

15
107821
Refwork 3
3800

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., LAKE CHARLES PLANT, 1750 Swisco Road, Sulphur, LA 70663
(Name and address of Manufacturer)

Manufactured for Dow Chemical, P.O. Box 2825, Midland, MI 48641-2825
(Name and address of Purchaser)

3. Location of Installation Dow Chemical USA, 1761 Rt. 12, Gales Ferry, CT 06335
(Name and address)

4. Type: Vertical Heat Exchanger 048139 — 048139 R-3 2327 2000
(HORIZ. VERT., OR SPHERE) (Tank separator, jkt. vessel, heat exch., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 Edition 1998, Addenda 1999
(Edition and 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, shell of heat exchangers, or chamber of multi-chamber vessels.

6. Shell (a) No. of course(s): 1 (b) Overall length (ft & in.): 9'-4"

Course(s)			Material	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter, in.	Length (ft & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	50 ID	9'-4"	SA-516-70N	1/2	1/16	1	A-Spot	85	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

(a)												(b)									
(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp												(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp									
Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		Convex	Concave	Type	Full	Spot	None	Eff.	Temp.	Time
	Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full									
(a)																					
(b)																					

If removable, bolts used (describe other fastening)

8. Type of jacket Jacket closure
(Describe as ogee & weld, bar, etc.)

If bar, give dimensions If bolted, describe or sketch.

WP 185/FV — psi at max. temp. 400 — ° F Min. design metal temp. -20 ° F at 185/FV psi.
(internal) (external) (internal) (external)

10. Impact test No. UCS-66
(Indicate yes or no and the component(s) impact tested)

11. Hydro., ~~hydro.~~, or ~~vacuum~~ test press 334 Proof test —

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA 182 F316L 50 1/2 ID 3 3/4" 0.0310 Welded
Stationary (Mat'l Spec. No.) Dia., in. (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)
SA 182 F316L 50 1/2 ID 3 3/4" 0.0310 Welded
Floating (Mat'l Spec. No.) Dia., in. Nom. thk., in. Corr. Allow., in. Attachment

13. Tubes: SA-249 TP316L 1.0 14BWG(AW) 1369 St. 10'
Mat'l Spec. No., Grade or Type O. D., in. Nom. thk., in. or gauge Number Type (Straight or U)

Items 14 - 18 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell (a) No. of course(s): Top&Bottom Channel -1 (b) Overall length (ft & in.): TC-0'-11 3/4", BC-2'-4 1/4"

Course(s)			Material	Thickness		Long. Joint (Cat. A)				Circum. Joint (Cat. A, B & C)				Heat Treatment	
No.	Diameter, in.	Length (ft. & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time		
1	50 ID	0' 11 3/4"	SA-240 TP316L	5/8	0.031	1	A-Spot	85	1	B,C-Spot	85	—	—		
1	50 ID	2'-4 1/4"	SA-240 TP316L	5/8	0.031	1	A-Spot	85	1	B,C-Spot	85	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—		

(a)												(b)									
SA-240 TP316L												SA-240 TP316L									
(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp												(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp									
Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		Convex	Concave	Type	Full	Spot	None	Eff.	Temp.	Time
	Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full									
(a)	End	5/8	0.031	—	2:1	—	—	—	—	Concave	1	B-Spot	85	—	—	—	—	—	—	—	—
(b)	End	5/8	0.031	—	2:1	—	—	—	—	Concave	1	B-Spot	100	—	—	—	—	—	—	—	—

removable, bolts used (describe other fastening)

SA-193-B7, 7/8", 72
(Mat'l Spec. No., Grade, Size, No.)

16. MAWP 301/FV (internal) (external) psi at max. temp. 450 (internal) (external) ° F Min. design metal temp. -20 ° F at 301/FV psi.

17. Impact test No. UHA-51(d)

18. Hydro., ~~XXXX~~, or ~~XXXX~~ test pressure

414

Proof test

19. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Connection	2	2"-300#	RFLWN	SA-182 F316L	—	—	—	Weld	UW16.1e	—	—
Drain/Vent	2	3/4"-300#	RFLWN	SA-182 F316L	—	—	—	Weld	UW16.1a	—	—
Clean Out	1	10"-300#	RFLWN	SA-312 F316L	SA-182 F316L	.500	0.0310	SA-240 TP316L	UW16.1Q	Welded	—
Spare Noz.	1	4"-300#	RFLWN	SA-182 F316L	—	—	—	Weld	UW16.1e	—	—
Spare Noz.	1	3"-300#	RFLWN	SA-182 F316L	—	—	—	Weld	UW16.1e	—	—
Outlet	1	6"-300#	RFLWN	SA-312 TP316L	SA-182 F316L	.432	.0310	SA-240 TP316L	UW16.1Q	Welded	—
Inlet	1	16"-300#	RFLWN	SA-182 F316L	SA-182 F316L	.500	—	Weld	UW16.1e	Welded	—

20. Supports: Skirt No Lugs — Legs — Others — Brackets Attached Shell, Welded

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

None

None

22. Remarks: No. 19-Pressure Relief Devices Per UG-125(a), Forming Per UCS-79(d)

Line No. 7 & 8 Do Not Apply.

Line No. 19 Cont. On U-4 Form

Item No. E-3300

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.

17,397

Expires

June 4

2003

Date 8/30/00 Name

OHMSTEDE, INC., LAKE CHARLES PLANT

Signed Krishna Rao V Kolluri

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the State or Province of LA 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 P-30 00 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 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 8-30-00

Signed

Wally A. Miller

(Authorized Inspector)

Commissions

194372(A) L-1184

(Natl Board incl. endorsement, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements on this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME Code, Section VIII, Division 1.

U Certificate of Authorization No.

Expires

Date

Name

Signed

(Assembler)

(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 the State or Province of

and employed by 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 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)

(Natl Board incl. endorsement, State, Province and No.)

