

(Name and address of Manufacturer)

(Name and address of Purchaser)

(Name and address)

Edition and Addenda (date)

Code Case No.

Special Service per UG-120(d)

(Mat'l Spec. No., Grade, Size, No.)

SA-193-B7, 3/4", 40
(Matl Spec. No., Grade, Size, No.)

16. MAWP 58/FV — psi at max. temp. 400 — ° F Min. design metal temp. 32 ° F at 58/FV psi.
(internal) (external) (internal) (external)

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

(Indicate yes or no and the component(s) impact tested)

18. Hydro., ~~Hydro.~~ or ~~Hydro.~~ test pressure 131 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	
*Inlet/Outlet	2	4"-150#	RFLWN	SA-106-B	SA-105	.337	.0625	Weld	Welded	Welded	—
Drain	1	2"-150#	RFLWN	SA-105	—	—	—	Weld	Welded	—	—
Vent	1	3/4"-150#	RFLWN	SA-105	—	—	—	Weld	Welded	—	—
Inlet	1	16"-150#	RFLJ	SA-312 TP304L	SA-105	.375	.030	Weld	Welded	Bolted	—
Connection	4	3"-150#	RFLWN	SA-312 TP304L	SA-182 F304L	.600	.030	Weld	Welded	Welded	—
Spare	1	10"-150#	RFLJ	SA-403-304L	SA-105	.365	.030	Weld	Welded	Bolted	—
Drain	1	6"-150#	RFLJ	SA-403-304L	SA-105	.280	.030	Weld	Welded	Bolted	—

20. Supports: Skirt No Lugs — Legs — Others — Brackets — Attached — Shell, Welded —
(Yes or No.) (No.) (No.) (Describe) (Where and How)

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)

*Nozzles Have 45° LR Elbow Between Pipe & Flange Of SA234WPB.

No. 19-Cont. - Spray 1 3/4"-150# RFLWN SA-312TP304L SA-182F304L .154 .030 Weld Welded Welded

Outlet 1 2"-150# RFLWN SA-312TP304L SA-182F304L .218 .030 Weld Welded Welded

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 2000

Date 12/20/99 Name OHMSTEDE, INC., LAKE CHARLES PLANT
(Manufacturer)

Signed Michael Burton
(Representative)

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 12-20-99, 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 12-20-99 Signed [Signature]
(Authorized Inspector)

Commissions 2241972(A) LA184
(Nat'l 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 — 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 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 —
(Authorized Inspector)

Commissions —
(Nat'l Board incl. endorsement, State, Province and No.)



NAT'L BD. 2499

CERTIFIED BY
ONIASTE INC.
LAKE CHARLES PLANT



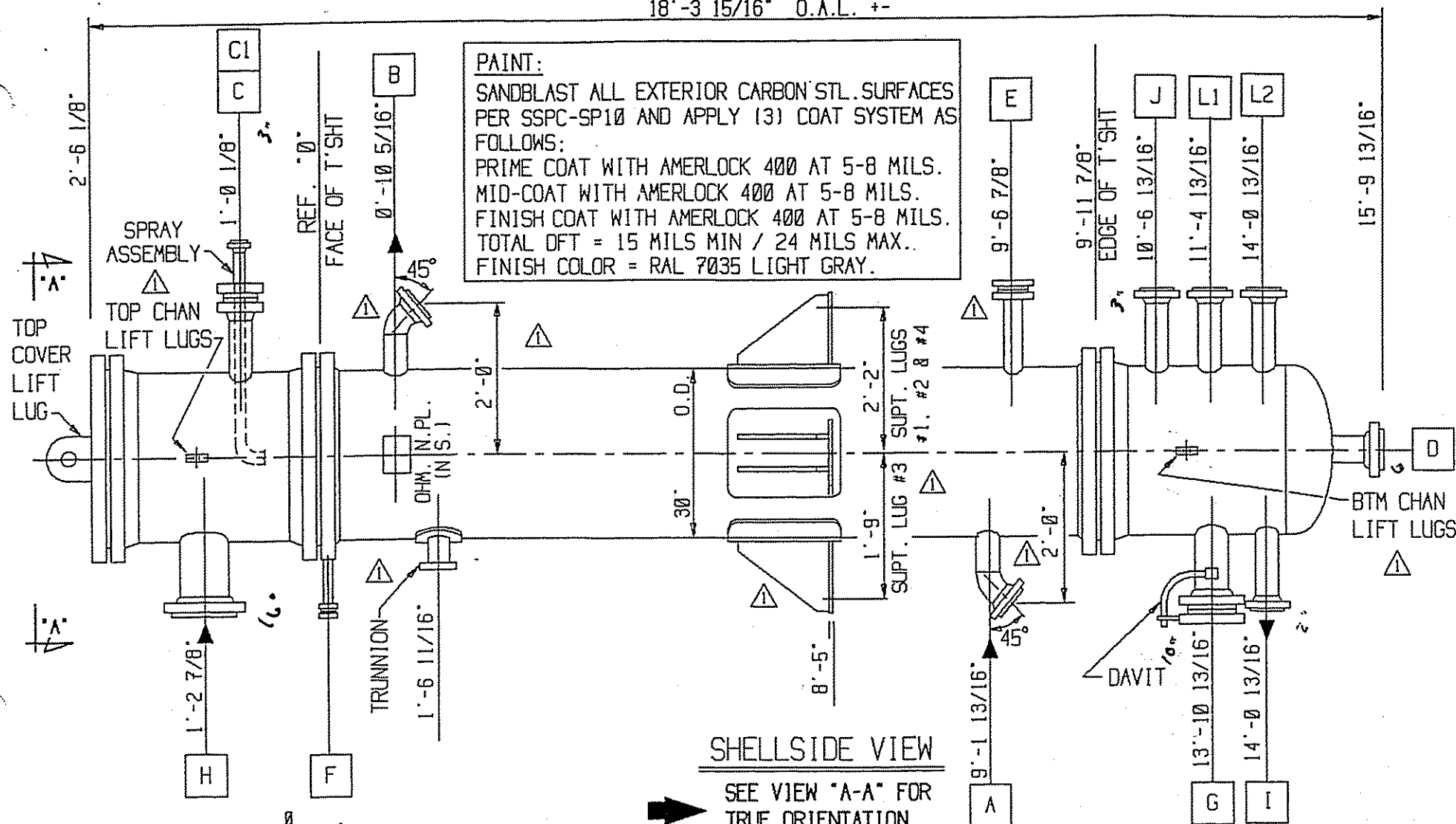
RT-3

MAWP	245	PSI	AT	250	°F
MDMT	14	°F	AT	245	PSI
TUBE ..					
MAWP	58/FV	PSI	AT	400	°F
MDMT	32	°F	AT	53/FV	PSI
S/N	932268				
YEAR	1999				

ITEM NO. E-565S SIZE 30-120 TYPE AEM
P.O. NO. 63309586 VIN# TEMA CLASS B
SHOP HYDRO PRESS 28 PSI / 51 PSI / TS
ID NO: EMPTY WT: 7600 LBS

