

1833

Item 1 T-1215-5A/B

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

B-Shop

103934

1. Manufactured and certified by Plant Maintenance Service Corp, 3690 Fite Rd., Memphis, TN 38127
(Name and address of Manufacturer)
2. Manufactured for Glitsch Ind., Dallas, TX
(Name and address of Purchaser)
3. Location of installation Cape Industries, Wilmington, NC
(Name and address)
4. Type: Horiz. (2) Chamber Product Tank Y-591 Y-591D 241 1994
(Horiz., vert. or sphere) (Tank, separator, jkt. vessel, heat exh., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)
5. ASME Code, Section VIII, Div. 1 1992, 1992 Addenda
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.): 3-5 3/4

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	60 OD	3-5 3/4	SA240T316L		5/16	1/8"	1	Spot	85	1	Spot	85%	NA	NA

7. Heads: (a) SA240T316L (b) ** SA240T316L
(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 | | |
|-----|------------------------------|-----------|-------|---------|---------|------------------|--------------------|----------------------|---------------|------------------|---------|------------|------------------|------|
| | | Min. | Corr. | Crown | Knuckle | | | | | Convex | Concave | Type | Full, Spot, None | Eff. |
| (a) | End | .331 | 1/8" | 60" | 6% | | | | | Yes | Yes | S | None | 85% |
| (b) | End | .796 | 1/4" | 59 1/4" | 6% | | | | | Yes | Yes | S | None | 85% |

If removable; bolts used (describe other fastening) _____
(Mat'l Spec. No., Grade, size, No.)

8. Type of jacket _____ Jacket closure _____
(Describe as ogee & weld, bar, etc.)
9. MAWP 50 FV psi at max. temp. 300 300 °F Min. design metal temp. -20 °F at FV/50 psi.
(internal) (external) (internal) (external)

10. Impact test No; Charpy impact tests exempt per paragraphs UHA-51(A) and UCS-66(a)(c)(d)
(Indicate yes or no and the component(s) impact tested)

11. Hydro. ~~XXXXXX~~ test press. 79 Proof test _____

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: _____
Stationary (Mat'l Spec. No.) Dia., in. (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)

- _____ Floating (Mat'l Spec. No.) Dia., in. Nom. thk., in. Corr. Allow., in. Attachment

13. Tubes: _____
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): 1 (b) Overall length (ft & in.): 2-2 3/4

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	60 OD	2-2 3/4	SA240T316L		5/16	1/8"	1	Spot	85%	1	Spot	85%	NA	NA

15. Heads: (a) SA240T316L (b) ** SA240T316L
(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		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	End	.331	1/8"	60"	6%					Yes	Yes	S	None	85%
(b)	End	.796	1/4"	59 1/4"	6%					Yes	Yes	S	None	85%

If removable, bolts used (describe other fastening) _____
(Mat'l Spec. No., Grade, Size, No.)

16. MAWP 50 FV psi at max. temp. 300 300 °F Min. design metal temp. -20 °F at FV
(internal) (external) (internal) (external)

17. Impact test No; Charpy impact tests exempted per paragraphs UHA-51(A) and UCS-66(a)(c)(d)
(Indicate yes or no and the component(s) impact tested)

18. Hydro. ~~PROX NOZZLE~~ test press. 79 Proof test

Purpose (inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Loc. (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
A1, A2 Inlets	2	2"	LJ SA	312TP316L	SA105	Sch 160	1/8"			1	
B2, I1, I2	4	3"	LJ	SA312	SA105	Sch 160	1/8"			1	
Outlets, Levels				TP316L							
M1, M2 Manway	2	20"	Plate	SA240T316L	SA105	1/4"	1/8"			1a	Shells
C1, C2, R1, R2	4	1 1/2"	LJ	SA312TP316L	SA105	XXHVY	1/8"			1	
Drains Reliefs											
D1, D2, S1, S2, Vents	4	2"	LJ	SA312TP316L	SA105	Sch 160	1/8"			1	

20. Supports: Skirt NO Lugs NA Legs NA Others 2 Saddles Attached Welded to shells
(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)

22. Remarks: * Relief protection per paragraph UG-125 must be provided by customer
** This head is common between two chambers.