NAT'L BD. 0327

SHELL

MAWP 35/FV PSI AT 200 °F
185/FV

30 °F 450
MIDMT 20 °F AT 30/FV PSI

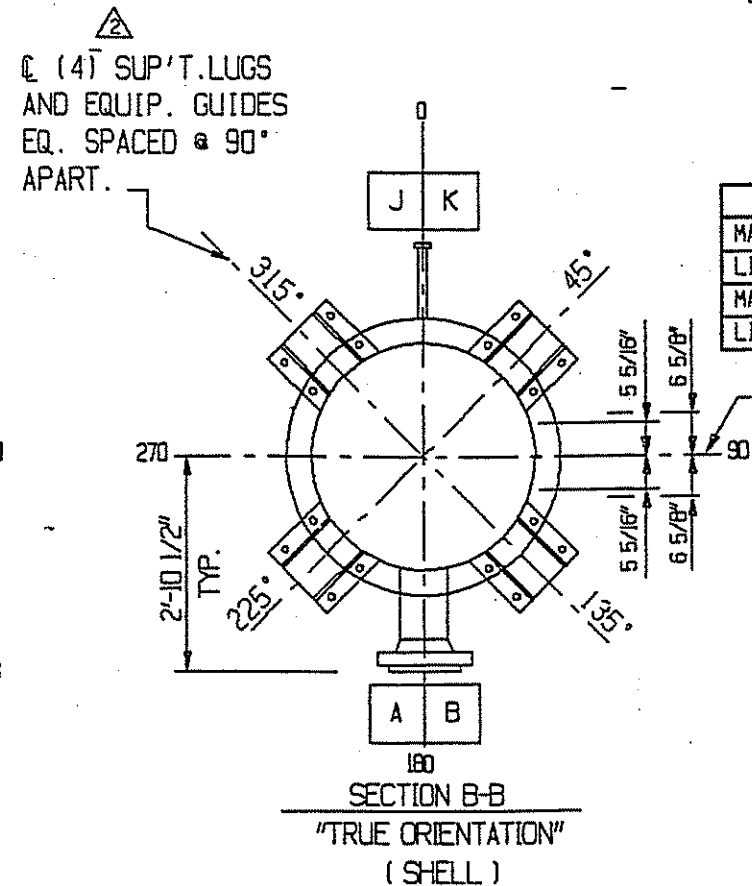
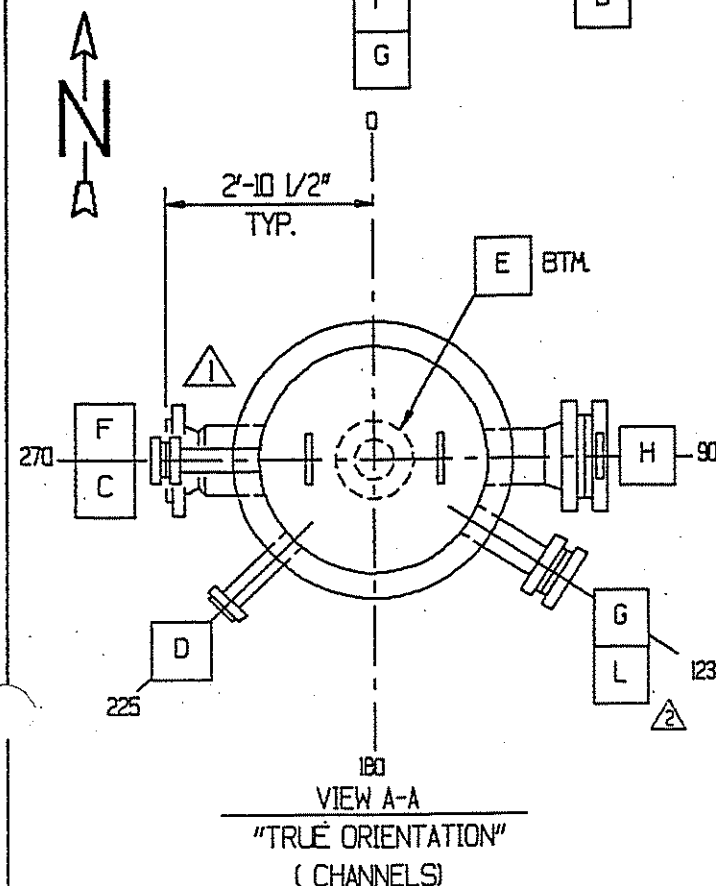
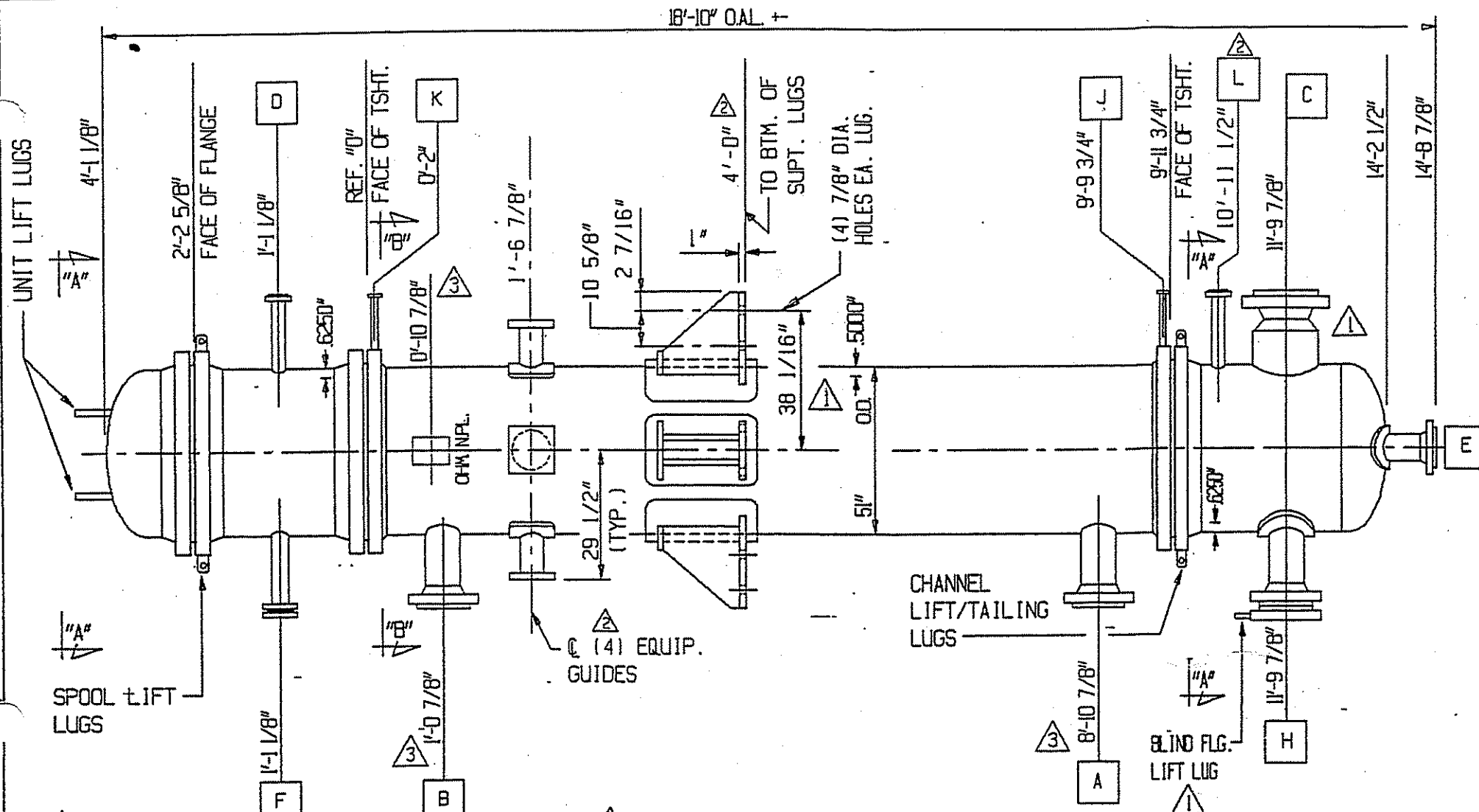
S/N 048134
2000

PC NO. 63373232 DO/ IL NO. 323133

HYDRO SS/TS: 334/414 PSIG

DEV/NET: 27400/41900 LBS

18'-10" OAL +



INSULATION: (BY OTHERS)
SHELLSIDE: NONE
TUBESIDE: NONE

	SHELLSIDE	TUBESIDE
MAWP (PSIG)	FV / 185	FV / 301
LIMITED BY	150# ANSI FLGS.	CHANNEL FLANGES
MAP (PSIG)	229	318
LIMITED BY	TUBESHEETS	CHANNEL FLANGES

CL. NAMEPLATE
CERTIFIED LEF
DATE 8-8-00

NO.	REVISIONS	BY	CHK.	DATE
3	REV. NOZZ. "A & B" LOCATIONS	JL	CF	8-8-00
2	REV. PER CUST. COMMENTS	CRF	DG	7-19-00
1	REL. FOR FAB. / CUST. REVIEW	JL	DG	6-19-00
0	FOR CUSTOMER APPROVAL	DG	LEF	6-2-00

DESIGN DATA	SHELL	TUBE
DESIGN PRESSURE PSIG	172	300
VACUUM PRESSURE PSIG	FV	FV
TEST PRESSURE PSIG	334 (SHOP) 241 (FIELD)	414 (SHOP) 392 (FIELD)
DESIGN TEMP. Deg.F.	400	450
MMT Deg.F.	-20	-20
CORROSION ALLOWANCE	1/16"	.0310"
NUMBER OF PASSES	L	1
RADIOGRAPHY	SPOT	SPOT
HEAT TREAT REQUIRED	NO	NO

ESTIMATED WEIGHTS, LBS.

DRY: 27400 WET: 41900

SPECIFICATIONS

ASME CODE SECT. VIII, DIV.1, 1998 ED., A99 (STAMP YES)
TEMA CLASS B and API-660 APPLIES NATIONAL BOARD REGISTRATION REQUIRED
CUSTOMER SPEC'S.: G95-1000-01, G95-1000-02, G95-3000-01, G95-8000-02, G95-8000-03, G95-4001-50, G95-4001-53, G95-4001-60, G95-6500-01, G95-6500-02, G95-6500-03, G95-3000-01, G95-3000-04, G165-0202-01

MATERIAL

BONNET, SPOOL, BTM CHANNEL: SA-240-316L
SHELL: SA-516-70N
TUBESHEETS: SA-182-F316L
BAFFLES: SA360-EQUAL
TUBES: SA-249TP316L
(1369) 1" O.D. X 14 BWG (AW) X 10'-0" LG
TUBE PITCH 1 1/4" SURFACE 3312 SQ.FT.