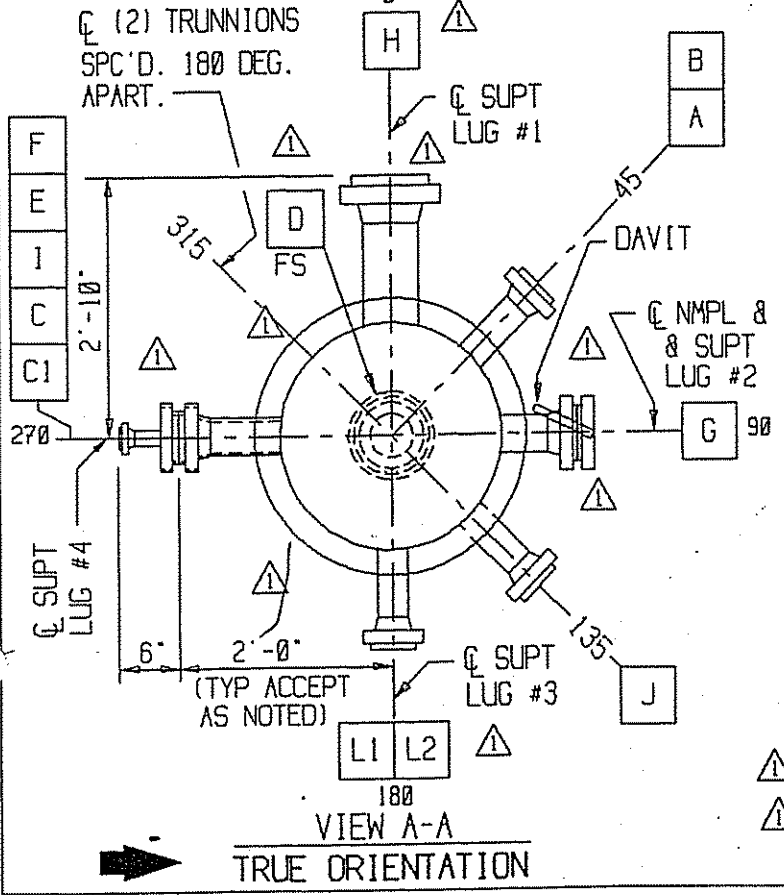
18'-3 15/16" O.A.L. +-
2'-6 1/8"

PAINT:
SANDBLAST ALL EXTERIOR CARBON STL. SURFACES
PER SSPC-SP10 AND APPLY (3) COAT SYSTEM AS
FOLLOWS:
PRIME COAT WITH AMERLOCK 400 AT 5-8 MILS.
MID-COAT WITH AMERLOCK 400 AT 5-8 MILS.
FINISH COAT WITH AMERLOCK 400 AT 5-8 MILS.
TOTAL DFT = 15 MILS MIN / 24 MILS MAX..
FINISH COLOR = RAL 7035 LIGHT GRAY.



SHELLSIDE VIEW

SEE VIEW "A-A" FOR
TRUE ORIENTATION



I	2"	150#RF WN	OUT
C1	3/4"	150#RF WN	SPRAY
D	6"	150#RF LJ	DRAIN
L2	3"	150#RF WN	LEVEL
L1	3"	150#RF WN	LEVEL
J	3"	150#RF WN	VAPOR OUT
G	10"	150#RF LJ W/ BLIND	SPARE
C	3"	150#RF WN W/ BLIND	SPRAY
H	16"	150#RF LJ	INLET
F	3/4"	150# RF LWN W/ BLIND	VENT
E	2"	150#RF LWN W/ BLIND	DRAIN
B	4"	150#RF WN	OUTLET
A	4"	150#RF WN	INLET
MK		SIZE-RATE	SERVICE

OHMSTEDE - LAKE CHARLES PLANT
CERTIFIED "AS BUILT" DRAWING
Signed *Kristina* Date *12/20/99*

SUPPORTS:
(1) 1 5/16" X 1 9/16" LG.
SLOT EACH SUPPORT.

CERTIFIED BH
DATE 10/20/99

DESIGN DATA

DESIGN DATA	SHELL	TUBE
DESIGN PRESSURE P.S.I.G.	100	50
TEST PRESSURE P.S.I.G. (SHOP / FIELD)	428/368	131/87
DESIGN TEMPERATURE DEG. F. (MAX./MIN.)	250/ 14	400/ 32
CORROSION ALLOWANCE	.0625"	.0300"
NUMBER OF PASSES	1	1
RADIOGRAPHIC EXAMINATION	SPOT	SPOT
HEAT TREAT REQUIRED	NO	NO

ESTIMATED WEIGHTS, LBS.

DRY: 7600 BUNDLE: 3800 WET: 12600

SPECIFICATIONS

ASME CODE SECT. VIII, DIV.1, 1998 ED. & ADD. (STAMP YES)
TEMA CLASS B
NATIONAL BOARD REGISTRATION REQUIRED
CUSTOMER SPECIFICATIONS: G9S-1000-01, G8S-4001-50, G8S-4001-60,
G8S-4001-53, G9G-3005-04, G16S-0204-01, G9S-3000-01, G9S-1000-02,
G16S-0201-01, G16S-0202-01, G9G-3000-02, G9G-5545-01

MATERIAL

CHANNEL: SA-240-304L
SHELL: SA-516-70
TUBESHEETS: SA-240-304L
BAFFLES: SA-36
TUBES: SA-249TP304L
(428) 1" O.D. X .065" (AW) X 10'-0" LG.
TUBE PITCH 1 1/4" SURFACE 1083 SQ.FT.

GENERAL NOTES

ALL BOLT HOLES TO STRADDLE NATURAL CENTER LINES.
TUBES ROLL ONLY.
BODY FLANGE GASKETS: .1750" THK. SPIRAL WND/FLXCB

MAXIMUM ALLOWABLE PRESSURES

SHELLSIDE:
MAWP (HOT & CORR.) = 245 PSIG LMTD BY NOZZ RATING
MAP (NEW & COLD) = 285 PSIG LMTD BY NOZZ RATING
SHOP HYDRO = 1 1/2 (285) = 428 PSIG
FIELD HYDRO = 1 1/2 (245) = 368 PSIG
TUBESIDE:
MAWP (HOT & CORR.) = 58/FV PSIG LMTD BY CHANNEL COVER
MAP (NEW & COLD) = 87 PSIG LMTD BY CHANNEL COVER
SHOP HYDRO = 1 1/2 (87) = 131 PSIG
FIELD HYDRO = 1 1/2 (58) = 87 PSIG

PAINT: SEE DETAIL THIS SHEET.

