

FORM U-1A MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS  
(Alternate Form for Single Chamber, Completely Shop-Fabricated Vessels Only)  
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

93295

1. Manufactured by CERTIFIED & ALLOY FAB, INC 200 RYAN STREET SOUTH PLAINFIELD, NJ 07080  
2. Manufactured for C E LUMMUS, BLOOMFIELD, NJ  
3. Location of Installation FMC CORP. BALTIMORE, MARYLAND  
4. Type VERTICAL TANK 2752 - D-1589 1672 (Year Built) 1985  
(# Horiz. or vert. tank) (Mfr's Serial No.) (CRN) (Drawing No.) (Nat'l Bld No.)  
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 1983 and Addenda to SUMMER 84 and Code Case Nos. -  
(Year) (Date)  
Special Service per UG-120(d) \_\_\_\_\_  
Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: \_\_\_\_\_  
6. Shell: Matl. SA240 304L Nom. Thk. .25 in. Corr. .0312 in. Diam. 60 in. Lgth. 4 ft 9 in.  
(Spec. No., Grade)  
7. Seams: Long. WELD DBL BUTT R.T. SPOT Efficiency 85 % H.T. Temp. - F Time - hr  
(Welded, Dbl, Sngl, Lap, Butt) (Spot or Full)  
Girth WELD DBL BUTT R.T. SPOT No. of Courses 1  
(Welded, Dbl, Sngl, Lap, Butt) (Spot, Partial, or Full)  
8. Heads: (a) Material SA240 304L (Spec. No., Grade) (b) Material - (Spec. No., Grade)  
Location Min. Corr. Crown Knuckle Ellipse Conical Hemisph. Flat Side to Pressure  
(Top, Bottom, Ends) Thk. Allow. Radius Radius Ratio Apex Angle Radius Diam. (Convex or Concave)  
(a) TOP & BTM .25" .0312 60" 3.75" - - - - CONCAVE  
(b) \_\_\_\_\_  
If removable, bolts used (describe other fastenings) \_\_\_\_\_  
(Material, Spec. No., Gr., Size, No.)  
9. Constructed for max. allowable working pressure 50 psi at max. temp. 323 F. Min. temp. (when less than -20 F) - F. Hydrostatic, pneumatic, or combination test pressure 77 psi.  
10. Safety Valve Outlets: Number - Size - Location ELSEWHERE IN SYSTEM  
11. Nozzles and Inspection Openings:  
Purpose (Inlet, Outlet, Drain) No. Diam. or Size Type Matl. Nom. Thk. Reinforcement Matl. How Attached Location  
MANWAY 1 20" RING SA240 304L .25" - WELDED SHELL  
PROCESS 1 3"-150# PAD SA240 304L 1.4375" - WELDED -  
PROCESS 1 3"-150# L.J. SA312 304L SCH40 - WELDED -  
PROCESS 2 2"-150# L.J. SA312 304L SCH40 - WELDED -  
PROCESS 6 1 1/2"-150# L.J. SA312 304L SCH40 - WELDED -  
PROCESS 1 6"-150# L.J. SA240 304L .3125" W/2" DIP PIPE WELDED -  
PROCESS 1 3"-150# L.J. SA312 304L SCH40 W/2" DIP PIPE WELDED -  
12. Supports: Skirt NO Lugs - Legs 4 Other - Attached WELDED TO SHELL  
(Yes or no) (No.) (No.) (Describe) (Where and how)  
13. Remarks: P.O.# 12858 310 900 GALLON SURGE TANK

CERTIFICATE OF 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.

Date 3-7-85 Signed ALLOY FAB, INC by [Signature]  
(Manufacturer) (Representative)  
"U" Certificate of Authorization No. 7130 expires JANUARY 31, 19 87

