

100037

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by OHMSTEDE, INC. ST. GABRIEL PLANT, 4250 HWY 30, ST. GABRIEL, LA
(Name and address of manufacturer)

2. Manufactured for TRIAD CHEMICAL, DONALDSONVILLE, LA
(Name and address of purchaser)

3. Location of installation TRIAD CHEMICAL, DONALDSONVILLE, LA
(Name and address)

4. Type HORIZ. EXCH. 38112 - B-38112 REV.1 - 1990
(Horiz. or vert., tank) (Mfr's serial No.) (CRN) (Drawing) (Nat'l. Bd. No.) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME Boiler and Pressure Vessel Code, The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1989
Year

1989 - -
Addenda (date) Code Case No. Special service per UG-120(d)

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers

6. Shell: SA 106-B 3/8" 1/16" 1'-9 1/4" 15'-8 7/8"
Matl. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft & in.) Length (Overall) (ft & in.)

7. Seams: SMLS N/A 100% -
Long. (Dbl., Sngl.) R.T. (Spot or Full) Eff. (%) H.T. Temp. (°F)
- - N/A 1
Time Girth (Dbl., Sngl.) R.T. (Spot, Partial, or Full) No. of Courses

8. Heads: (a) Matl. - (Spec. No., Grade) (b) Matl. - (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)										
(b)										

If removable, bolts used (describe other fastenings) -
(Matl., Spec. No., Gr., Size, No.)

9. Type of Jacket - Proof Test -

10. Jacket Closure - If bar, give dimensions - If bolted, describe or sketch.
(Describe as ogee & weld, bar, etc.)

11. MAWP 115 psi at max. temp. 248 °F. Min. design metal temp. -20 °F at 115 psi.
Hydro., pneu., or comb. test press. 173 psi.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: SA 240-304 2 1/4" 1 5/8" 1/16" EA. SIDE WELDED
Stationary Matl. (Spec. No., Gr.) Diam. (in.) (Subject to pressure) Nom. Thk. (in.) Corr. Allow. (in.) Attach. (Welded, Bolted)

- - - -
Floating Matl. (Spec. No., Gr.) Diam. (in.) Nom. Thk. (in.) Corr. Allow. (in.) Attach.

13. Tubes: SA 249-TP 304 3/4" 16 AVG. 361 STRAIGHT
Matl. (Spec. No., Gr.) O.D. (in.) Nom. Thk. (in. or Gauge) Number Type (Straight or "U")

Items 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: SA 106-B 3/8" 1/16" 1'-9 1/4" 1'-5 7/16"
Matl. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft & in.) Length (Overall) (ft & in.)

15. Seams: SMLS N/A 100% -
Long. (Dbl., Sngl.) R.T. (Spot or Full) Eff. (%) H.T. Temp. (°F)
- - N/A 1 EA.
Time Girth (Dbl., Sngl.) R.T. (Spot, Partial, or Full) No. of Courses

16. Heads: (a) Matl. SA 516-70 (Spec. No., Grade) (b) Matl. SA 516-70 (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	<u>END</u>	<u>1 5/8"</u>	<u>1/16"</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>26 7/8"</u>	<u>FLAT</u>
(b)	<u>END</u>	<u>1 5/8"</u>	<u>1/16"</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>26 7/8"</u>	<u>FLAT</u>

If removable, bolts used (describe other fastenings) SA 193-B7 3/4" (24)
(Matl., Spec. No., Gr., Size, No.)

17. MAWP 85 psi at max. temp. 140 °F. Min. design metal temp. -20 °F at 85 psi.
Hydro., pneu., or comb. test press. 128 psi.

Form U-1 (Back)

18. Nozzles, Inspection and Safety Valve Openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Mtd.	How Attached	Location
IN/OUT	1 EA.	4"	PIPE	SA 106-B	SCH 120	INHERENT	FW	SHELL
IN/OUT	1 EA.	10"	PIPE	SA 106-B	X-STG	INHERENT	FW	CHANN
VENT	1	3/4"	CPLG	SA 105	6000#	INHERENT	FW	CHANN
DRAIN	2	3/4"	CPLG	SA 105	6000#	INHERENT	FW	CHANN

19. Supports: Skirt No Lugs Legs Other (2) SADDLES Attached SHELL FW
(Yes or no) (No.) (No.) (Describe) (Where and how)

20. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:
(Name of part, item number, mfr's. name and identifying stamp)

MIN. METAL TEMP PER UG-20(f) & UHA-S1.

CHANNEL GIRTH FLANGES: SA 105

RELIEF VALVE IN LINE BY OTHERS.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

"U" Certificate of Authorization No. 10562 expires 7-14- 1991
 Date 10-25-90 Co. name OHMSTEDE, INC. Signed [Signature]
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by OHMSTEDE, INC. at 4250 Hwy 30, St. GABRIEL, LA

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of LOUISIANA and employed by H.S.B.I. & I. Co.

of HARTFORD, CT. have inspected the pressure vessel described in this Manufacturer's Data Report on 10-18, 19 90, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this

pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in the Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 12-5-90 Signed Charles R. Efferson Commissions 22,922
(Authorized Inspector) (Nat'l Board, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly construction of all parts of this vessel conforms with the requirements of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code.