TYPE UNIT : A E M SIZE : 30-120

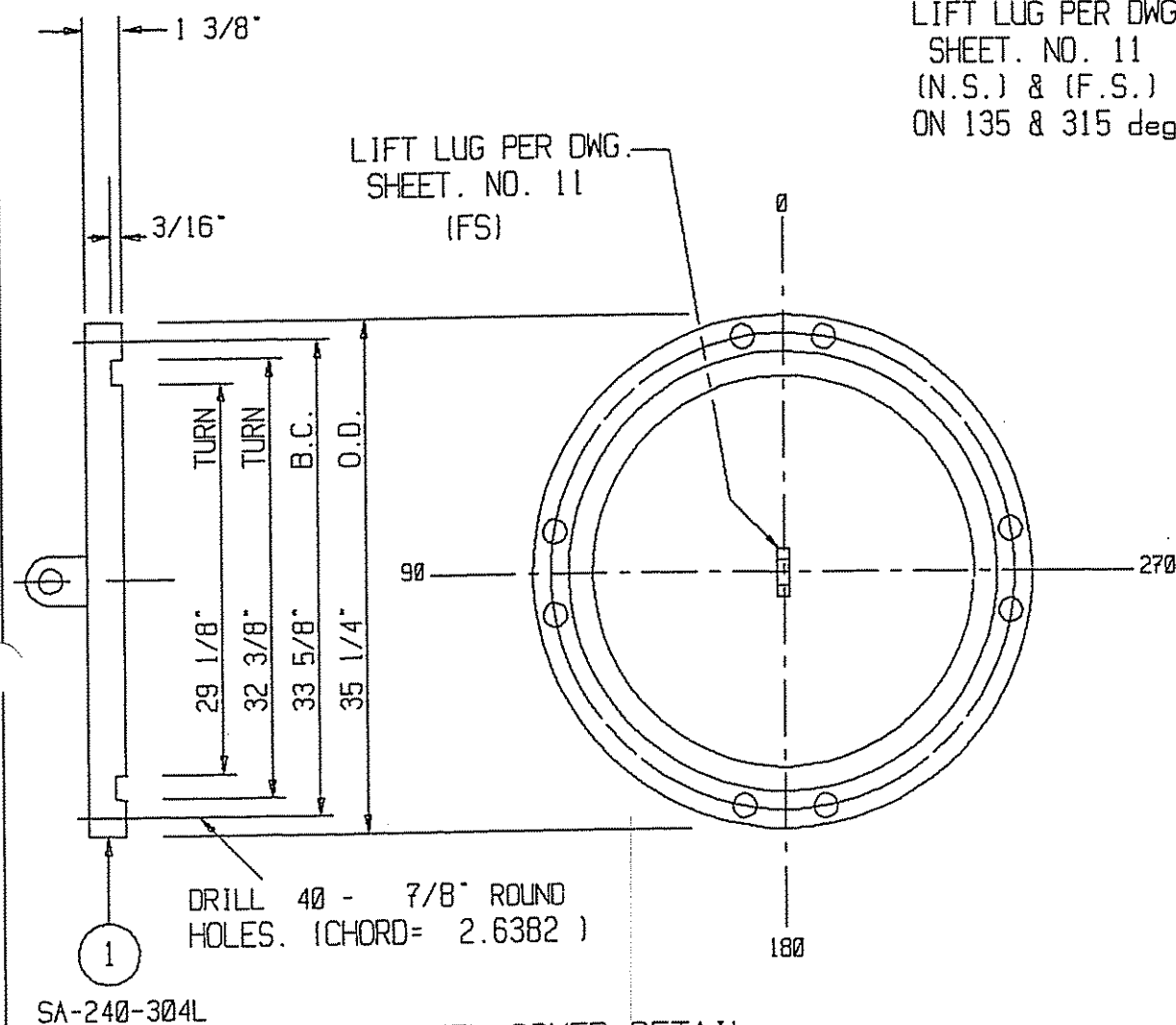
CUSTOMER: DOW CHEMICAL COMPANY
OHMSTEDE JOB NO.: 938268
P.O. NO.: 63309586
ITEM NO.: E-565S
SERVICE : CONDENSER
VIN:

ASSEMBLY AND SPECIFICATIONS

OHMSTEDE	DRAWING NO.	SHEET NO.	REV.
	938268	1	1

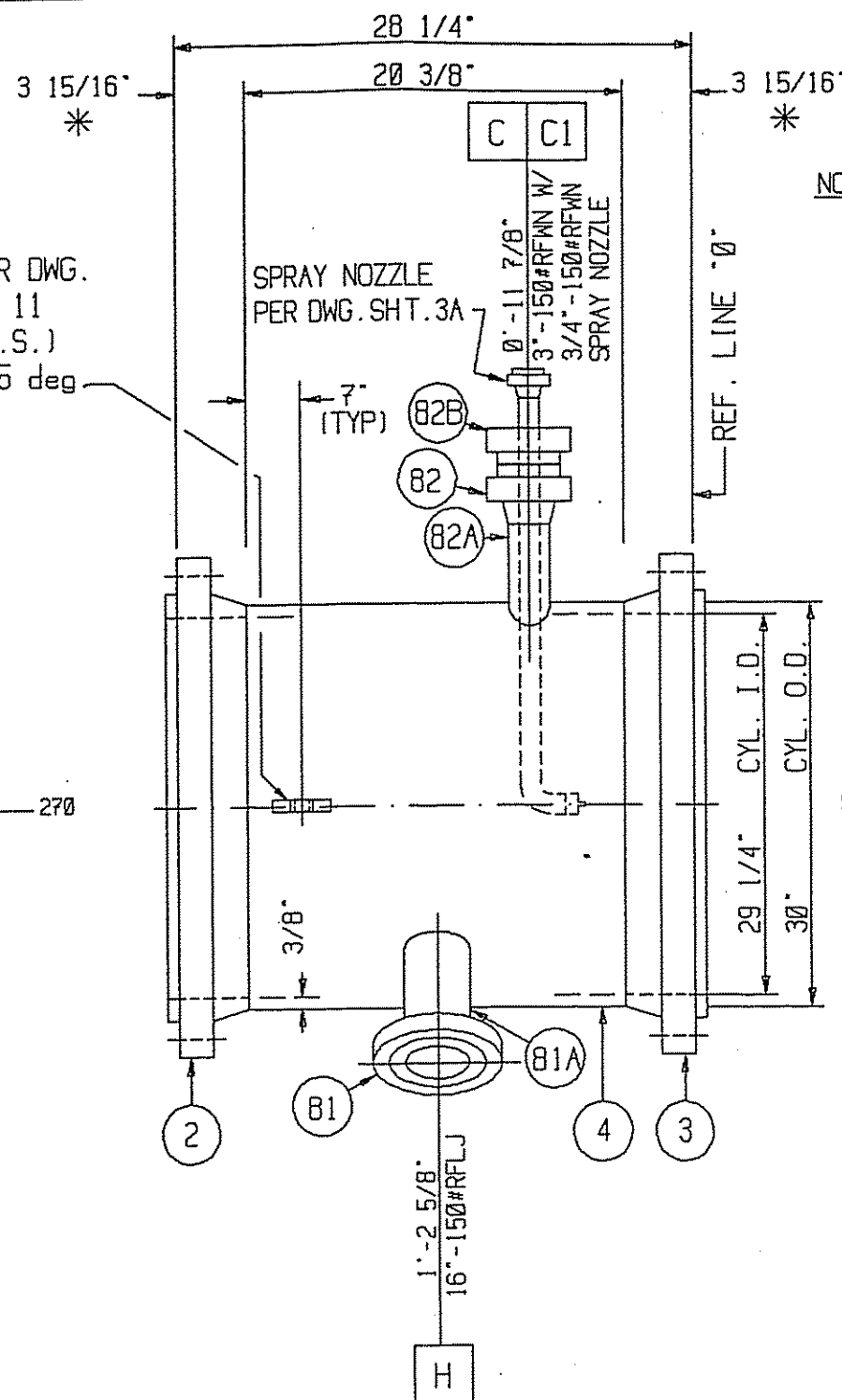
COVER NOTES:

- 1) MACHINE ALL COVER GASKET SURFACES TO 125 AARH - 250 AARH WITH SERATTED FINISH OF 40-55 GROOVES PER INCH.