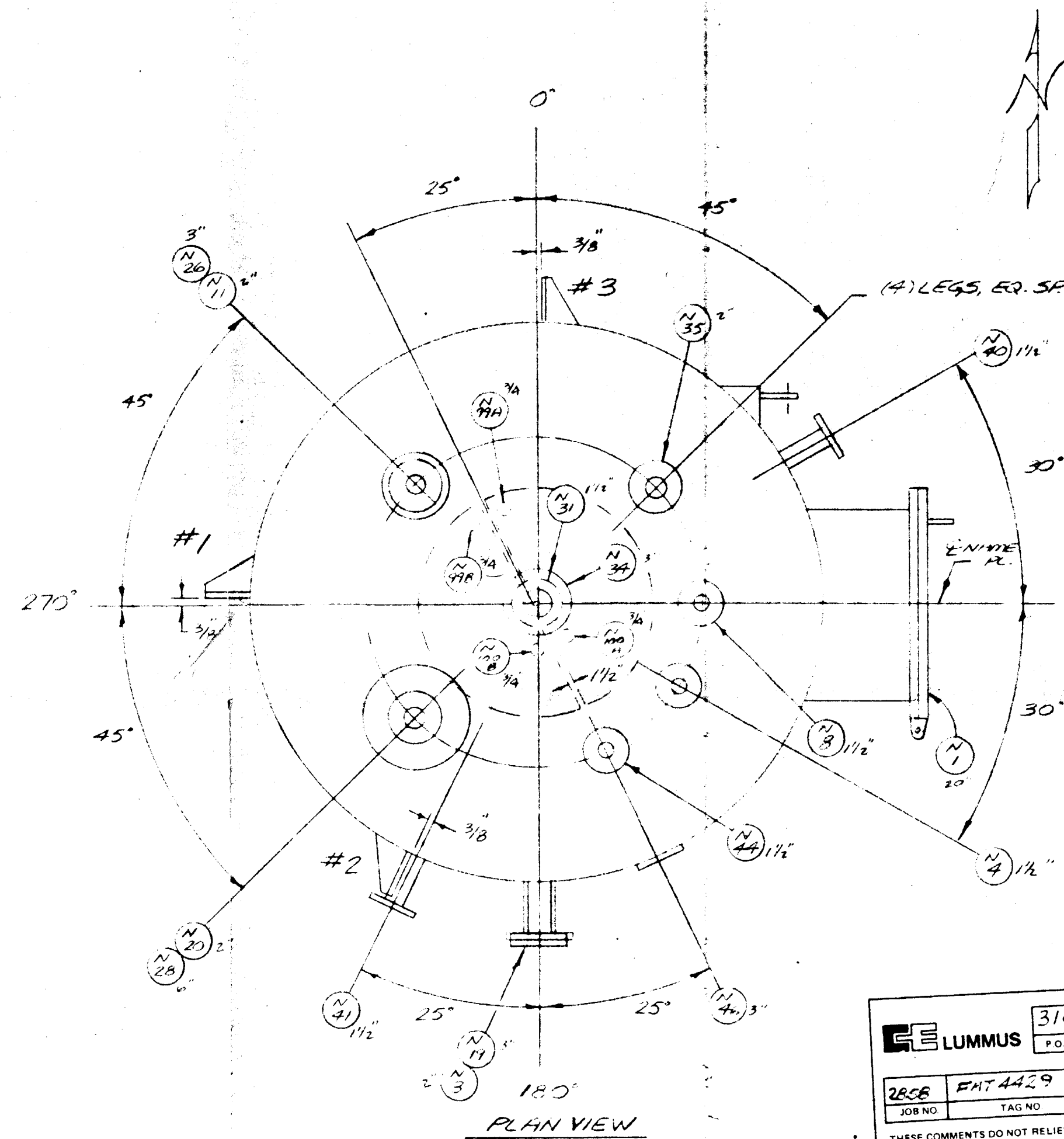
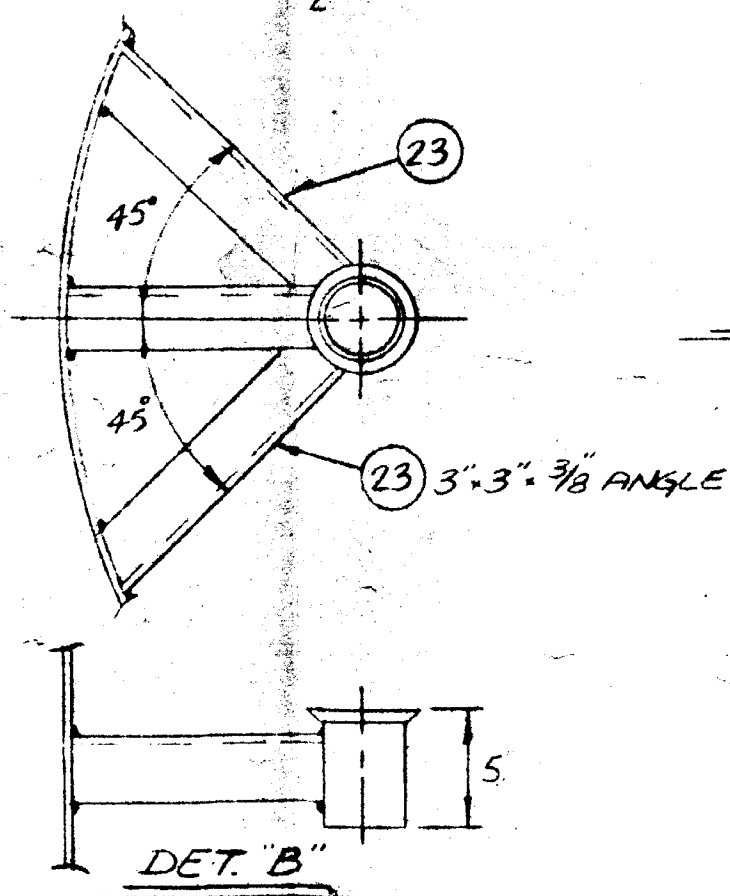
CERTIFICATE OF SHOP INSPECTION