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. 26189 Expires 2-24, 19 95

Date 7/7/94 Name Plant Maintenance Service Corp Signed Tom Nichols
(Manufacturer) (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 TN and employed by Commercial Union Insurance Company of Boston, have inspected the pressure vessel described in this Manufacturer's Data Report on 7-7, 19 94, 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 7-7-94 Signed [Signature] Commissions NBA8909A, TN #2370
(Authorized Inspector) (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 _____, 19 _____

Date _____ Name _____ Signed _____
(Representative)

VPF No. : 38097WN
Equipment No. : T-1215-5A/B
Project No. : 27-0188
P.O. No. : 32532
Approved by : P. Johnson
Sheet No. : 3
Account No. : 4009
Date : 4/5/95

D ASSEMBLY INSPECTION

I, of Boiler and Pressure Vessel Inspectors and the State or Province of _____

FILE COPY
the described pressure vessel and state that parts referred to as data items of shop inspection, have been inspected by me and to the best of my knowledge is in accordance with ASME Code, Section VIII, Division 1. The described vessel is not to be used for any purpose other than that for which it was designed. 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.

ENGR. DEPT.

(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)



W
RT-3

NAT'L. BD. NO. 241



CERTIFIED BY

PLANT MAINTENANCE SERVICE CORP.

PLANT-B



MEMPHIS, TENN.

M.A.W.P.

TUBE SIDE

PSI AT

OF

SHELL SIDE

50/FV

PSI AT

300

OF

TUBE SIDE

OF AT

PSI

M.D.M.T.

SHELL SIDE

-20

OF AT

50/FV

PSI

SERIAL NO.