"U" Certificate of Authorization No. expires , 19
 Date Co. name Signed
(Assembler that certified and constructed field assembly) (By Representative)

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

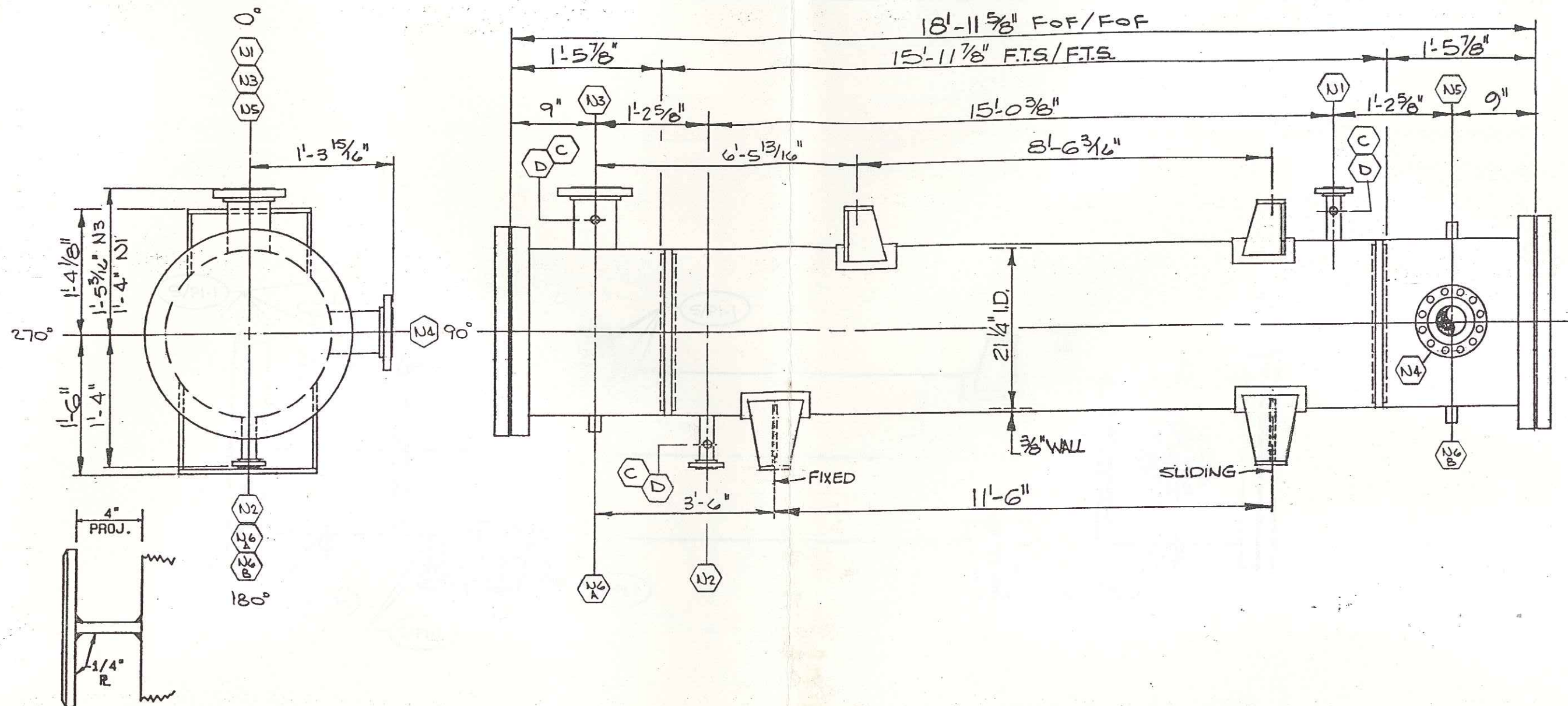
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of and employed by

of have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items , not included in the

certificate of shop inspection, have been inspected by me and that, to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of psi. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure

vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Signed Commissions
(Authorized Inspector) (Nat'l Board (incl. endorsements), State, Prov., and No.)



NAME & BRKT

SEE DWG B-38112-8

NATIONAL BOARD			
N.B. SERIAL NO. _____			
CERTIFIED AND MANUFACTURED BY			
Ohmstede of Louisiana, Inc.			
☐ ST. GABRIEL		☐ LAKE CHARLES	
SHELL		TUBE	
M.A.W.P. _____ PSI		PSI _____ PSI	
DESIGN TEMP _____ °F		°F _____ °F	
TEST PRESS _____ PSI		PSI _____ PSI	
ITEM NO. _____	SERIAL NO. _____		
SIZE _____	TYPE _____	YEAR BUILT _____	
P.O. NO. _____			

NO	SIZE	RATING	FACING	SERVICE
D	3/4"	6000*	CPLG	
C	1"	6000*	CPLG	
N6	3/4"	6000*	CPLG	DRAIN
N5	3/4"	6000*	CPLG	VENT
N4	10"	150*	RF	OUTLET
N3	10"	150*	RF	INLET
N2	4"	150*	RF	OUTLET
N1	4"	150*	RF	INLET
MK	SIZE	RATING	FACING	SERVICE

NOZZLE DATA

GENERAL NOTES

- DESIGN & CONSTRUCT IN ACCORDANCE WITH:
 - ASME CODE SECT. VIII, DIV. 1, 1989 ED., 1989 ADD.
 - TEMA "R"
 - CUST. SPECS.
- POST WELD HEAT TREAT: NONE
- PAINTING: SANDBLAST TO WHITE METAL & APPLY (1) COAT CARBOZINC II @ 2-2 1/2 MILS DFT.

