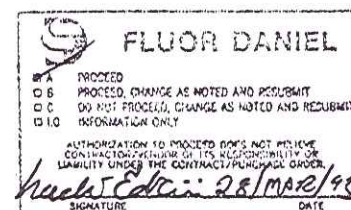
NZL-M1

W/BLD. & GASKET &
(12) 7/8" X 5" STUDS W/2 NUTS EA.



NOZZLE NOTES

1. FILLET WELD SIZE INDICATES DIMENSION OF FILLET 'LEG' NOT THE DIM. THROUG THROAT OF FILLET.
2. SEGMENTED REINFORCING PAD TO HAVE A MIN. OF (1) 1/4" Ø NPT WEEP HOLE IN LOW SIDE OF EACH SEGMENT.
3. ROUND ALL INSIDE EDGES TO A 1/8" MIN. RADIUS.
4. SEE NZL DTL. FOR INSIDE AND OUTSIDE PROJECTIONS.
5. BORE I.D. MUST MATCH UP FOR WELDING OF WELD NECK FLANGES AND STUB ENDS.
6. LONG SEAMS & GIRTH SEAMS ON NZLS MUST BE CONSIDERED FOR RT REQUIREMENTS, REFERENCE SHEET 1 AND INDIVIDUAL NOZZLE DETAILS FOR RT SPECIFICATIONS.
7. FOR ACCEPTABLE WELD PROCEDURES SEE SHT-1.



SHT-5		REVISION RECORD				
REV	DATE	BY	DESCRIPTION	P.E.	Q.C.	DATE
0	12/7	RLC	FOR APPROVAL	J.P.	M.B.	12/14/94
0	1/13	RLC	PER MARK-UPS			1/17/95

CUSTOMER: GLCC

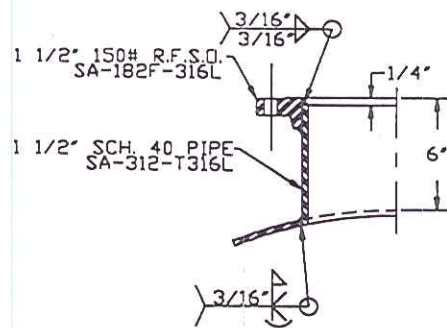
JOB NO.: 4J1149

ITEM NO.: TS-232

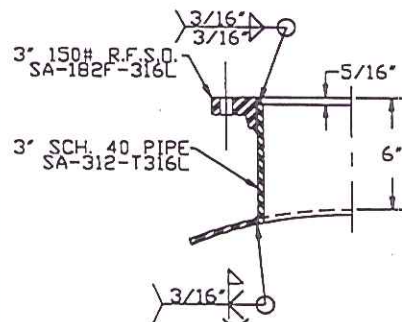
SHT. 5 OF 9

PROJECT ENGINEER: JUD PHENY

FINAL CORRECTED



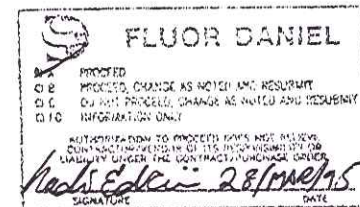
NZL-K1



NZL-K2

NOZZLE NOTES

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CUSTOMER: GLCC

JOB NO.: 4J1149

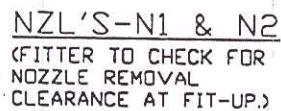
ITEM NO.: TS-232

SHT. 6 OF 9

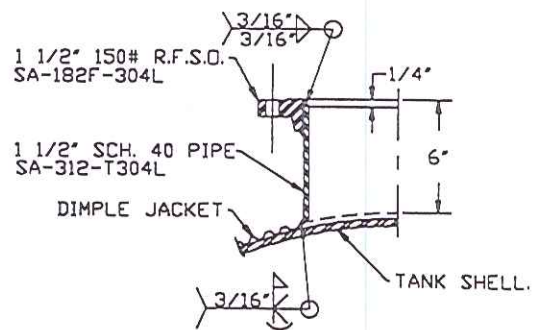
PROJECT ENGINEER:

JUD PHENY

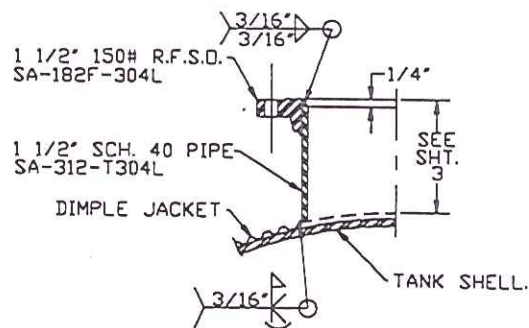
FINAL CORRECTED



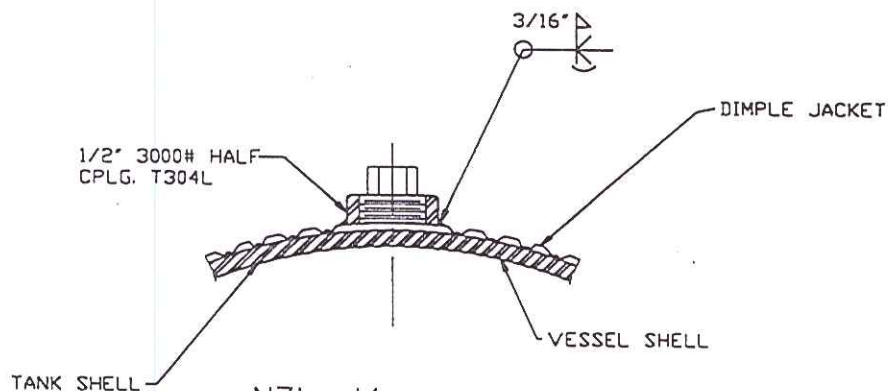
PROJECT ENGINEER: JUD PHENY



NZL'S-J1 & J2



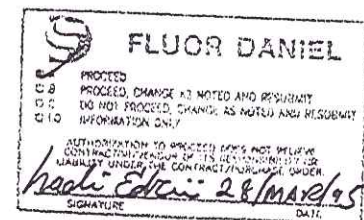
NZL-J3



NZL-J4
NOTE: W/PLUGS.

NOZZLE NOTES

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SHT-7 REVISION RECORD						
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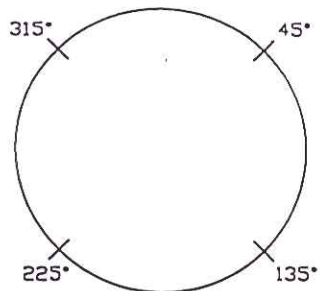
CUSTOMER: GLCC

JOB NO: 4J1149 ITEM NO: TS-232

SHT. 7 OF 9

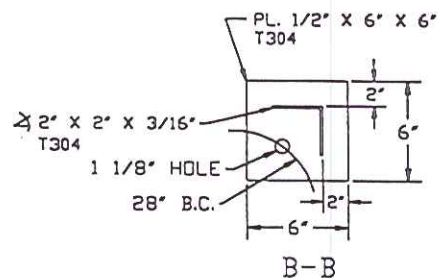
PROJECT ENGINEER: JUD PHENY

FINAL CERTIFIED



LEG LOCATION

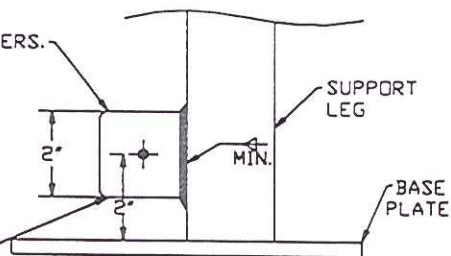
(4 REQ'D. @ 45°-135°-225° & 315°.)