Y-591

YEAR BUILT

1994

P.O. NO. 21833

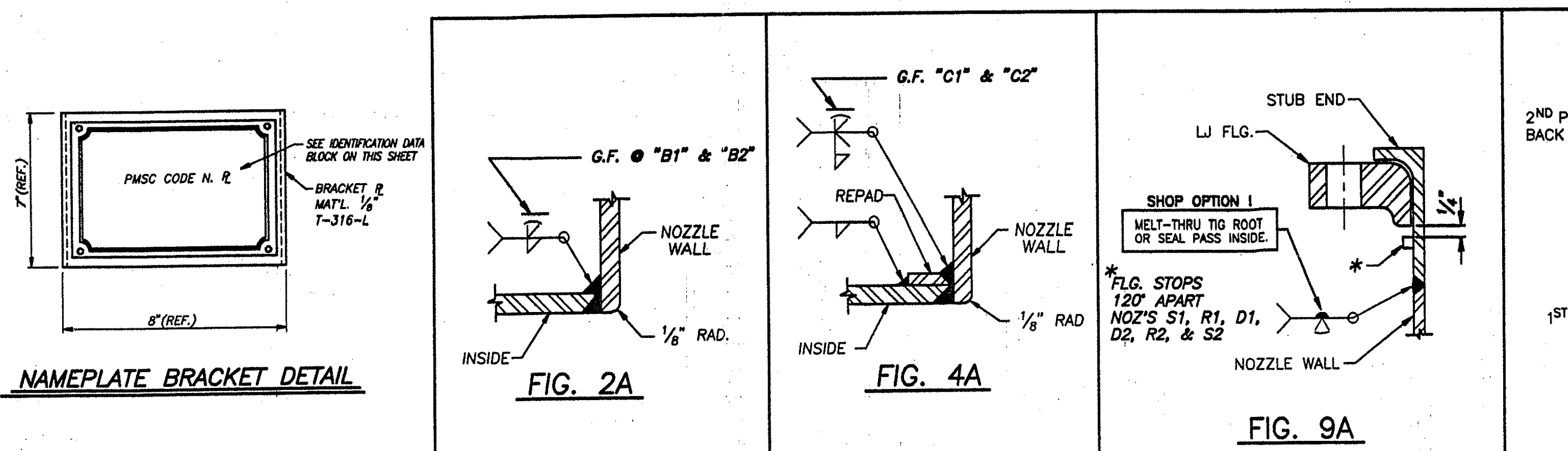
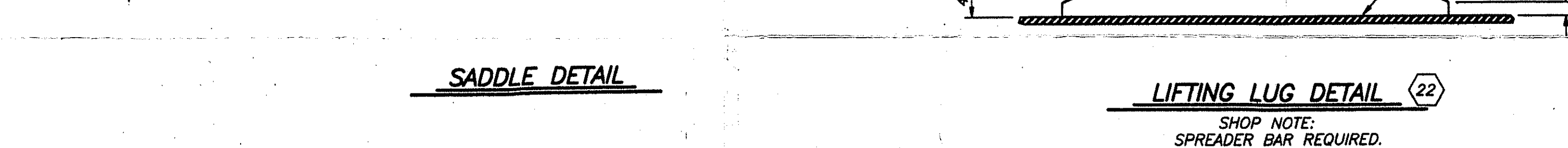