CHANNEL-COVER DETAIL

LIFT LUG PER DWG. SHEET. NO. 11 (N.S.) & (F.S.) ON 135 & 315 deg



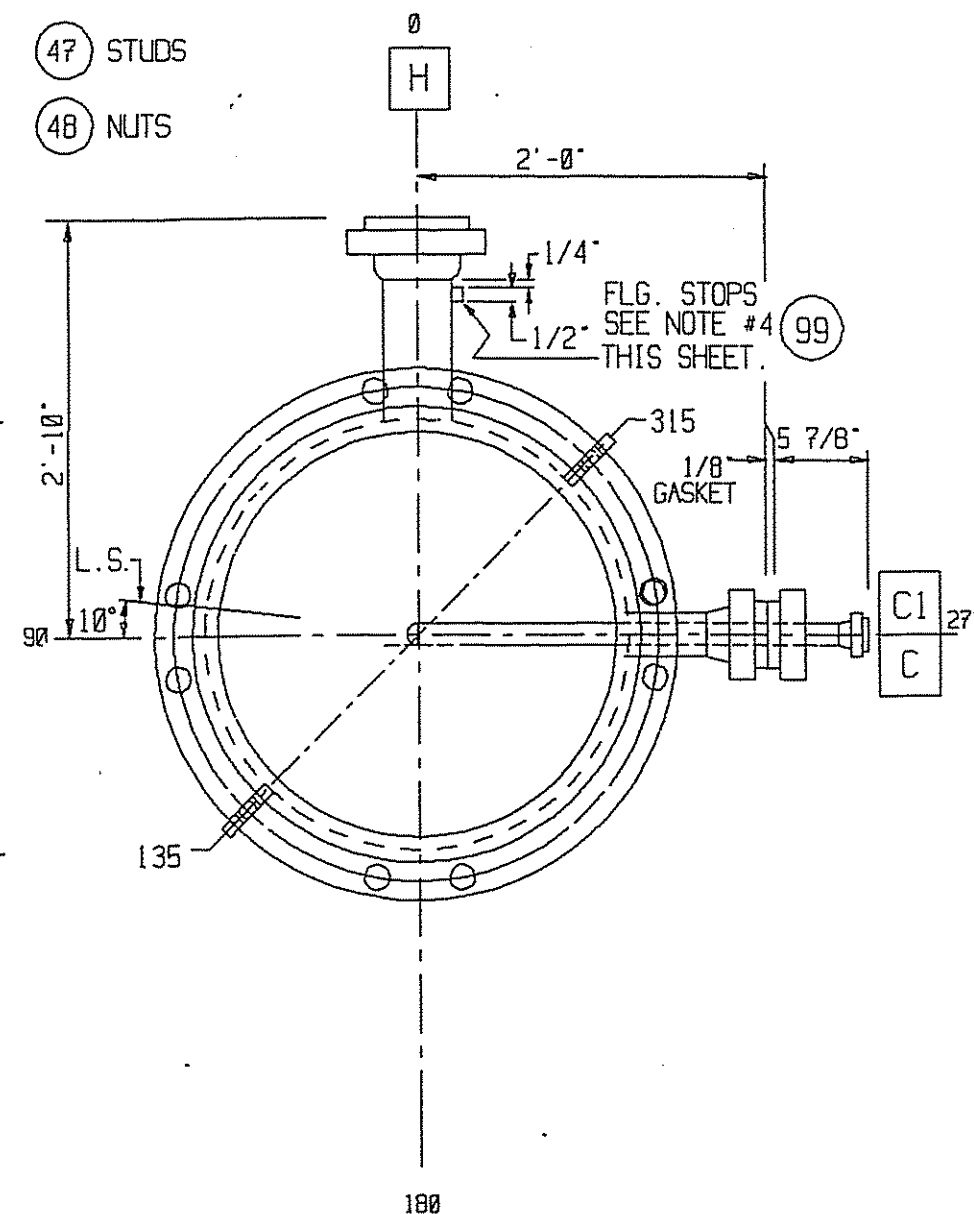
CHANNEL SIDE VIEW
SEE END VIEW FOR TRUE ORIENTATION

* MACHINE GASKET FACING AFTER ALL WELDING.
FOR FLANGE DETAILS SEE DWG. SHEET. NO. 13

NOZ. "C" BOLTING

(47) STUDS

(48) NUTS



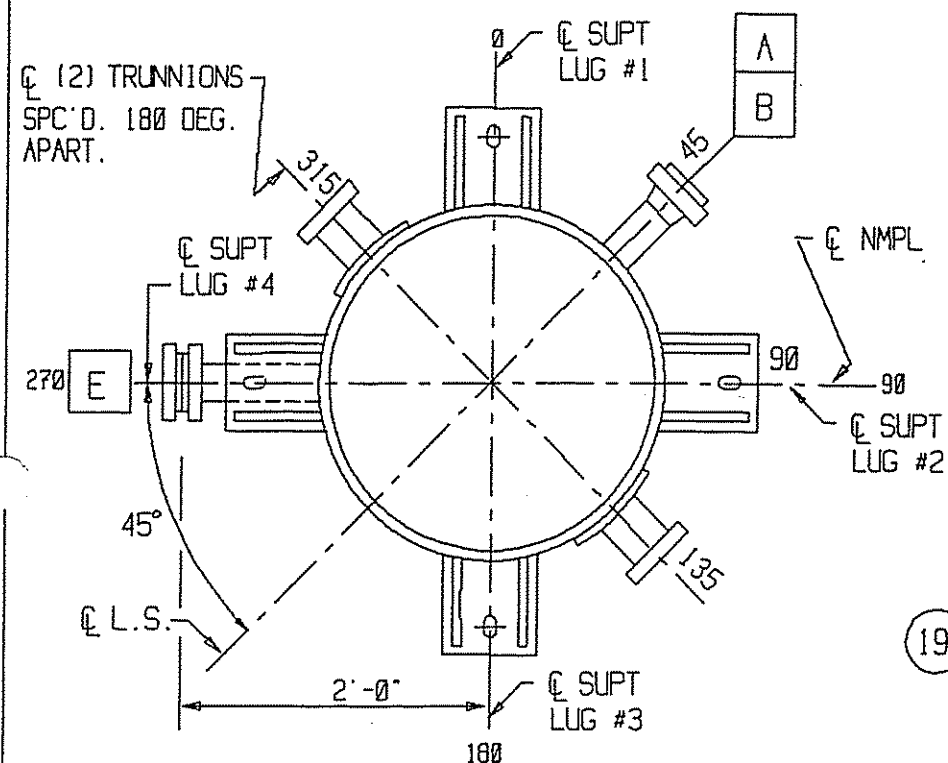
CHANNEL END VIEW
TRUE ORIENTATION

TOP CHANNEL WEIGHT: 1250 LBS.