GENERAL NOTES

ALL BOLT HOLES TO STRADDLE NATURAL CENTER LINES.
GASKETS: .1750" THK. T316 SPIRAL WOUND FLEXIBLE GRAPHITE
(1) SET OF SPARE GASKETS REQUIRED.
TUBE ENDS TO BE STRENGTH WELDED & ROLLER EXPANDED
PAINT: SEE DRAWING SHEET 1A.

NOZZLE SCHEDULE

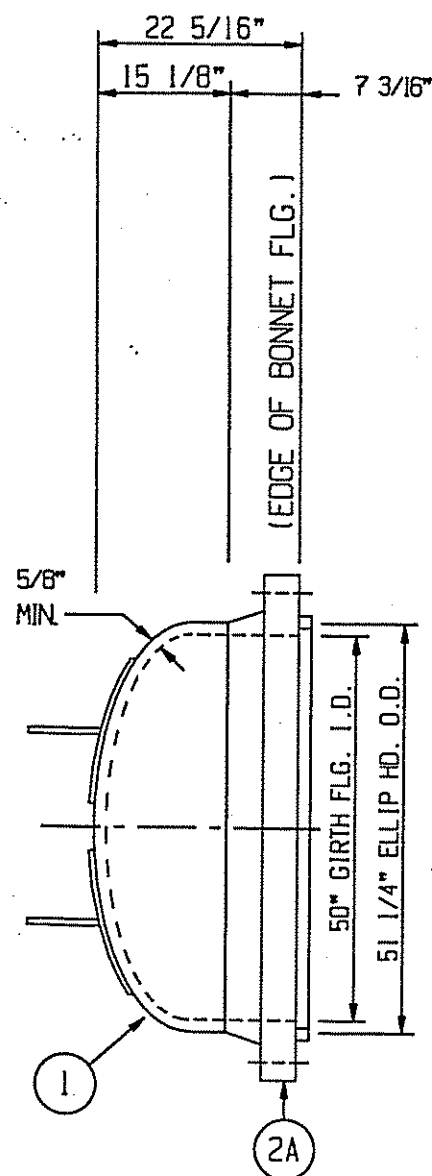
MK	QTY.	DESCRIPTION	PROCESS
A	1	12" 150#RF WN	SHELL INLET
B	1	12" 150#RF WN	SHELL OUTLET
C	1	1.16" 300#RF WN	TUBESIDE VAPOR INLET
D	1	1.2" 300#RF LWN	TUBESIDE VAPOR OUTLET
E	1	1.6" 300#RF WN	TUBESIDE LIQUID OUTLET
F	1	3" 300#RF LWN	SPARE W/ BLIND
G	1	4" 300#RF LWN	SPARE W/ BLIND
H	1	10" 300#RF WN	CLEANOUT/INSP. W/ BLIND
J	1	3/4" 300#RF LWN	SHELL DRAIN
K	1	3/4" 300#RF LWN	SHELL VENT
L	1	1.2" 300#RF LWN	TEMP. CONN.

ONE 50-120 A-E-M

CUSTOMER: DOW CHEMICAL COMPANY
OHMSTEDE JOB NO.: 048139 COPYRIGHT 2000, OHMSTEDE INC.
P.O. NO.: 63373232
ITEM NO.: E-3300 ENG TAG NUM DESC ID: 523133
SERVICE: REFLUX CONDENSER
DOCUMENT CODE NO.: 9001

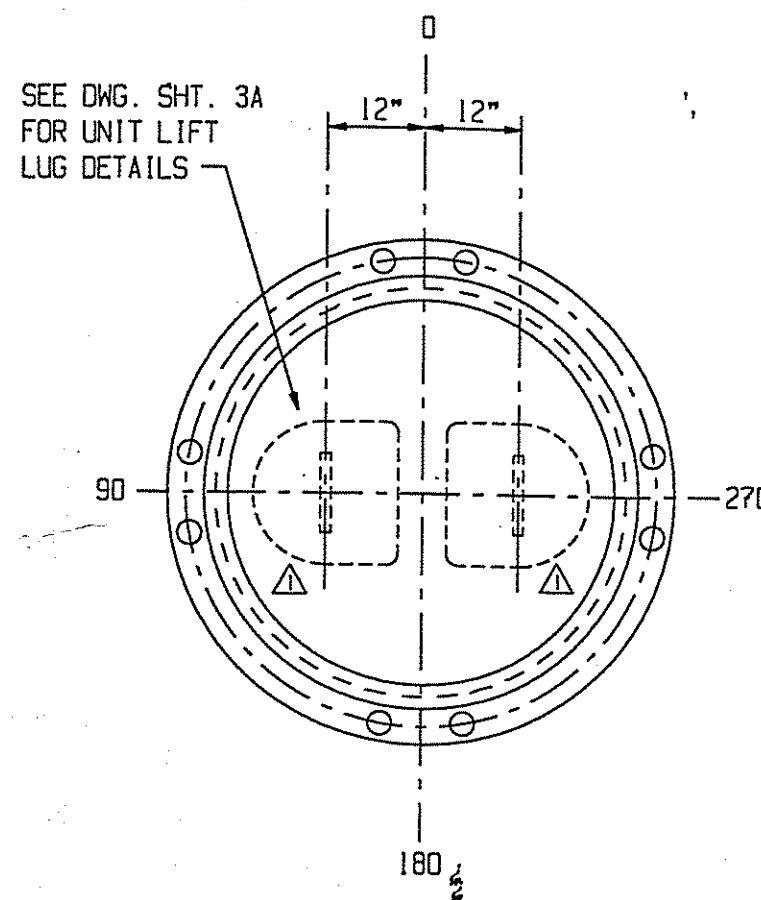
OUTLINE DRAWING

OHMSTEDE	DRAWING NO.	SHEET NO.	REV.
	048139	1	3



BONNET SIDE VIEW

FOR FLANGE DETAILS SEE DWG. SHT. 13



BONNET END VIEW
(TRUE ORIENTATION)



NOTES:

- 1) ALL BOLT HOLES TO STRADDLE CENTER LINES.
- 2) FOR WELD AND BEVEL DETAILS SEE DWG. SHT. 14
- 3) SPOT RADIOGRAPHY.