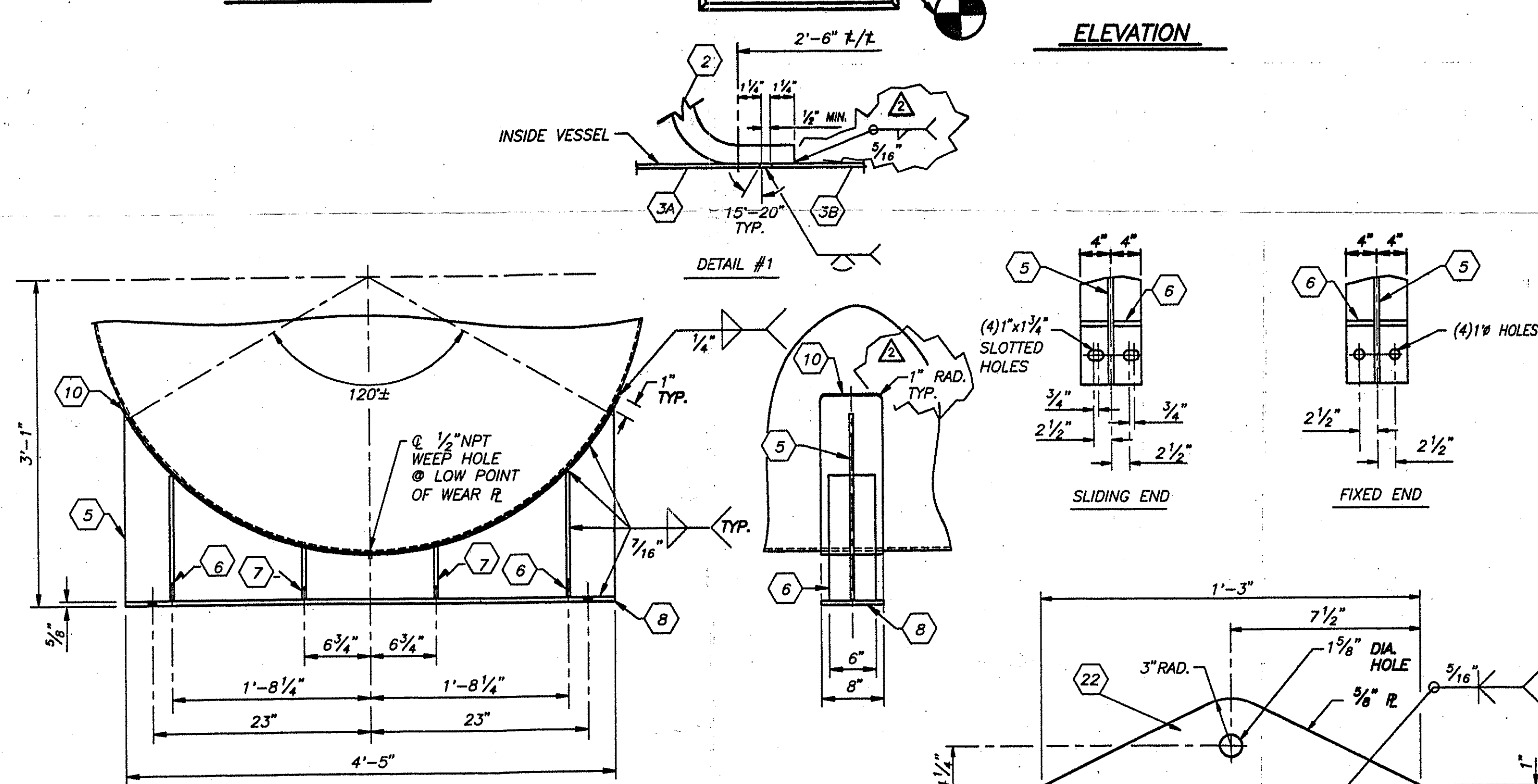
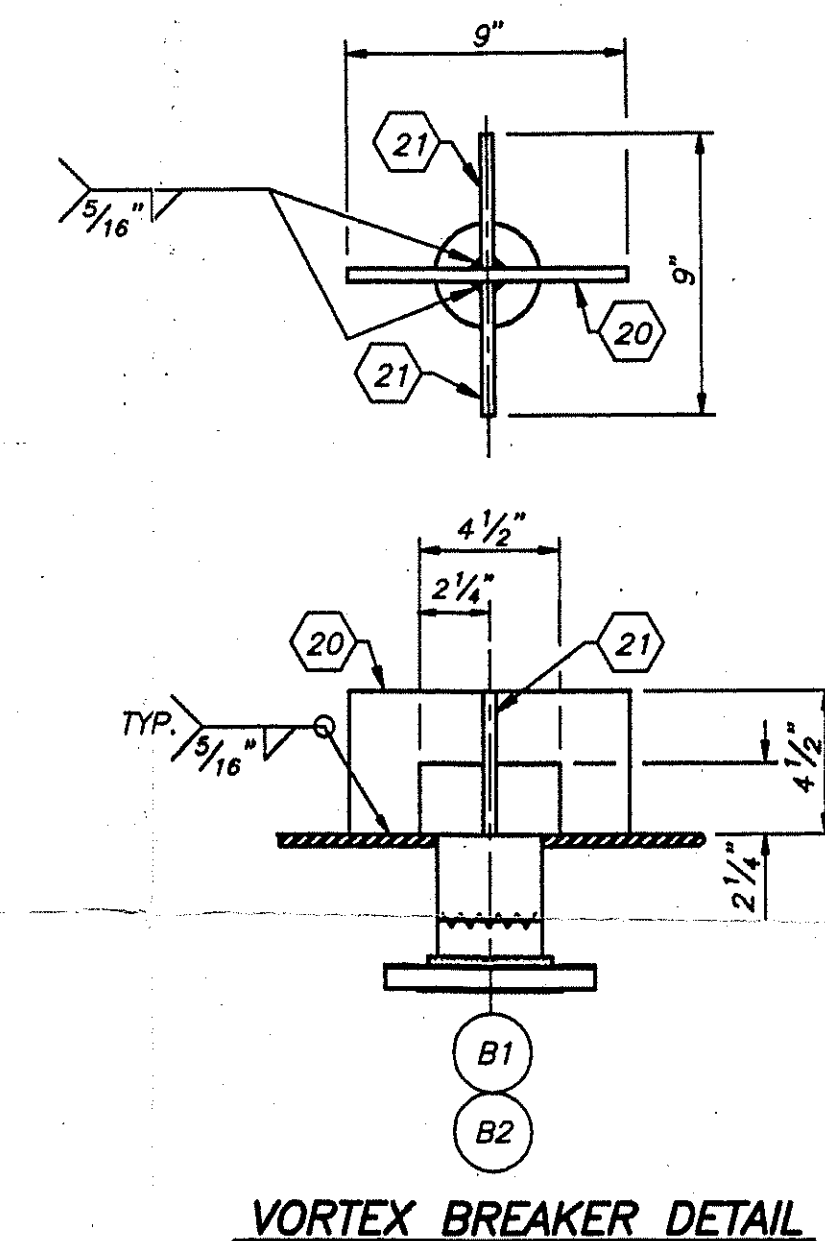
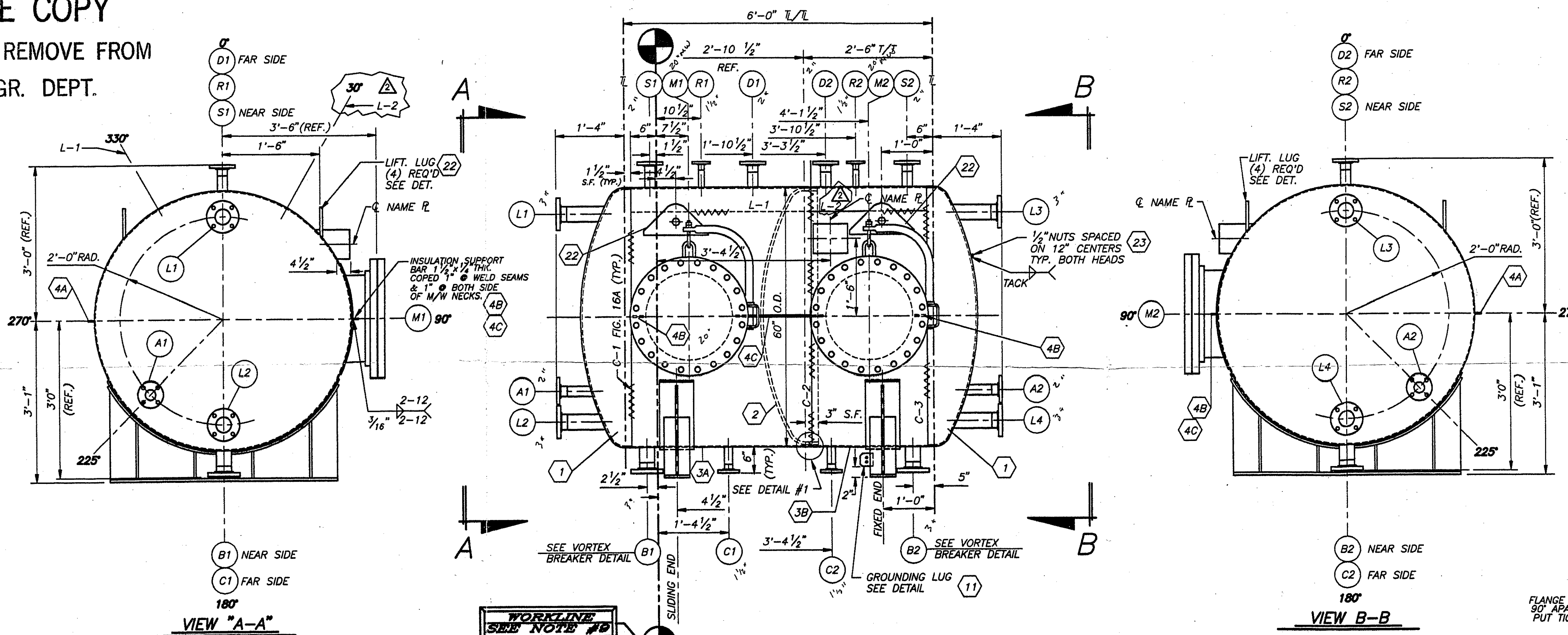