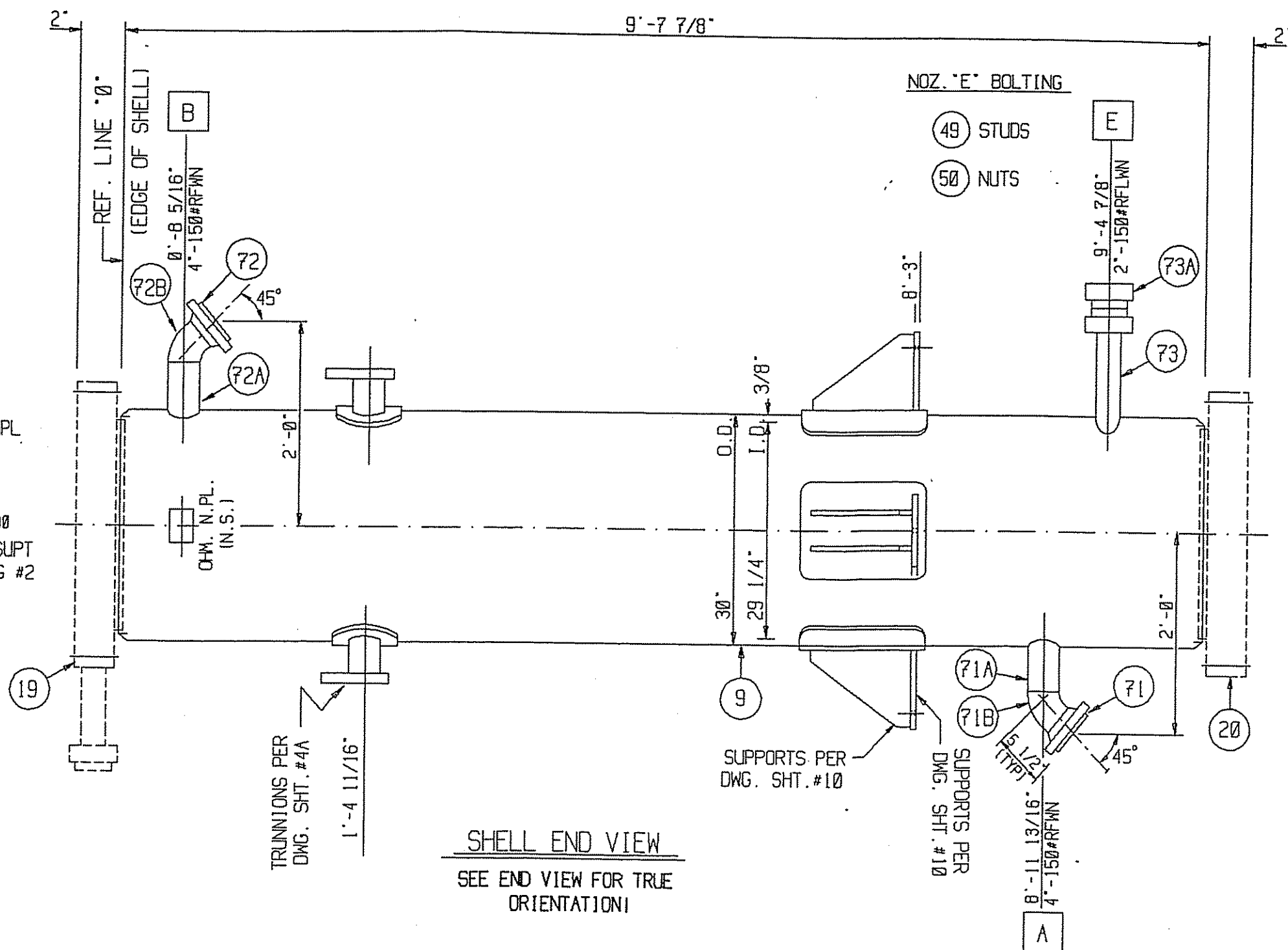
NOTES:

- 1) ALL BOLT HOLES TO STRADDLE CENTER LINES.
- 2) FOR WELD & BEVEL DETAILS SEE DWG. SHEET. NO. 14
- 3) SPOT RADIOGRAPHY.
- 4) THREE (3) FLANGE STOPS 1/4" THK. X 1/2" X 1/2" TO BE WELDED TO NOZZLE "H" NECK APPROX. EQ. SPACED.

					CUSTOMER: DOW CHEMICAL COMPANY			
					OHMSTEDE JOB NO.: 938268			
					P.O. NO.: 63309586			
					ITEM NO.: E-565S			
					SERVICE : CONDENSER			
					VIN:			
					TOP CHANNEL DETAILS			
0	RELEASE FOR FAB	TN	BH	10-7-99	OHMSTEDE	DRAWING NO. 938268	SHEET NO. 3	REV. 0
NO.	REVISIONS	BY	CHK.	DATE CHK.				



SHELL END VIEW
TRUE ORIENTATION



SHELL END VIEW
SEE END VIEW FOR TRUE
ORIENTATION

SHELL WEIGHT: 1275 LBS.

CUSTOMER: DOW CHEMICAL COMPANY
OHMSTEDE JOB NO.: 938268
P.O. NO.: 63309586
ITEM NO.: E-565S
SERVICE : CONDENSER
VIN:

SHELL DETAILS

DRAWING NO.
938268

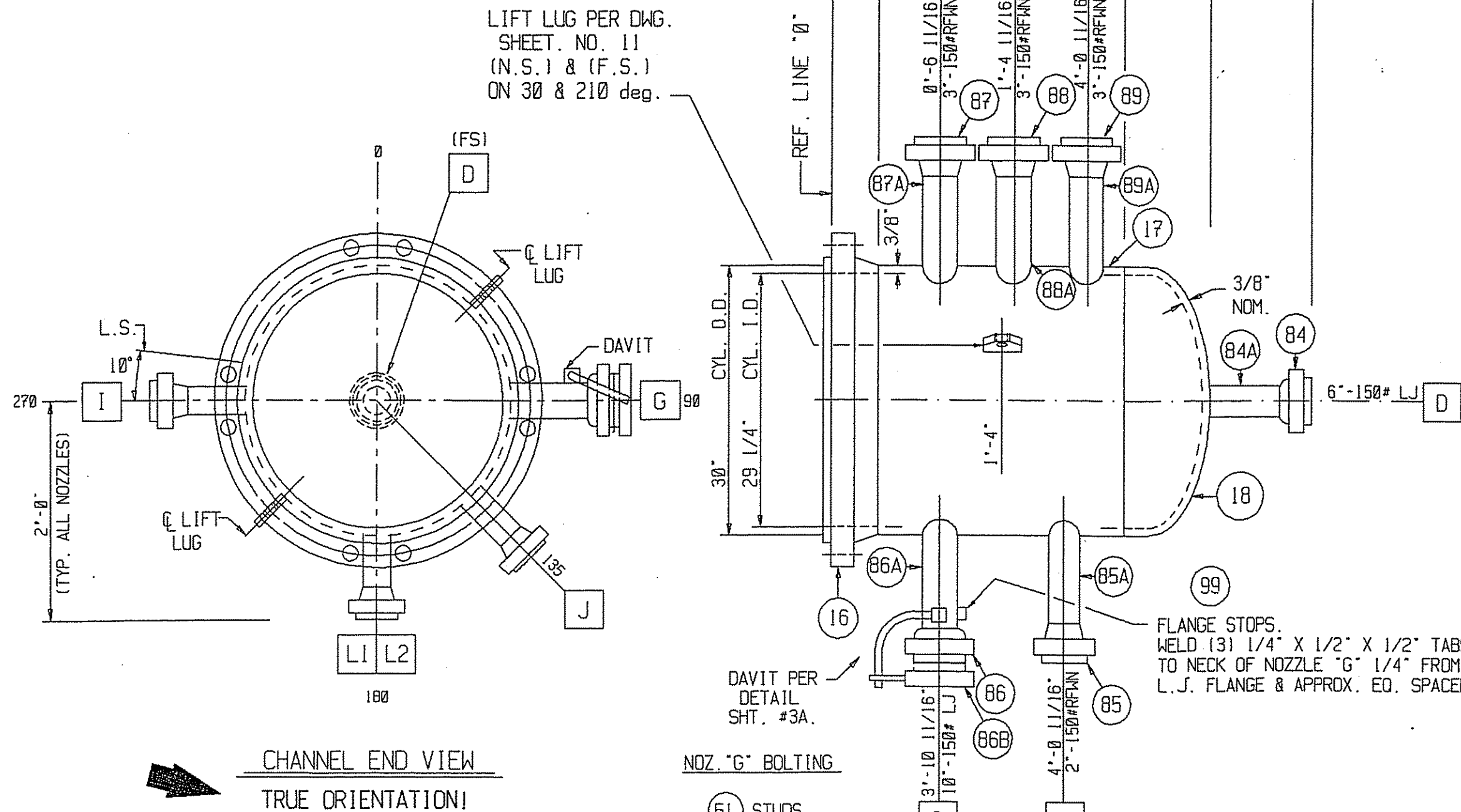
SHEET NO.	REV.
4	0

NOTES:

- 1) ALL BOLT HOLES TO STRADDLE CENTER LINES.
- 2) FOR WELD & BEVEL DETAILS SEE DWG. SHEET NO. 14
- 3) GRIND ALL INSIDE WELDS FLUSH.
- 4) SPOT RADIOGRAPHY.