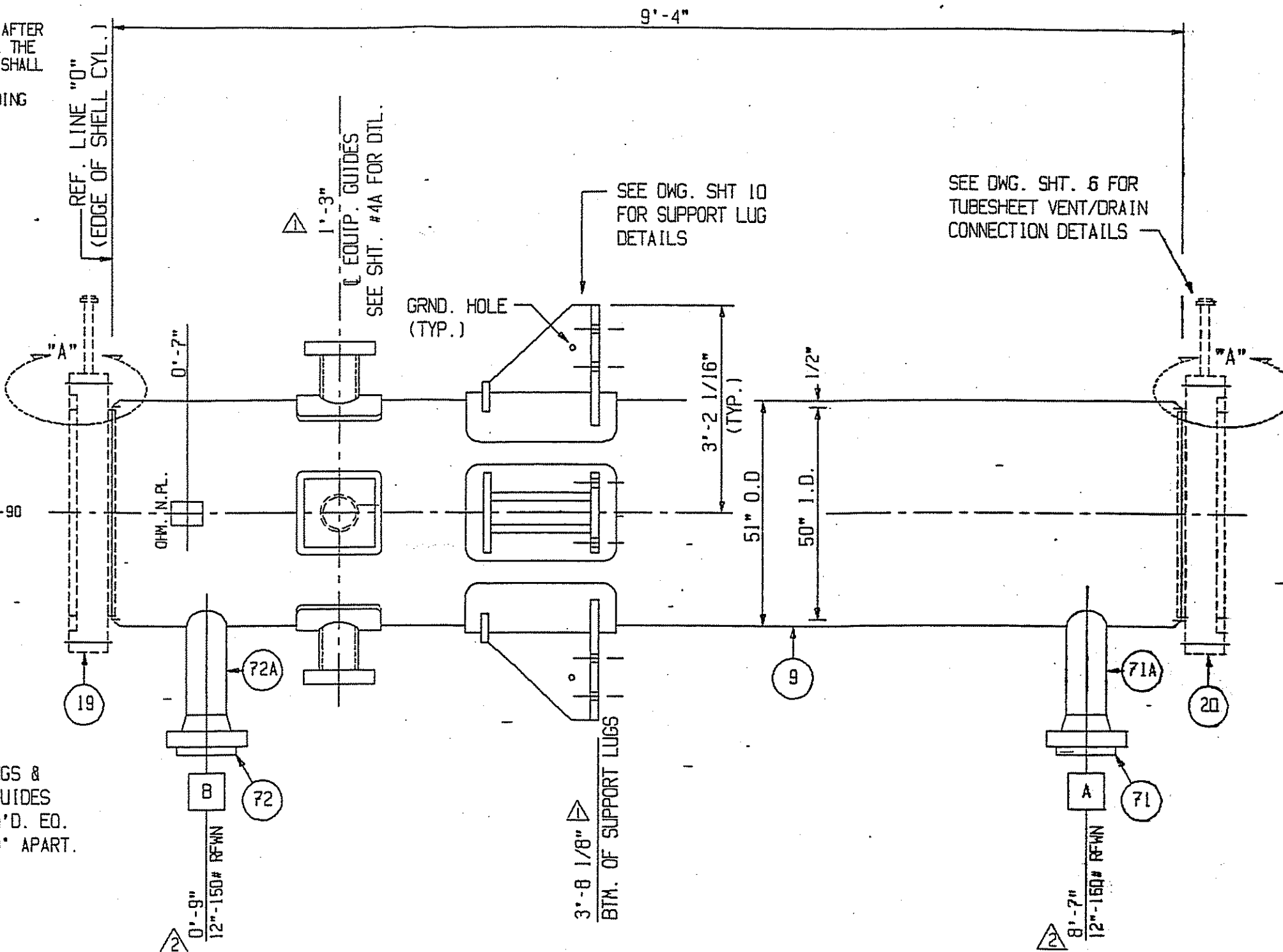
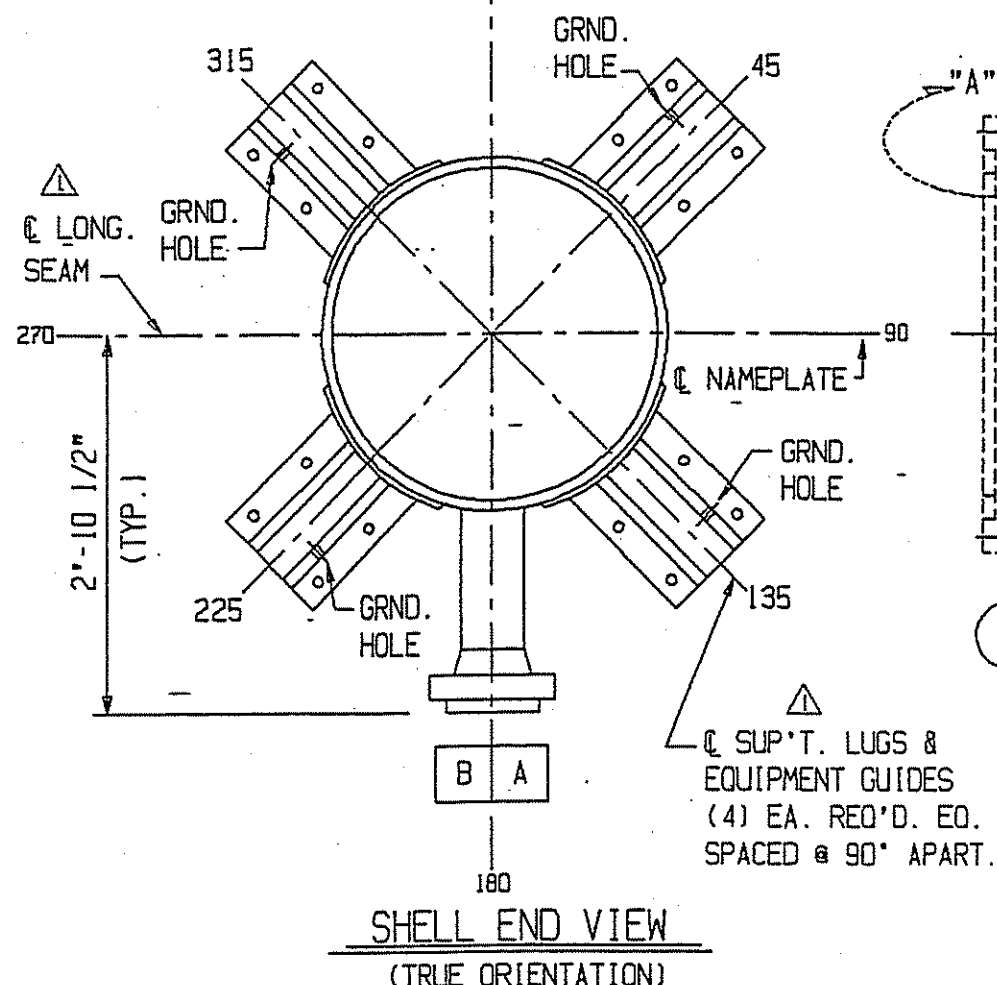
BONNET WEIGHT = 1,800 LBS.

					CUSTOMER: DOW CHEMICAL COMPANY			
					OHMSTEDE JOB NO.: 048139 COPYRIGHT 2000, OHMSTEDE INC.			
					P.O. NO. : 63373232			
					ITEM NO.: E-3300 ENG TAG NUM DESC ID: 523133			
					SERVICE: REFLUX CONDENSER			
					DOCUMENT CODE NO.: 9003			
1	REV. LIFT LUG PAD.	CRF	DG	7-19-00	TOP BONNET DETAILS			
0	REL. FOR FAB. / CUST. REVIEW	JL	DG	6-19-00				
NO.	REVISIONS	BY	CHK.	DATE CHK.	OHMSTEDE			
					DRAWING NO.	SHEET NO.	REV.	
					048139	3	1	

SHOP NOTE:

ALL SURFACES LEFT EXPOSED AFTER ATTACHMENT OF TUBESHEET & THE TUBESHEET ATTACHMENT WELD SHALL BE P.T. EXAMINED PER UG-93 (d) (3) AFTER WELDING IS COMPLETE.

TUBESHEET TO CYL. WELD DETAIL "A"