Vessel made by ALLOY FAB, INC at SOUTH PLAINFIELD, NJ

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 NEW JERSEY and employed by COMMERCIAL UNION have inspected the pressure vessel described in this Manufacturers' Data Report on 3/7 19 85, 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 Manufacturers' 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.

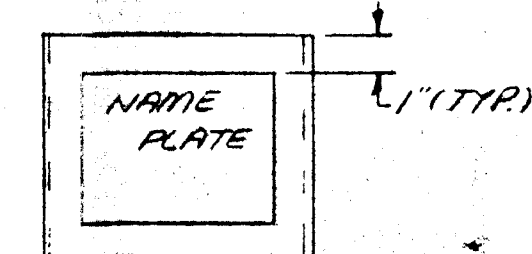
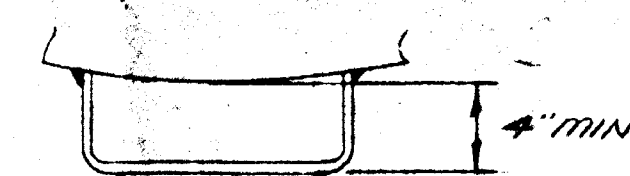
Signed [Signature] Date 3/7/85 Commissions NB 7169, NI, NJ 499 1  
(Inspector) (Nat'l Board, State, Province and No.)

2858-FAJ 4429-5A



| SCHEDULE OF CONNECTIONS |    |        |       |       |         |                        |
|-------------------------|----|--------|-------|-------|---------|------------------------|
| NK                      | NO | SIZE   | RATG. | TYPE  | THK.    | SERVICE                |
| N1                      | 1  | 20"    | -     | RINGS | 1/4"    | MANWAY                 |
| N3                      | 1  | 2"     | 150#  | L.J.  | SCM-40  | SPARE W/B. FLG.        |
| N4                      | 1  | 1 1/2" | 150#  | L.J.  | SCM-40  | NITROGEN PAD           |
| N8                      | 1  | 1 1/2" | 150#  | L.J.  | SCM-40  | VENT                   |
| N11                     | 1  | 2"     | 150#  | L.J.  | SCM-40  | FEED FR. E-4426/V-4424 |
| N19                     | 1  | 3"     | 150#  | L.J.  | SCM-40  | DRAWOFF TO P-4429      |
| N20                     | 1  | 2"     | 150#  | L.J.  | SCM-40  | RETURN FR. P-4429      |
| N26                     | 1  | 3"     | 150#  | L.J.  | SCM-40  | SLEEVE FOR N11         |
| N28                     | 1  | 6"     | 150#  | L.J.  | 3/16"   | SLEEVE FOR N20         |
| N31                     | 1  | 1 1/2" | 150#  | L.J.  | SCM-40  | DRAIN                  |
| N34                     | 1  | 3"     | 150#  | L.J.  | SCM-40  | CONSERVATION VENT      |
| N35                     | 1  | 2"     | 150#  | L.J.  | SCM-40  | UTILITY CONN.          |
| N40                     | 1  | 1 1/2" | 150#  | L.J.  | SCM-40  | TEMP IND. (TI)         |
| N41                     | 1  | 1 1/2" | 150#  | L.J.  | SCM-40  | TEMP CONT. (TIC)       |
| N44                     | 1  | 1 1/2" | 150#  | L.J.  | SCM-40  | LEVEL TAP              |
| N46                     | 1  | 3"     | 150#  | PAD   | 1 1/16" | EXT. LEVEL LI/LAM/LAL  |
| N99                     | 1  | 3/4"   | 6000# | C/PUG | TH'D    | STEAM TO PANEL COIL    |
| N100                    | 1  | 3/4"   | 6000# | C/PUG | TH'D    | COND. FR. PANEL COIL   |