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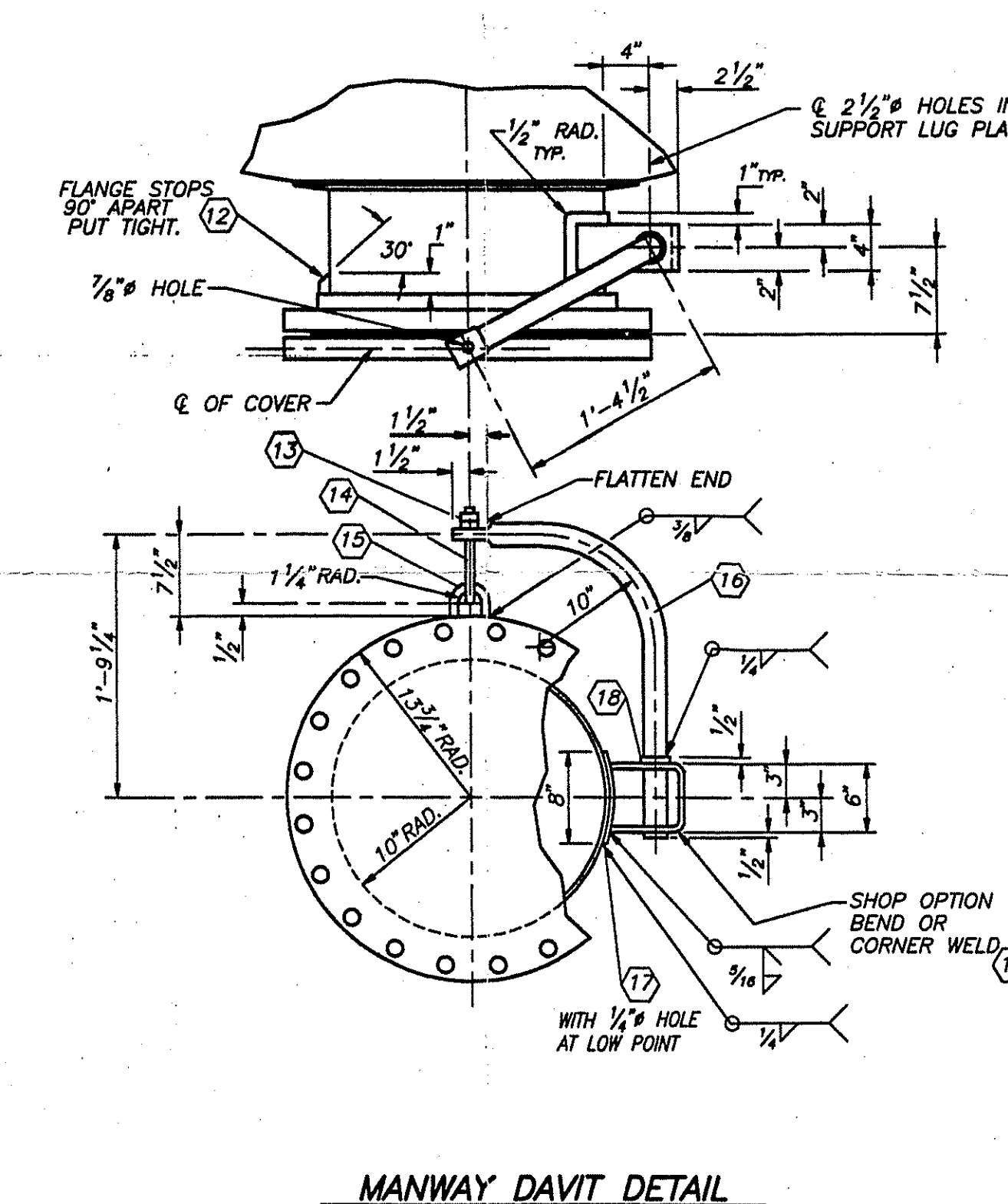
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WELD PROCEDURES
C/S TO C/S: CS-1, CS-11
C/S TO S/S: SSCS-2 OR SSCS-6
S/S TO S/S: SSSA-1, SS-1, SS-2, OR SS-6