SHELL SIDE VIEW

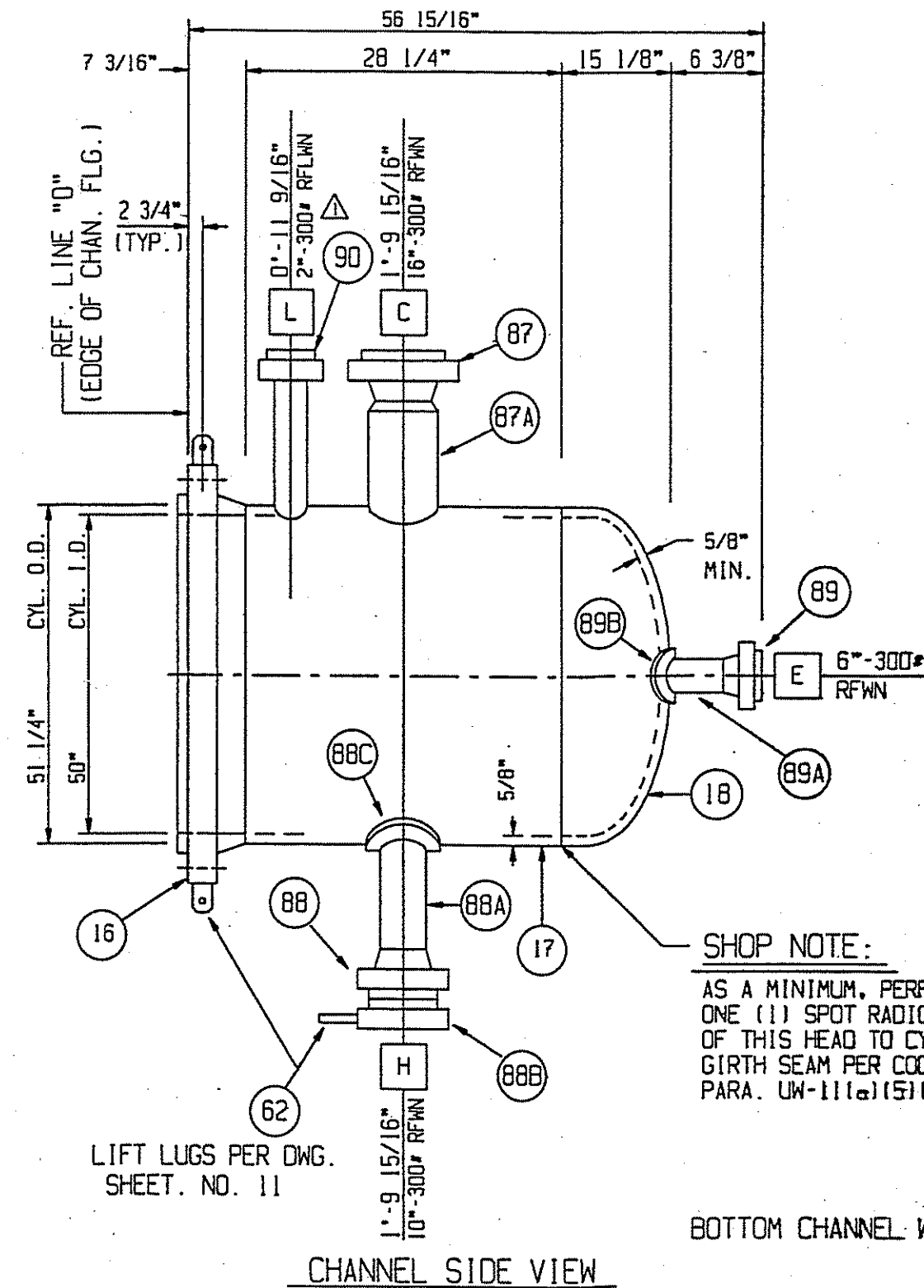
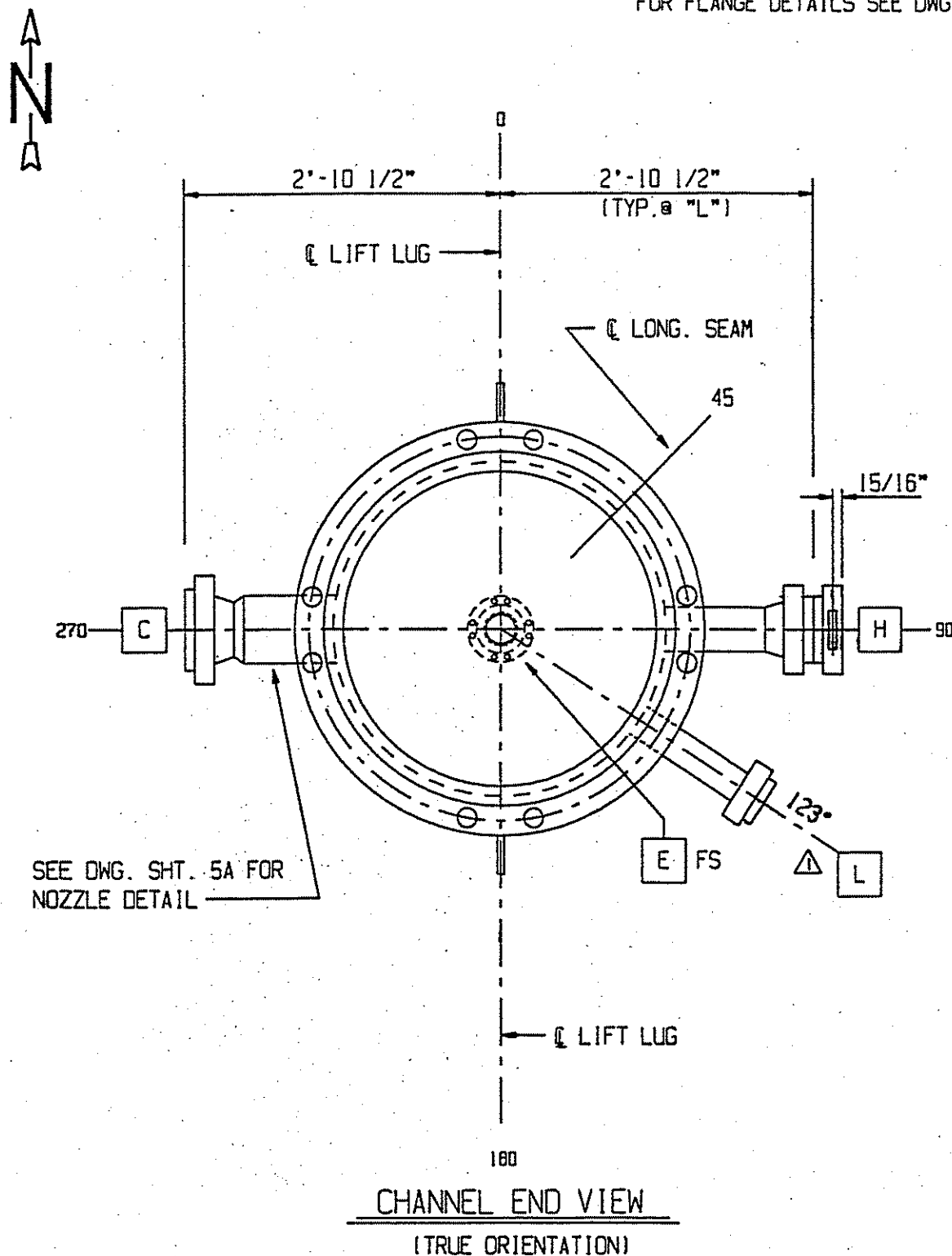
NOTES:

- 1) ALL BOLT HOLES TO STRADDLE CENTER LINES.
- 2) FOR WELD AND BEVEL DETAILS SEE DWG. SHT. 14.
- 3) GRIND ALL INSIDE WELDS FLUSH.
- 4) SPOT RADIOGRAPHY.
- 5) NOZZLE FLANGE GASKET SURFACE TO BE 125-250 AARH SERRATED FINISH W/ 40-55 GROOVES PER INCH.

SHELL WEIGHT = 19,900 LBS.
(INCL. BUNDLE)

					CUSTOMER: DOW CHEMICAL COMPANY			
					OHMSTEDE JOB NO.: 048139 COPYRIGHT 2000. OHMSTEDE INC.			
					P.O. NO. : 63373232			
					ITEM NO.: E-3300 ENG TAG NUM DESC ID: 523133			
					SERVICE: REFLUX CONDENSER			
					DOCUMENT CODE NO.: 9003			
					SHELL DETAILS			
					OHMSTEDE		DRAWING NO. 048139	SHEET NO. 4
								REV. 2
2	REV. NOZZ. "A & B" LOCATIONS	JL	CF	8-8-00				
1	REV. PER CUST. COMMENTS	CRF	DG	7-19-00				
0	REL. FOR FAB. / CUST. REVIEW	JL	DG	6-19-00				
NO.	REVISIONS	BY	CHK.	DATE CHK.				

FOR FLANGE DETAILS SEE DWG. SHT. 13A



BOTTOM CHANNEL WEIGHT = 3,200 LBS.

NOTES:

- 1) ALL BOLT HOLES TO STRADDLE CENTER LINES.
- 2) FOR WELD AND BEVEL DETAILS SEE DWG. SHT. 14
- 3) SPOT RADIOGRAPHY.
- 4) NOZZLE FLANGE GASKET SURFACE TO BE 125-250 AARH SERRATED FINISH W/ 40-55 GROOVES PER INCH.

(51) (52)
STUDS & NUTS
FOR NOZZ. CONN.
MK. "H"

				CUSTOMER: DOW CHEMICAL COMPANY			
				OHMSTEDE JOB NO.: 048139 COPYRIGHT 2000, OHMSTEDE INC.			
				P.O. NO. : 63373232			
				ITEM NO.: E-3300 - ENG TAG NUM DESC ID: 523133			
				SERVICE: REFLUX CONDENSER			
				DOCUMENT CODE NO.: 9003			
				BOTTOM CHANNEL DETAILS			
				OHMSTEDE		DRAWING NO. 048139	SHEET NO. 5
						REV. 1	
1	REV. PER CUST. COMMENTS	CRF	DG	7-19-00			
0	REL. FOR FAB. / CUST. REVIEW	JL	DG	6-19-00			
NO.	REVISIONS	BY	CHK.	DATE CHK.			