DESIGN DATA

		SHELL	TUBE
DESIGN PRESSURE	PSI	115	85
HYDROSTATIC TEST PRESSURE	PSI	173	128
DESIGN TEMPERATURE	°F	248	140
CORROSION ALLOWANCE	IN.	1/16"	1/16"
NUMBER OF PASSES		1	1
RADIOGRAPHY		NONE	NONE

CUSTOMER: TRIAD CHEMICAL

P.O. NO.: 90-04-03254-2

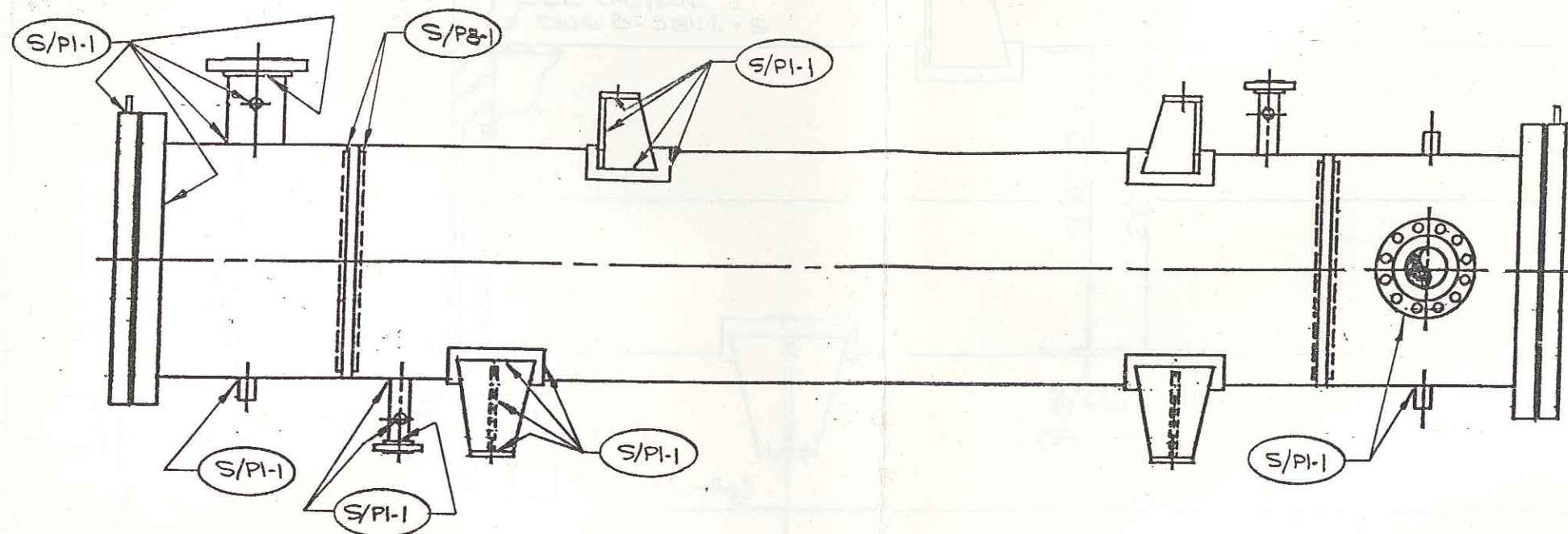
SERVICE:

OHMSTEDE

OUTLINE DRAWING

1	REL. FOR FAB	9-25-90	CK	BY
0	FOR CUST. APPR'L	9-21-90	CK	BY
REV	DESCRIPTION	DATE	BY	CK

DRY WT.	TEST WT.	BUNDLE WT.	CERTIFIED	DATE	DWN	FS	ITEM	E-206	B-38112-1
1000 LBS.	9900 LBS.	- LBS.	OK	9-25-90	CK	CK	JOB	38112	