Ø	RELEASE FOR FAB	TN	BH	10-7-99
NO.	REVISIONS	BY	CHK.	DATE CHK

* MACHINE GASKET FACING AFTER ALL WELDING.
FOR FLANGE DETAILS SEE DWG. SHEET. NO. 13



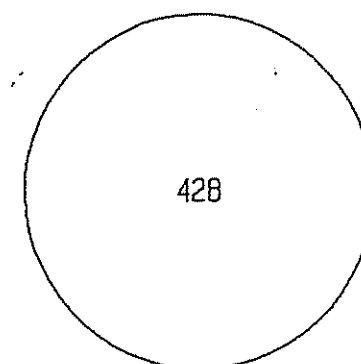
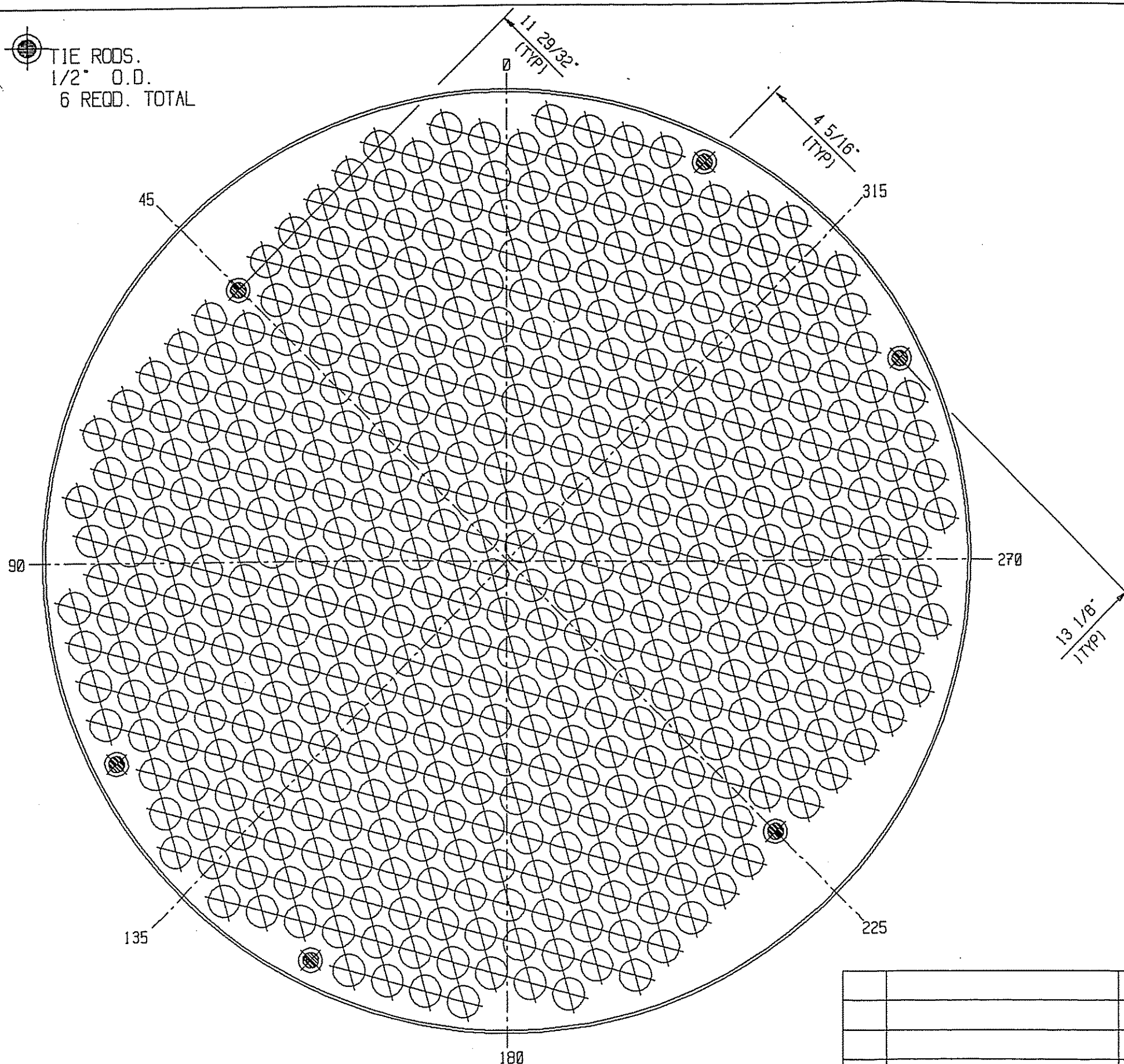
NOTES:

- 1) ALL BOLT HOLES TO STRADDLE CENTER LINES.
- 2) FOR WELD & BEVEL DETAILS SEE DWG. SHEET. NO. 14
- 3) SPOT RADIOGRAPHY.

					CUSTOMER: DOW CHEMICAL COMPANY			
					OHMSTEDE JOB NO.: 938268			
					P.O. NO.: 63309586			
					ITEM NO.: E-565S			
					SERVICE : CONDENSER			
					VIN:			
					BOTTOM CHANNEL DETAILS			
Ø	RELEASE FOR FAB	TN	BH	10-7-99	OHMSTEDE	DRAWING NO. 938268	SHEET NO. 5	REV. Ø
NO.	REVISIONS	BY	CHK.	DATE CHK.				

BTM CHANNEL WEIGHT: 1100 LBS.