DRILL & TAP 3/4" DEEP FOR (12) 1/2" DIA.
TIE RODS ON SHELL SIDE OF
#19 TUBESHEET. DO NOT DRILL THRU
(SEE TUBE LAYOUT FOR LOCATIONS.)

SHOP NOTE:

ALL SURFACES MARKED THIS
SHALL BE P.T. EXAMINED
IN ACCORDANCE WITH UG-93
(1) (3) AFTER MACHINING.

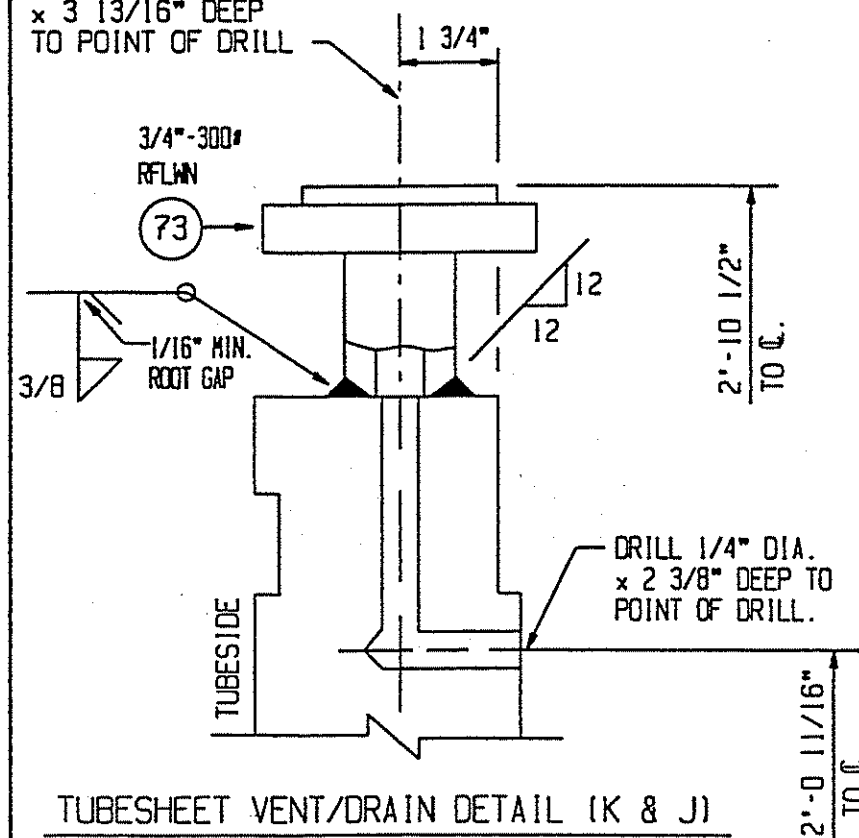
DRILL (72)
1" DIA. HOLES
EQUALLY SPACED TO
STRADDLE CTR. LINES.
(CHORD = 2.3936")

DRILL (72)
1" DIA. HOLES
EQUALLY SPACED TO
STRADDLE CTR. LINES.
(CHORD = 2.3936")

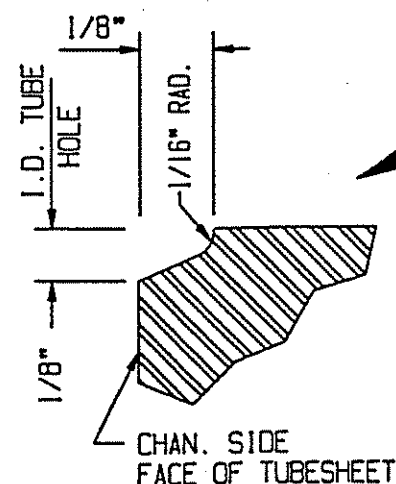
TOP TUBESHEET DETAIL
(TRUE ORIENTATION)

BOTTOM TUBESHEET DETAIL
(TRUE ORIENTATION)

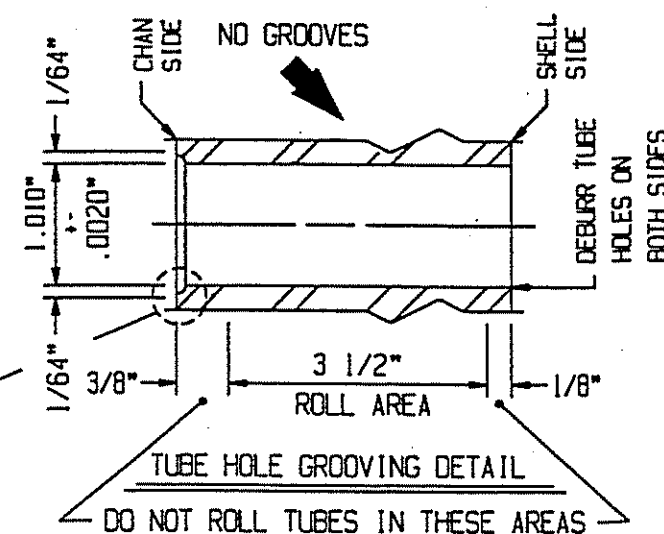
DRILL 1/4" DIA.
x 3 13/16" DEEP
TO POINT OF DRILL



TUBESHEET VENT/DRAIN DETAIL (K & J)



DETAIL "J" GROOVE



NOTES:

1) MACHINE ALL GASKET SURFACES 125-250 AARH

SHOP NOTE:

PRIOR TO ROLLING, TUBES
TO BE STRENGTH WELDED TO
TUBESHEET PER DWG. SHT. 6A

CUSTOMER: DOW CHEMICAL COMPANY
OHMSTEDE JOB NO.: 048139 COPYRIGHT 2000, OHMSTEDE INC.
P.O. NO. : 63373232
ITEM NO.: E-3300 ENG TAG NUM DESC ID: 523133
SERVICE: REFLUX CONDENSER
DOCUMENT CODE NO.: 9003