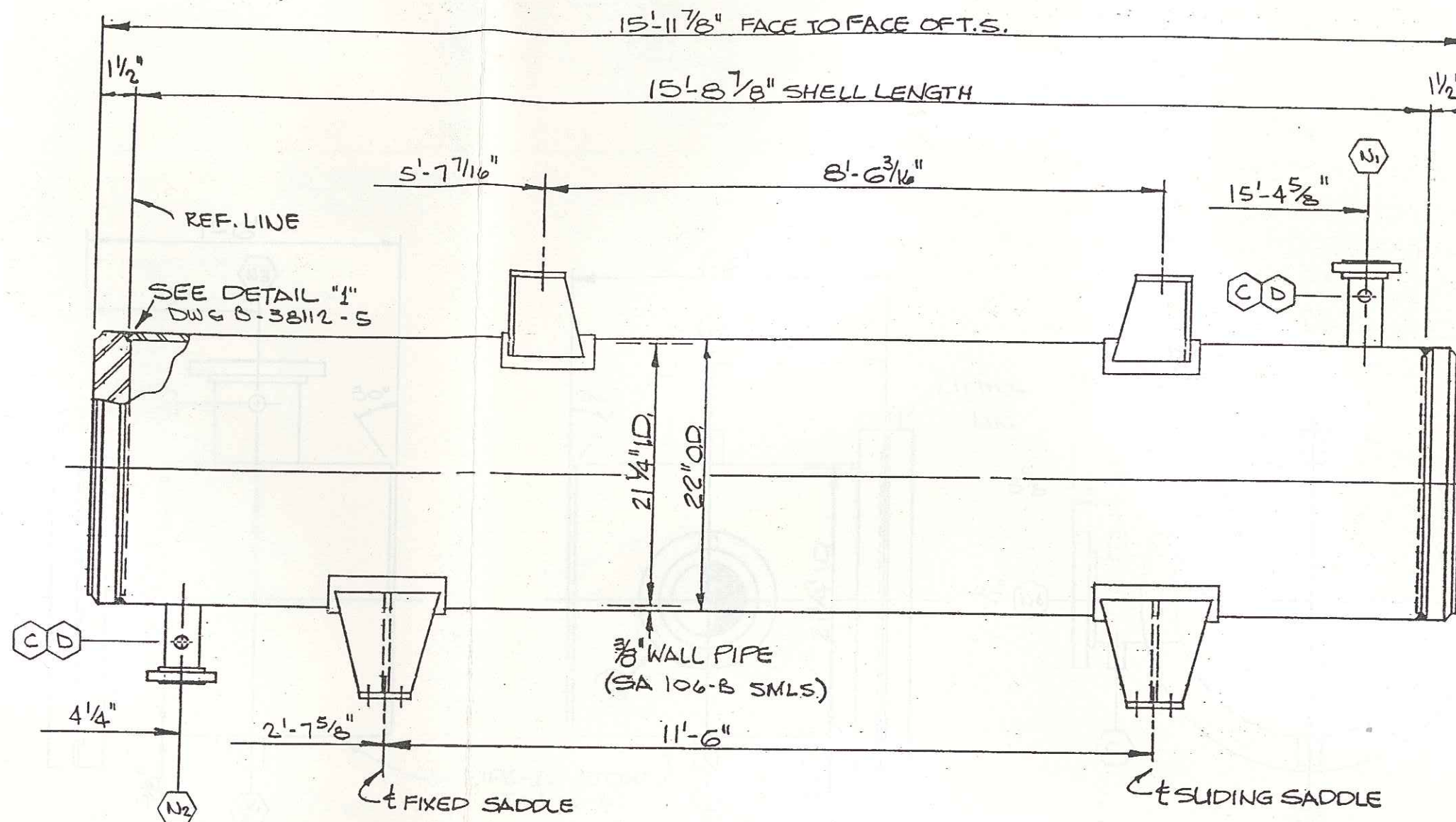
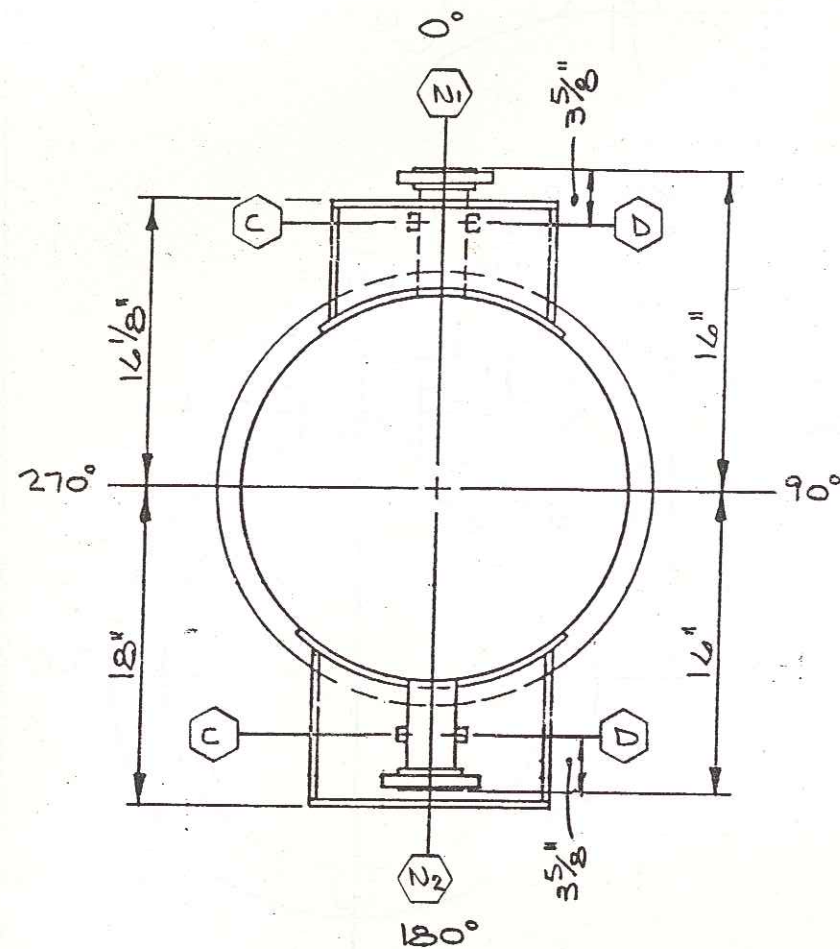