TIE RODS.
1/2" O.D.
6 REQD. TOTAL



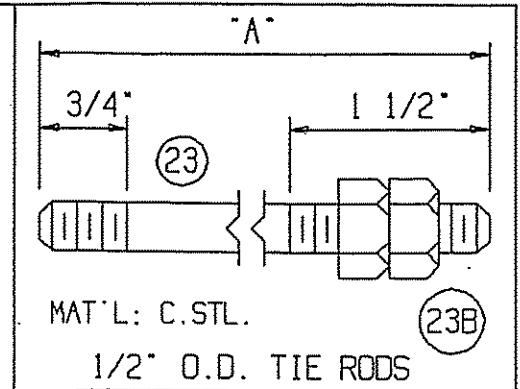
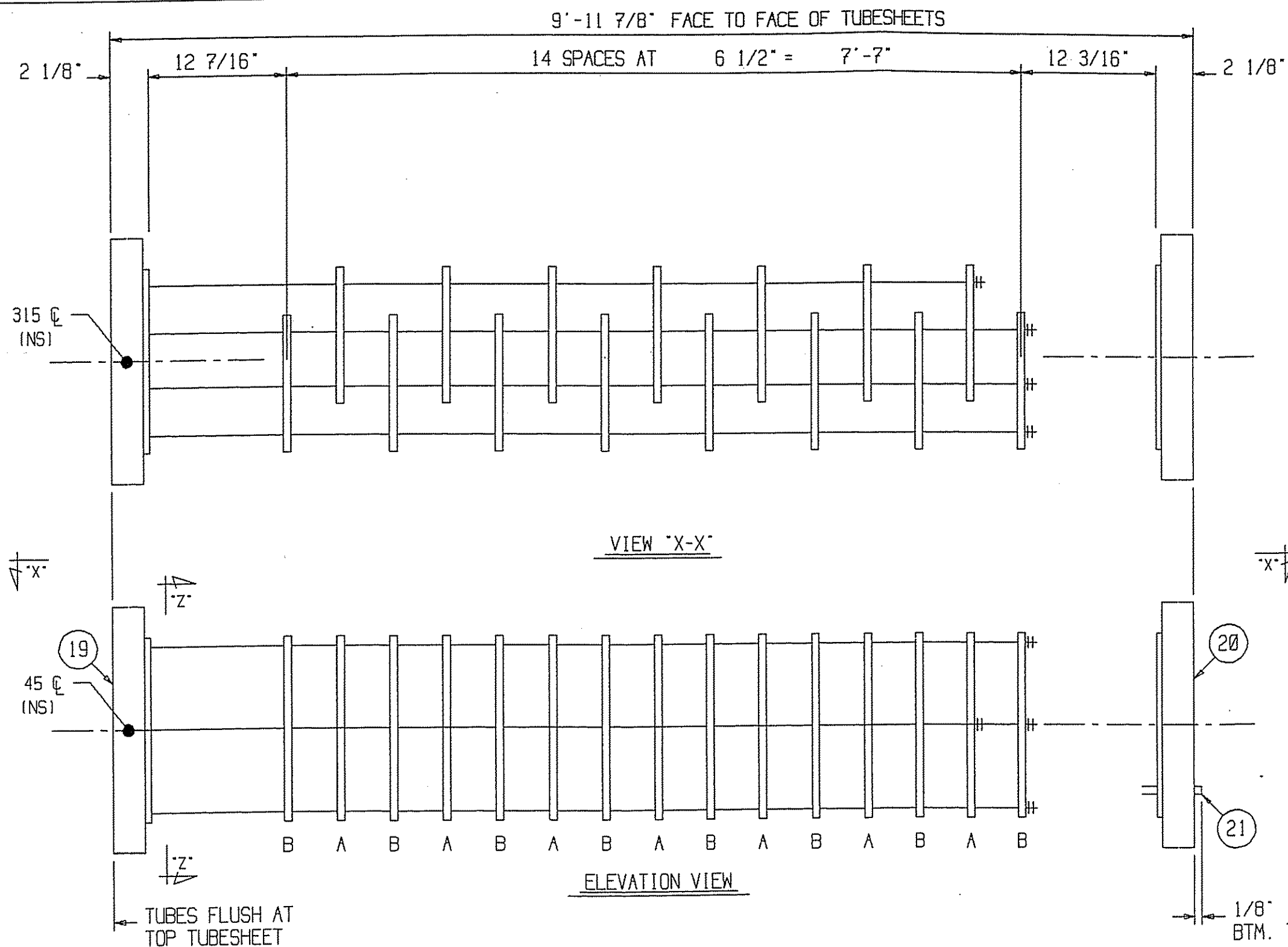
TUBE DISTRIBUTION

NOTES:

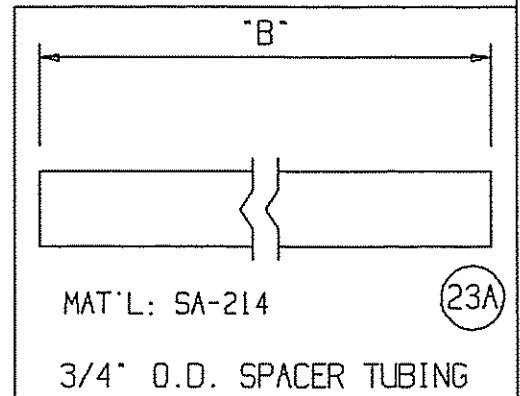
- 1) DRILL AND REAM TUBE HOLES IN TUBESHEETS TO 1.0100" $\pm$.002" DIA. FOR 428 - 1" O.D. TUBES.
- 2) TUBE PITCH = 1 1/4" 30° TRIANGLE.
- 3) NUMBER OF PASSES = 1
- 4) SEE DRAWING SHEET NO. 6 FOR TUBE HOLE GROOVING DETAILS.
- 5) BAFFLE O.D. = 29 1/16"
- 6) O.T.L. = 28 5/8"

VIEW LOOKING AT SHELL SIDE OF NO. 19 TUBESHEET

					CUSTOMER: DOW CHEMICAL COMPANY			
					OHMSTEDE JOB NO.: 938268			
					P.D. NO.: 63309586			
					ITEM NO.: E-565S			
					SERVICE : CONDENSER			
					VIN:			
					TUBE LAYOUT			
Ø	RELEASE FOR FAB	TN	BH	10-7-99	OHMSTEDE	DRAWING NO. 938268	SHEET NO. 7	REV. Ø
NO.	REVISIONS	BY	CHK.	DATE CHK.				



REQ'D.	"A"
5	8'-10"
1	8'-3 1/2"

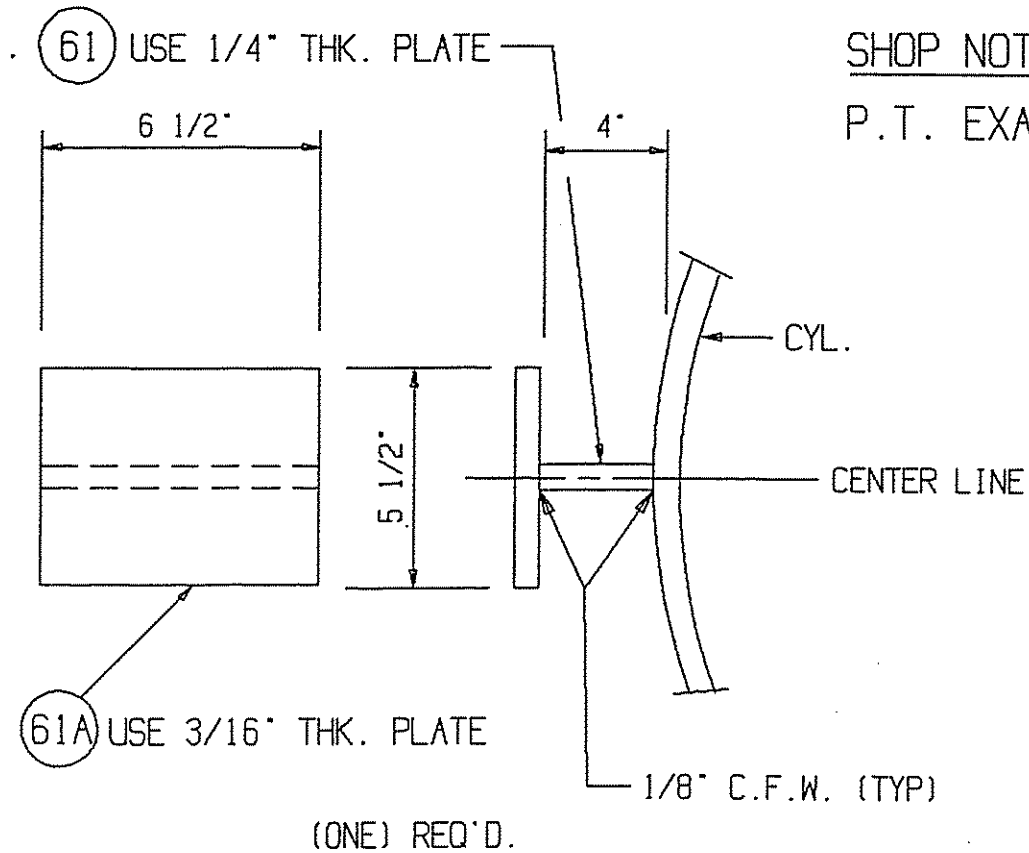


REQ'D.	"B"
5	12 5/16"
1	18 13/16"
56	6 1/4"
13	12 3/4"