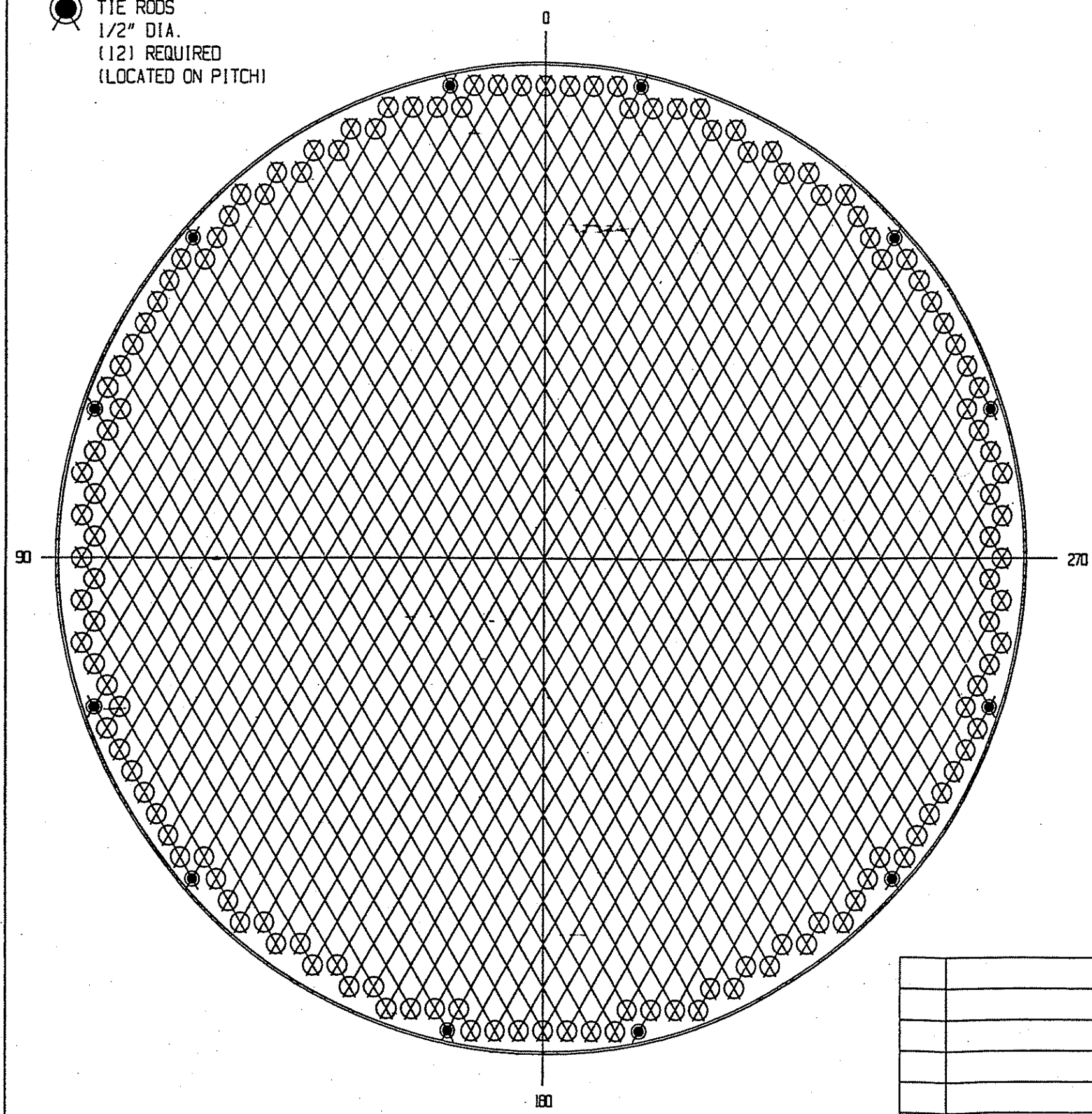
TUBESHEET DETAILS

OHMSTEDE

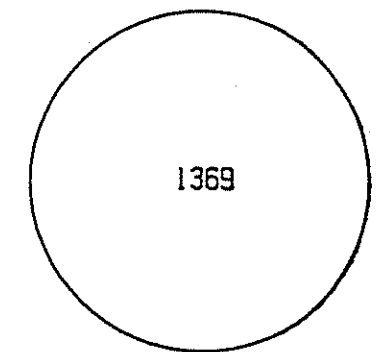
DRAWING NO. 048139
SHEET NO. 6
REV. 0

NO.	REVISIONS	BY	CHK.	DATE CHK.
0	REL. FOR FAB. / CUST. REVIEW	JL	DG	6-19-00

 TIE RODS
 1/2" DIA.
 (12) REQUIRED
 (LOCATED ON PITCH)



VIEW LOOKING AT SHELL SIDE OF NO. 19 TUBESHEET

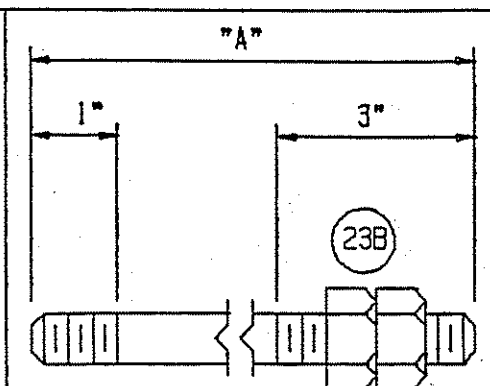
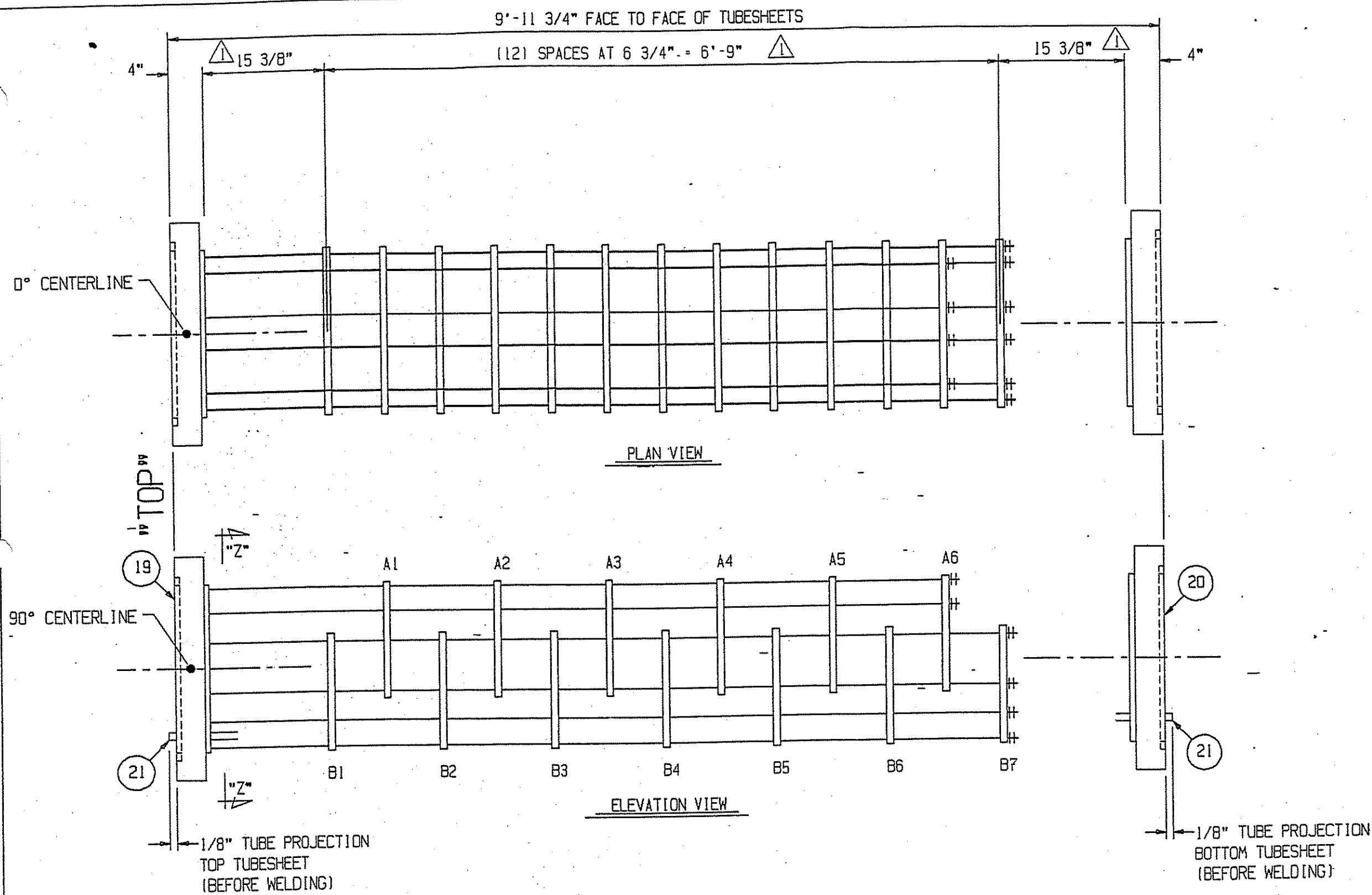


TUBE HOLE DISTRIBUTION

NOTES:

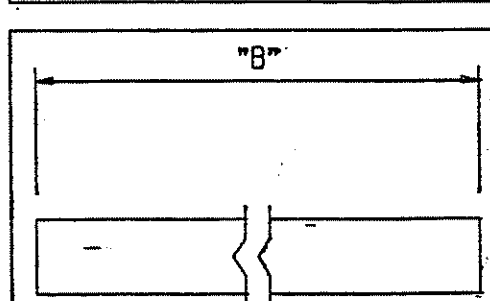
- 1) DRILL AND REAM TUBE HOLES IN TUBESHEETS TO 1.010" ± .0020 DIA. FOR 1369-1" O.D. TUBES.
- 2) TUBE PITCH = 1 1/4" TRIANGLE.
- 3) NUMBER OF PASSES = 1
- 4) BAFFLE O.D. = 49 3/4"
- 5) O.T.L. = 49 5/16"
- 6) SEE DWG. SHT. 6 FOR TUBE HOLE GROOVING DETAIL.