192 OR T/PI-1 OPTIONAL FOR C/S ROOT PASSES

WELD MAP

REV.	DESCRIPTION	DATE	BY	CK
1	REL. FOR FAB	9.25.90	GK	DL
0	FOR CUSTOMER APPR'L	9.21.90	GK	DL

CUSTOMER: TRIAD CHEMICAL			
P.O. NO.: 90-04-03254-2			
SERVICE :			
OHMSTEDE			
DWN	CK	ITEM: E-206	B-38112-2
CK	DL	JOB: 38112	



RADIOGRAPH: NONE

P.W.H.T.: NONE

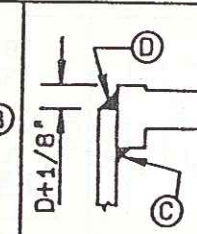
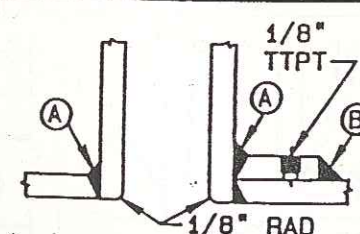
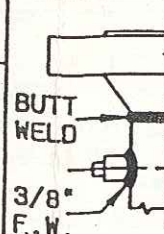
ALL BOLT HOLES TO STR NORMAL CTR LNS

QTY	NO	DESCRIPTION	MATERIAL	NECK THICKNESS AND MATERIAL	CUT LGTH	PAD SIZE AND MATERIAL	A	B	C	D
2	D	3/4" 6000# TH'D CPLG W/PLUG	SA105							
2	C	1" 6000# TH'D CPLG W/PLUG	SA105							
1	N2	4" 150# RFSS	SA105	4" SCH 120 PIPE	SA106-B	6"	3/8	-	-	-
1	N1	4" 150# RFSS	SA105	4" SCH 120 PIPE	SA106-B	6"	3/8	-	3/8	3/8
NO	MK'D	FLANGE SIZE, TYPE, AND MATERIAL		NECK THICKNESS AND MATERIAL			3/8	-	3/8	3/8
							*** WELD SIZE ***			

WELD PROCEDURES TO BE USED:

S/PI-1; A/PI-1

PWHT AFTER FABRICATION AT °F FOR A HOLDING TIME OF HOURS AND MINUTES HEATING RATE ABOVE °F SHALL BE °F PER HOUR. COOLING RATE SHALL BE °F PER HOUR DOWN TO °F. THEN COOLED IN STILL AIR. AN OVEN RECORDING CHART IS REQUIRED.



CUSTOMER: TRIAD CHEMICAL

P.O. NO.: 90-04-03254-2

SERVICE:

OHMSTEDE

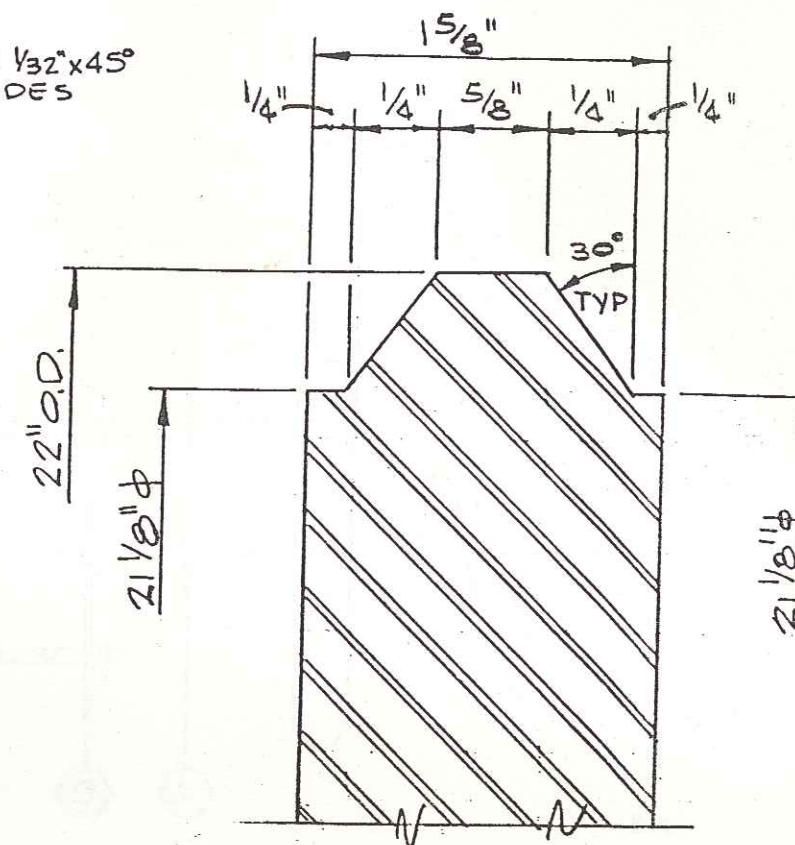
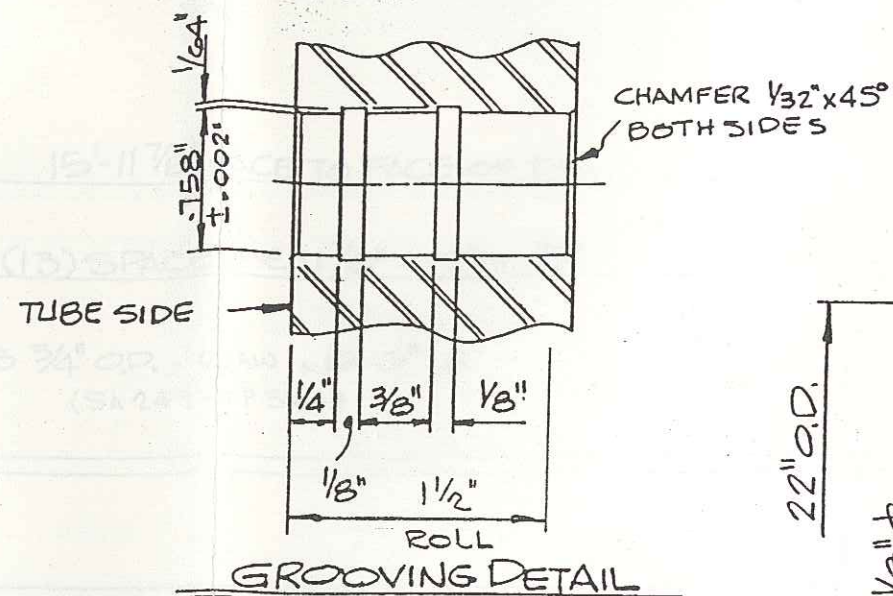
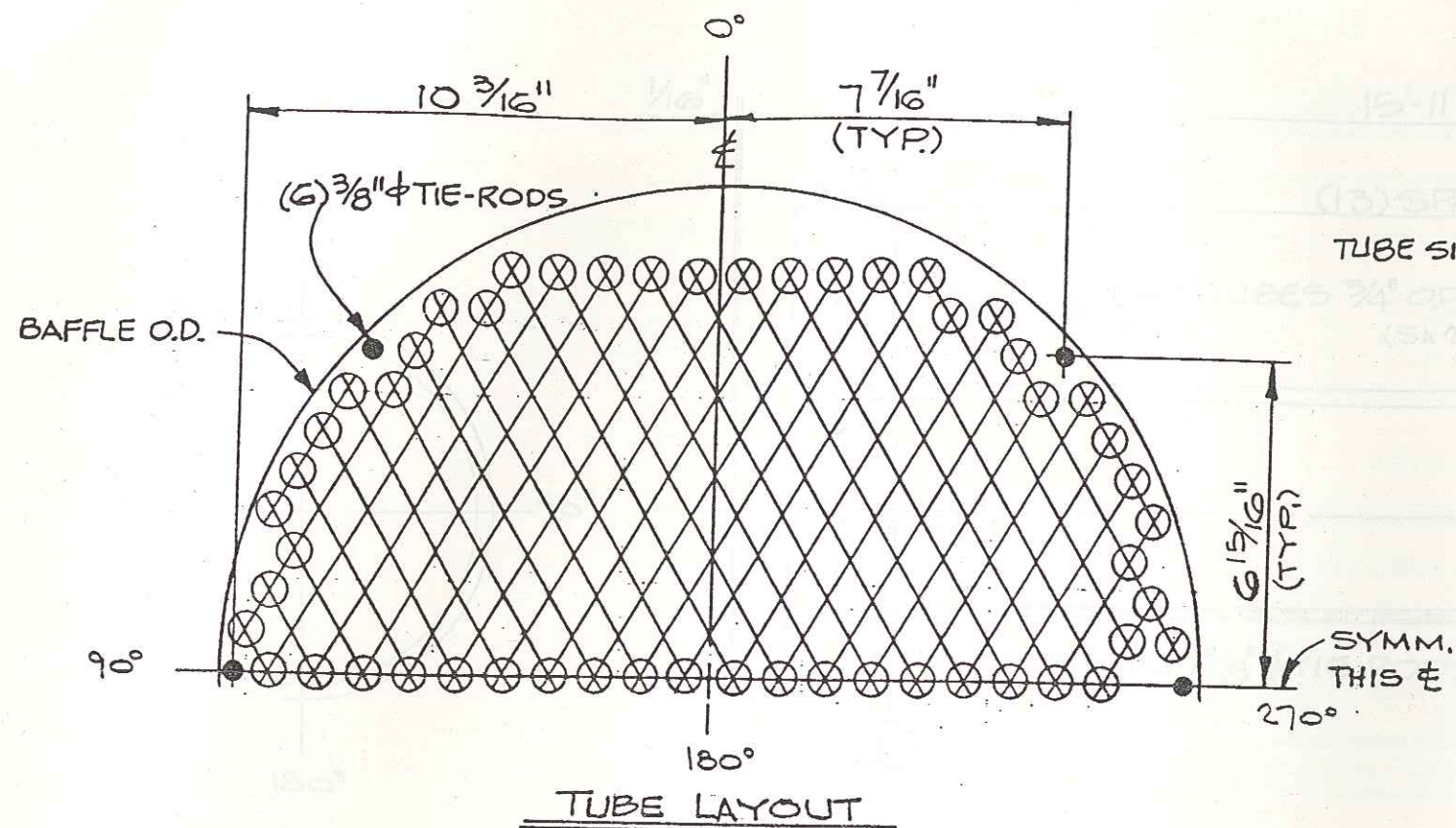
DWN FS ITEM: E-206

CKD JOB: 38112

B-38112-3

REV	DESCRIPTION	DATE	BY	CK
1	REL. FOR FAB	9-25-90	GK	N
0	FOR CUST APP'L	9-21-90	GK	N

B- 38112-4



DRILLING NOTES:

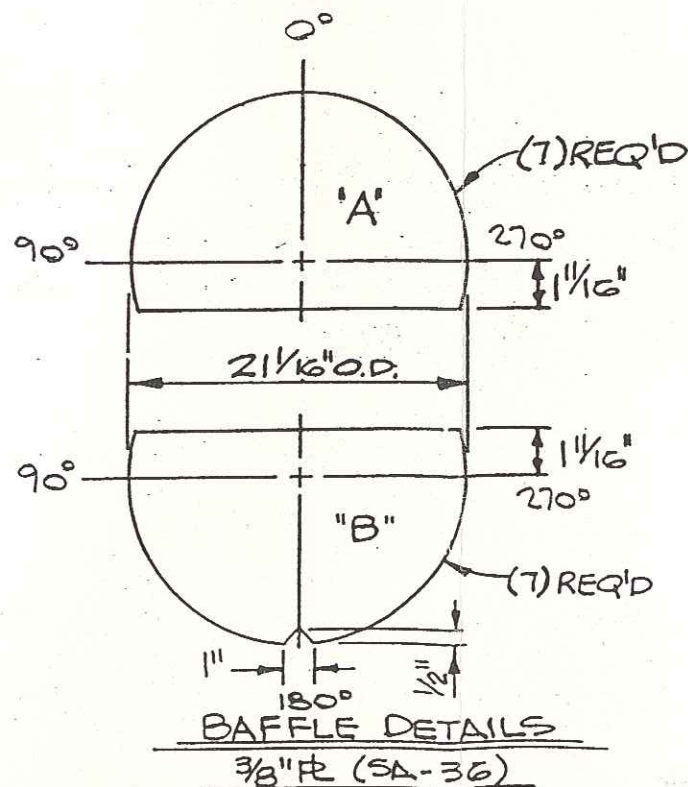
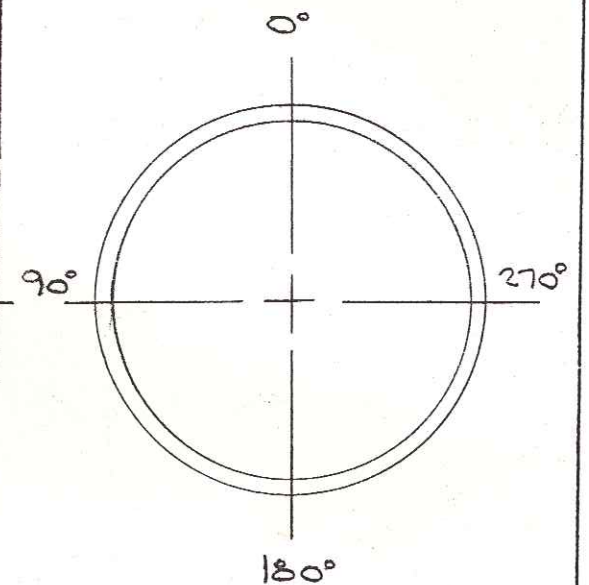
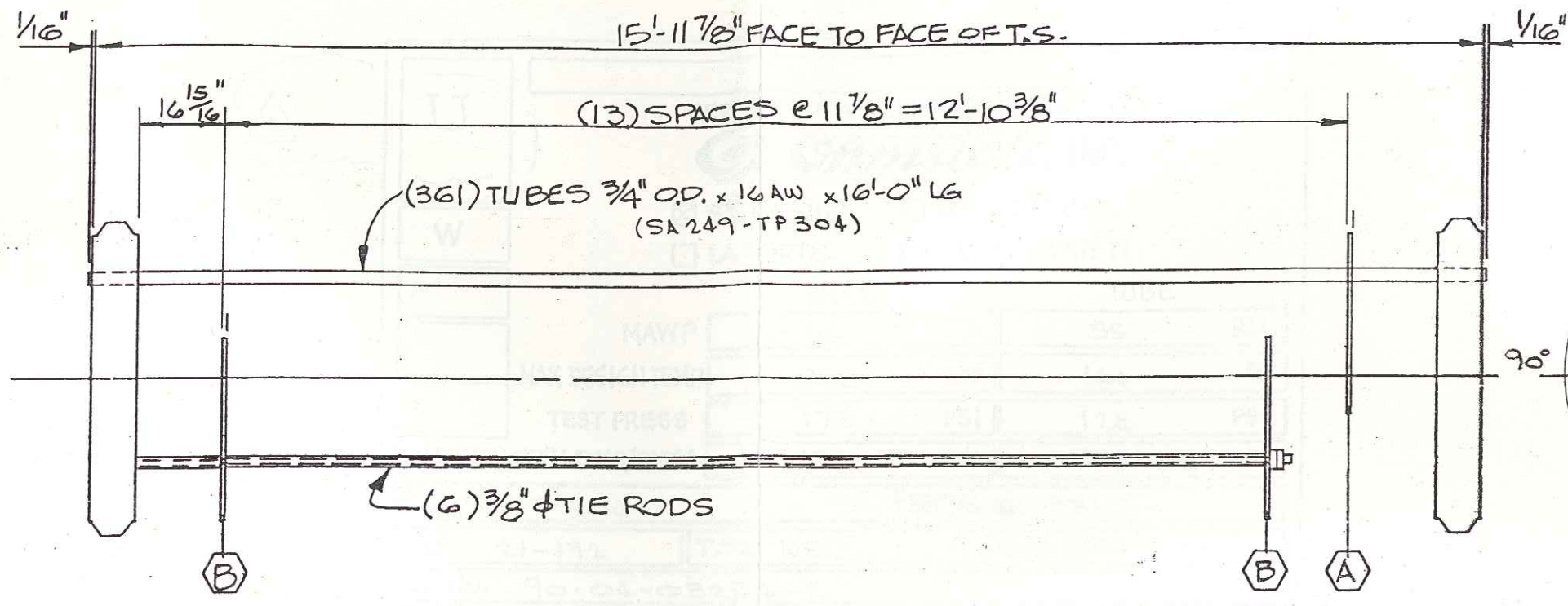
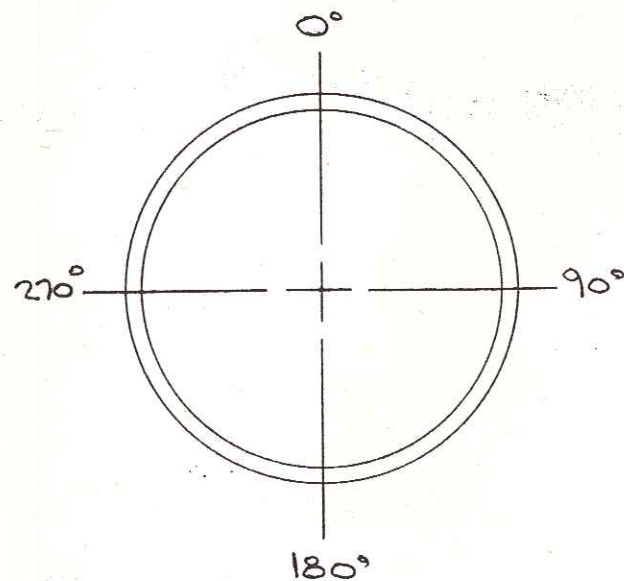
1. TOTAL OF (361) TUBE HOLES FOR (361) 3/4" O.D. TUBES ON 1" Δ PITCH & 20 1/4" CTR/O.M.T.
2. TUBESHEET:
 - A. DRILL TUBE HOLES PER GROOVING DETAIL
 - B. DRILL & TAP 9/16" DP. IN SHELL SIDE OF T.S. "A" FOR (6) 3/8" DIA. TIE-RODS.
3. BAFFLES AND/OR SUPP. PLATE
 - A. DRILL 25/32" DIA. HOLES FOR TUBES.
 - B. DRILL 7/16" DIA. HOLES FOR TIE-RODS.