B-B

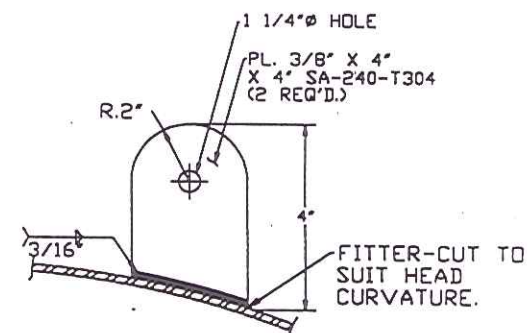
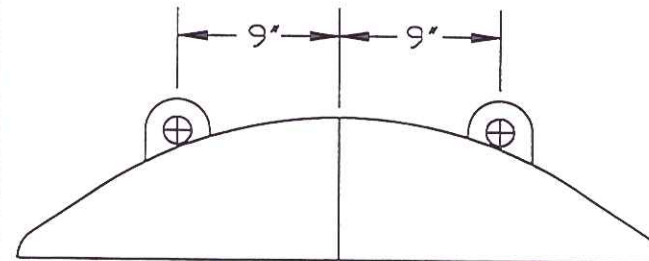
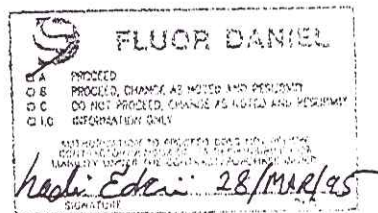
RADIUS CORNERS.

R. 3/16" X 2" X 2"
SA-240-T304 DRILL
SIZE R.(3390) TAP-
3/8" 16 T.P.I.



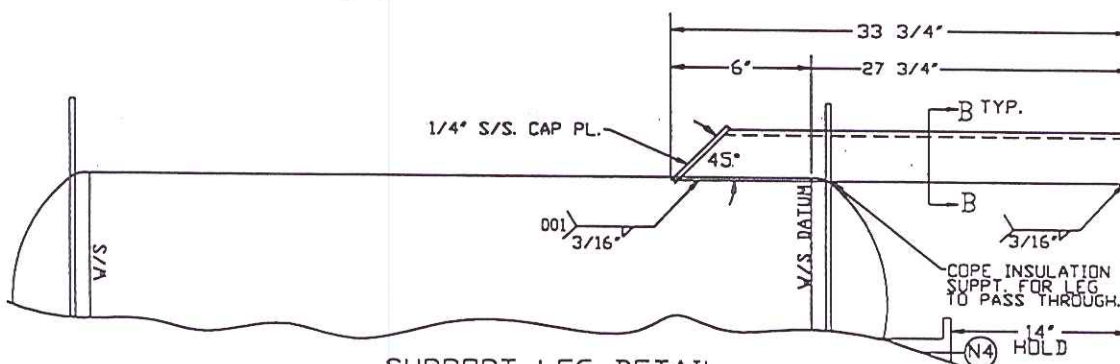
GROUNDING LUG DETAIL

(INSTALL ON 270° LEG.
(ONE REQ'D.))



LIFTING LUG DETAIL

(2 REQ'D. @ 159° & 339°)



SUPPORT LEG DETAIL

(@ 0°-90°-180° & 270°)

SHT-8		REVISION RECORD				
REV	DATE	BY	DESCRIPTION	P.E.	Q.C.	DATE
0	12/7	RLC	FOR APPROVAL	J.P.	M.B.	12/14/94
1	1/13	RLC	PER MARK-UPS	<i>[Signature]</i>	<i>[Signature]</i>	1-30-95

CUSTOMER: GLCC

JOB NO.: 4J1149

ITEM NO.: TS-232

SHT. 8 OF 9

PROJECT ENGINEER:

JUD PHENY