					CUSTOMER: DOW CHEMICAL COMPANY			
					OHMSTEDE JOB NO.: 048139 COPYRIGHT 2000 OHMSTEDE, INC.			
					P.O. NO.: 63373232			
					ITEM NO.: E-3300 ENG. TAG NUM. DESC. ID: 523133			
					SERVICE: REFLUX CONDENSER			
					DOCUMENT CODE NO.: 9003			
					TUBE HOLE LAYOUT			
0	REL. FOR FAB. / CUST. REVIEW	JL	DG	6-19-00	OHMSTEDE			
NO.	REVISIONS	BY	CHK.	DATE CHK.				
					DRAWING NO.	SHEET NO.	REV.	
					048139	7	0	



1/2" O.D. TIE RODS (23)

REQ'D.	"A"
8	8'-2 3/4" ⚠
4	7'-8" ⚠



3/4" O.D. SPACER TUBING (23A)

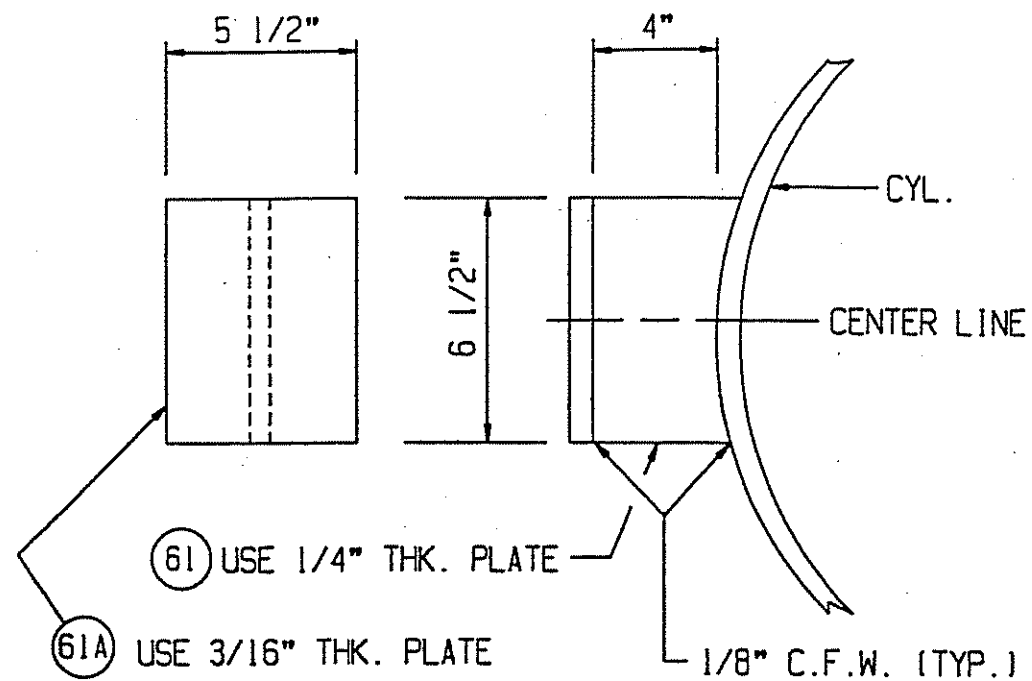
REQ'D.	"B"
8	15 1/4" ⚠
4	22" ⚠
48	6 1/2" ⚠
44	13 1/4" ⚠

NOTES:

1) FOR SECTION AND VIEW DETAILS SEE DWG. SHT. 9

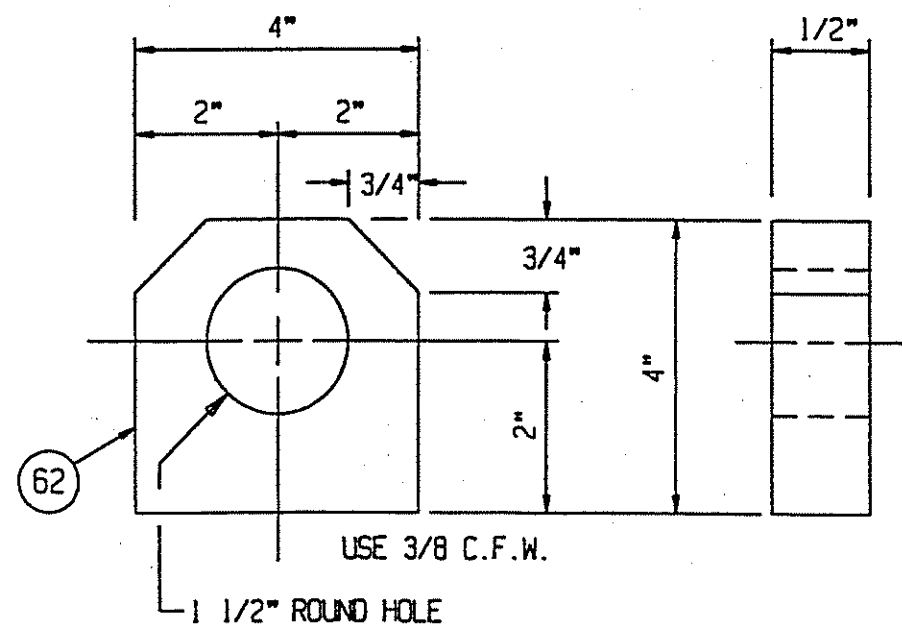
2) FOR STRENGTH WELD DETAILS SEE DWG. SHT. 6A.

					CUSTOMER: DOW CHEMICAL COMPANY			
					OHMSTEDE JOB NO.: 048139 COPYRIGHT 2000, OHMSTEDE INC.			
					P.O. NO.: 63373232			
					ITEM NO.: E-3300 ENG TAG NUM DESC ID: 523133			
					SERVICE: REFLUX CONDENSER			
					DOCUMENT CODE NO.: 9003			
					BUNDLE DETAILS			
1	REV. BAFFLE SPACING	JL	CF	8-8-00	OHMSTEDE	DRAWING NO. 048139	SHEET NO. 8	REV. 1
0	REL. FOR FAB. / CUST. REVIEW	JL	DG	6-19-00				
NO.	REVISIONS	BY	CHK.	DATE CHK.				



ONE (1) REQ'D.

NAME PLATE BRACKET DETAIL



NO. REQUIRED: (5)

LIFTING LUG DETAIL

NOTE:
SEAL WELD NAMEPLATE
TO BRACKET

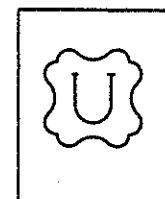
(65) MATERIAL: 18-8 STN. STL. (16 GA.)



Ohmstede Inc.

NATL. BD. NO. *

CERTIFIED BY
OHMSTEDE INC.



SHELL

MAWP 185/FV PSI AT 400 °F

MDMT -20 °F AT 185/FV PSI

TUBE

MAWP 301/FV PSI AT 450 °F

MDMT -20 °F AT 301/FV PSI

S/N 048139

YEAR 2000

ITEM NO. E-3300 SIZE 50-120 TYPE AEM

P.O. NO. 63373232 DOW ID. NO. 523133

HYDROTEST: SHELLSIDE 334 PSIG TUBESIDE 414 PSIG

DRY WT. 27400 LBS WET WT. 41900 LBS

* TO BE ASSIGNED AT TIME OF SHIPMENT

					CUSTOMER: DOW CHEMICAL COMPANY:			
					OHMSTEDE JOB NO.: 048139 COPYRIGHT 2000, OHMSTEDE INC.			
					P.O. NO. : 63373232			
					ITEM NO.: E-3300 ENG. TAG NUM DESC. ID: 523133			
					SERVICE: REFLUX CONDENSER			
					DOCUMENT CODE NO.: 9003			
					NAMEPLATE, BRKT. & LIFT LUGS			
0	REL. FOR FAB. / CUST. REVIEW	JL	DG	6-19-00	OHMSTEDE			
NO.	REVISIONS	BY	CHK.	DATE CHK.	DRAWING NO.	SHEET NO.	REV.	
					048139	11	0	