DETAIL TUBESHEETS

(2) REQ'D
MAT'L: SA 240-304

REV.	DESCRIPTION	DATE	BY	CK
1	REL. FOR FAB	9-25-90	GK	DL
0	FOR CUSTOMER APPR'L	9-21-90	GK	DL

CUSTOMER: TRIAD CHEMICAL			
P.O. NO.: 90-04-03254-2			
SERVICE:			
OHMSTEDE			
DWN	FS	ITEM: E-206	B-38112-6
CK	DL	JOB: 38112	



TIE-ROD SCHEDULE		SPACER SCHEDULE	
SIZE - 3/8" ϕ BAR		SIZE - 3/4" O.D.	TUBES
MAT'L - C. STL		MAT'L - SA-214	
QTY	LENGTH	QTY	LENGTH
2	13'-5 5/8"	26	11 1/2"
4	14'-5 1/2"	4	16 15/16"
		24	23 3/8"
		2	28 13/16"

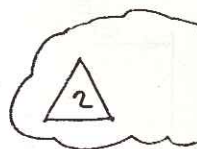
CUSTOMER: TRIAD CHEMICAL
P.O. NO.: 90-04-03254-2
SERVICE :

OHMSTEDE

DWN FS ITEM: E-206
CK JOB: 38112

B-38112-7

REV.	DESCRIPTION	DATE	BY	CK
1	REL. FOR FAB	9-25-90	CK	☒
0	FOR CUSTOMER APPR'L	9-21-90	CK	☒



U W 	CERTIFIED AND MANUFACTURED BY			
	 Ohmstede, INC.			
	☒ ST. GABRIEL		☐ LAKE CHARLES	
	☐ LA PORTE		☐ CORPUS CHRISTI	
	MAWP	SHELL	TUBE	
		115 PSI	85 PSI	
	MAX DESIGN TEMP	248 °F	140 °F	
	TEST PRESS	173 PSI	128 PSI	
	MIN DESIGN METAL TEMP/PRESS		-20 °F @ 115 PSI -20 °F @ 85 PSI	
ITEM NO. E-206		SERIAL NO. 38112		
SIZE 21-192	TYPE NEW		YEAR BUILT 1990	
P.O. NO. 90-04-03254-2				

REV. NAME #	9-27-90	GK	
REL. FOR FAB	9-25-90	GK	
FOR CUSTOMER APPR'L	9-21-90	GK	
DESCRIPTION	DATE	BY	CK

CUSTOMER: TRIAD CHEMICAL			
P.O. NO.: 90-04-03254-2			
SERVICE :			
OHMSTEDE			
DWN		ITEM: E-206	B-38112-8
CK		JOB: 38112	

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