REVIEWED
Eng. *[Signature]* Date 4/21/94
C.C. Date

NOZZLE SCHEDULE											
NO.	DATE	REVISION	BY	DESCRIPTION	QTY	SIZE	RAT'G	FACE	TYPE	PROJ.	SERVICE
S1-2	2	2"	150#	S.E.	L.J.	0"	6"	-	9A	7/16"	2A SPARE W/BLIND
R1-2	2	20"	150#	S.E.	L.J.	0"	6"	-	9A	7/16"	2A PRESSURE RELIEF
M1-2	2	20"	150#	R	L.J.	0"	12"	-	25B	7/16"	4A MANWAY W/DAVIT
L1-4	4	3"	150#	S.E.	L.J.	0"	6"	-	9A	7/16"	2A LEVEL
D1-2	2	2"	150#	S.E.	L.J.	0"	6"	-	9A	7/16"	2A VENT
C1-2	2	1 1/2"	150#	S.E.	L.J.	0"	6"	-	9A	7/16"	2A DRAIN W/RECIRCULATION
B1-2	2	3"	150#	S.E.	L.J.	0"	6"	-	9A	7/16"	2A LIQUID OUTLET
A1-2	2	2"	150#	S.E.	L.J.	0"	6"	-	9A	7/16"	2A LIQUID FEED INLET
Q _A	N	SIZE	RAT'G	FACE	TYPE	PROJ.	WELD/FLG.	WELD/SHL.	SERVICE		

DESIGN DATA

DESIGN PER ASME SECTION VIII, DIV. 1, 1992 ADD.

STAMPED	SHELL SIDE	TUBE SIDE	COIL SIDE
* EACH CHAMBER TO BE TESTED SEPARATELY			
DESIGN PRESSURE	50 PSIG/FV		
DESIGN TEMP.	300° F		
* HYDRO TEST	79 PSIG		
RADIOGRAPH	SEE NOTE #11	SPOT	
CORR. ALLOW	1/8"		
STRESS RELIEVE	NONE		
APPROX. WT. EMPTY	7,600#		
JOINT EFFICIENCY PER CODE TABLE	HEAD GIRTH 85%	SHELL LONG 85%	SHELL GIRTH 85%
UW-12			
SPECIFICATIONS	HERC. 5CS-375		

IDENTIFICATION DATA

U W RT-3	NAT'L. BD. NO.	CERTIFIED BY
PLANT MEMPHIS, TN		
TUBE SIDE XXXX	PSI AT XXXX	F
M.A.W.P. SHELL SIDE 50/FV	PSI AT 300	F
TUBE SIDE XXXX	F AT XXXX	PSI
M.D.M.T. SHELL SIDE -20	F AT 50/FV	PSI
SERIAL NO.	Y-591	
YEAR BUILT	1994	
ITEM NO. T-1215-5A/B	P.O. NO. 21833	