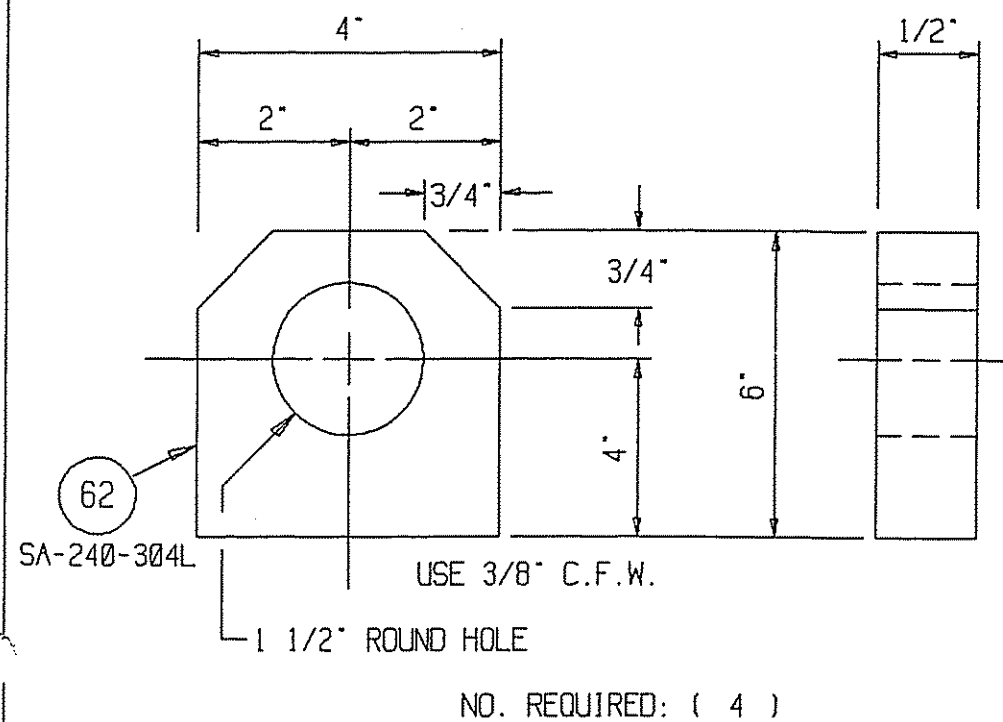
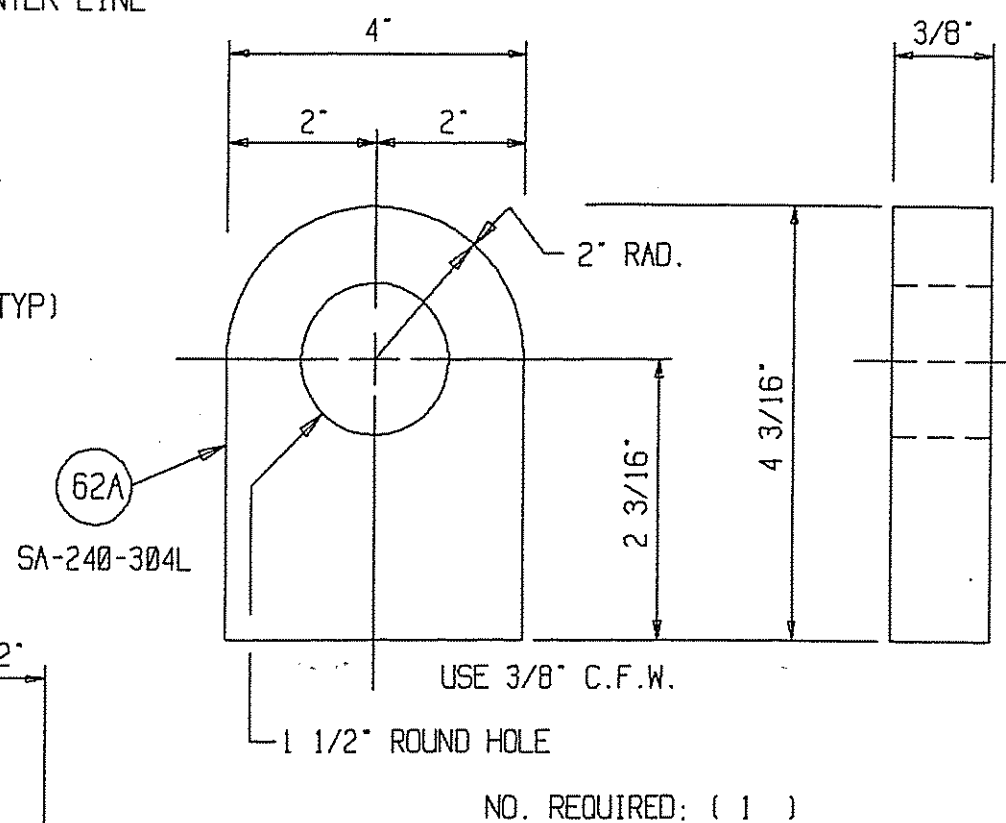
NOTES:

1) SEE DWG. SHEET NO. 9 FOR SECTION AND VIEW DETAILS.

					CUSTOMER: DOW CHEMICAL COMPANY			
					OHMSTEDE JOB NO.: 938268			
					P.O. NO.: 63309586			
					ITEM NO.: E-565S			
					SERVICE: CONDENSER			
					VIN:			
					BUNDLE DETAILS			
Ø	RELEASE FOR FAB	TN	BH	10-7-99	OHMSTEDE	DRAWING NO. 938268	SHEET NO. 8	REV. Ø
NO.	REVISIONS	BY	CHK.	DATE CHK.				



SHOP NOTE I
P.T. EXAMINE LIFT LUG ATTACHMENT WELDS.



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

60



Ohmstede Inc.

NATL. BD. NO. *

CERTIFIED BY
OHMSTEDE INC.

ST. GABRIEL PLANT

SHELL

MAWP	245	PSI	AT	250	°F
MDMT	14	°F	AT	245	PSI

TUBE

MAWP	58 / FV	PSI	AT	400	°F
MDMT	32	°F	AT	58 / FV	PSI

S/N 938268

YEAR 1999

ITEM NO. E-565S SIZE 30-120 TYPE A E M

P.O. NO. 63309586 VIN.: TEMA CLASS B

SHOP HYDROTESTS PRESSURE: 428 PSI SHELLSIDE / 131 PSI TUBESIDE

IDENTIFICATION NO: EMPTY WT: 7600 LBS.

2 1/2" MIN.

* TO BE ASSIGNED AT TIME OF SHIPMENT

					CUSTOMER: DOW CHEMICAL COMPANY			
					OHMSTEDE JOB NO.: 938268			
					P.O. NO.: 63309586			
					ITEM NO.: E-565S			
					SERVICE: CONDENSER			
					VIN:			
					NMPL. BRKT & LIFT LUG DETAILS			
					OHMSTEDE		DRAWING NO. 938268	SHEET NO. 11
							REV. Ø	

Ø	RELEASE FOR FAB	TN	BH	10-7-99
NO.	REVISIONS	BY	CHK.	DATE CHK.