NOTES

- ALL BOLT HOLES TO STRADDLE PRINCIPAL VESSEL CENTERLINES UNLESS OTHERWISE NOTED.
- EACH NOZZLE & MANHOLE REINFORCING PAD OR SEGMENT THEREOF SHALL HAVE ONE (1) 1/8" NPT. TEST HOLE LOCATED AT LOWEST POINT.
- VESSEL SHALL BE CLEANED INSIDE & OUTSIDE, FREE OF DIRT, GREASE, DEBRIS, LOOSE MILL SCALE, WELD SPATTER, ETC.
- WIRE BRUSH ALL WELDS & BREAK ALL SHARP EDGES.
- INSTALL MASONITE PROTECTORS ON ALL OPENINGS BEFORE SHIPPING.
- PROTECT ALL MACHINED SURFACES WITH A RUST PREVENTATIVE BEFORE SHIPPING.
- LIFTING LUGS ARE INSTALLED TO SET THIS UNIT INITIALLY WHEN EMPTY ONLY.
- INSPECTED BY: Q.C. A.I. CUSTOMER
- ALL TAIL DIMENSIONS ARE TO THE WORKLINE WHERE APPLICABLE. WORKLINE TO BE PERMANENTLY STAMPED INSIDE & OUTSIDE OF VESSEL ON APPROXIMATELY 6" CENTERS.
- SURFACE PREP. & PAINTING REQUIREMENT:
A) CARBON STEEL SURFACES (PER HERCULES SPEC. 11CS-696)
SURFACE PREPARATION: COMMERCIAL BLAST CLEANING PER SSPC-SP6
PRIME COAT: CARBOZINC II HS, 3 MILS MIN. D.F.T.
5 MILS MAX. D.F.T.
MID COAT: CARBOLINE 890, 4 MILS MIN. D.F.T.
7 MILS MAX. D.F.T.
TOP COAT: CARBOLINE 134 HS, 2 MILS MIN. D.F.T.
3 MILS MAX. D.F.T.
NOTE-PRIMER ZINC CONTENT TO BE 85 WT % MIN.
B) INSULATED STAINLESS STEEL SURFACES:
(PER HERCULES SPEC. 11CS-674)
SURFACE PREPARATION: SOLVENT CLEANING PER SSPC-SP1, HAND TOOL CLEANING PER SSPC-SP2 AND APPROPRIATE VISUAL STANDARDS FOUND IN SSPS-VI & I. BASE COAT: PPG PITT-THERM 97-724. TOP COAT: SAME AS BASE COAT.
TOTAL MIN. D.F.T. TO BE 1.5 MILS AT ANY POINT ON SURFACE
- VESSEL SHALL BE SPOT RADIOGRAPHED ON ALL BUTT WELDS. CATEGORY "C" & "D" WELD JOINTS SHALL BE TESTED BY DYE-PENETRANT OR ULTRASONIC MEANS.
- ALL HEADS PREFERRED HOT FORMED. IF COLD FORMED, THEY MUST BE INSPECTED AND DYE PENETRANT CHECKED. STAINLESS HEADS MUST BE FULLY SOLUTION ANNEALED, WATER QUENCHED, AND PICKLED AFTER FORMING.
- MTR'S REQUIRED FOR ALL PRESSURE PARTS. TRANSFER HEAT NUMBERS.
- SEE SPEC. #5CS-375, PARA. 5.5 FOR WELDING REQUIREMENTS
- TOLERANCES PER SPEC. #5CS-375, PARA. 5.3.
- VESSEL ITEM NUMBER SHALL BE PAINTED ON OUTSIDE SURFACE WITH 3" HIGH LETTERS.
- ALL FLANGE GASKET SURFACES SHALL BE 125 RMS FINISH. USE STD. NON-ASB. GASKETS FOR HYDRO-TEST. INSTALL SERVICE GASKETS PRIOR TO SHIPMENT. BOY & SHIP ONE (1) SPARE SERVICE GASK. FOR EACH BLINDED NOZ. & MANWAY.
- SPREADER BAR REQUIRED FOR LIFTING VESSEL.

PLANT MAINTENANCE SERVICE CORP.

3000 FITE ROAD MEMPHIS, TENN.

JOB: ONE (1) 60" O.D. x 6'-0" T/L

HORIZ. ACETIC PRODUCT (Two compartment) TANK

LOCATION: WILMINGTON, NC.

OWNER/USER: CAPE INDUSTRIES

PURCH./ENG.: GLTSCHE TECHNOLOGY CORP.

P.O. NO. 21833

ITEM NO. T-1215-5A/B

ORDER NO. Y-591-D

DATE 3-9-94

DWG. BY B.B.

CHK. BY BS

Y-591-D

SHT. 1 OF 1