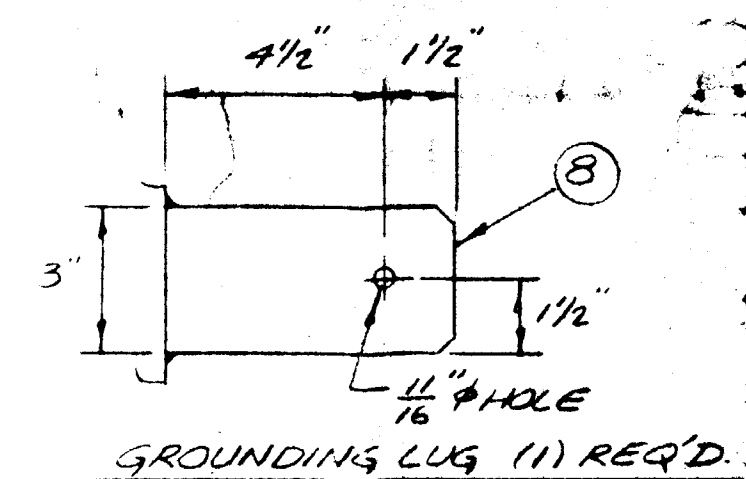
| ITEM NO. |          |        | BILL OF MATERIAL |                                               |
|----------|----------|--------|------------------|-----------------------------------------------|
| ITEM NO. | NO. REQ. | CONN.  | MAT'L.           | DESCRIPTION                                   |
| 1        | 1        |        | SA-360           | SHELL 60"O.D. x 57'LG. x 1/4"                 |
| 2        | 1        |        | SA-360           | ASME F.Y.D.H.D. 60"O.D. x 112'5F. x 1/4" MIN. |
| 3        | 2        |        | CS7L             | DEAN PANEL COIL (SEE NOTES)                   |
| 4        | 4        |        | 304L 3/8         | RODSN PAD 1/4" x 13" x 7/16"                  |
| 5        | 4        |        | CS7L             | COVER PL. 1/4" TK.                            |
| 6        | 4        |        | SA-36            | ANGLE LEG 4"x4"x1/2"                          |
| 7        | 4        |        | A-285-C          | BASE PL. 1/2" TK.                             |
| 8        | 1        |        | A-36             | GROUND. LUG 1/2" TK.                          |
| 9        | 2        |        | A-36             | INS. RING 1/4" x 1 1/2"                       |
| 10       | 22       |        | 304L 3/8         | INS. CLIP 1/4" x 1 3/4" x 1"                  |
| 11       | 1        | N1     | 304L 1/2         | 20" MANUARY                                   |
| 12       | 4        | N1 1/2 | SA-105           | 2" 150# ANSI L.J. FLG.                        |
| 13       | 4        | N1 1/2 | SA-36            | 2" SCH. 40 L.J. STUB END                      |
| 14       | 1        | N3     | 304L 1/2         | 2" 150# ANSI BLIND FLG.                       |
| 15       | 1        | N3     | SA-360           | GASKET 3/4" x 118" O.D. x 2 3/8" I.D.         |
| 16       | 4        | N8     | A-193-B7         | 5/8" x 11NC x 2 3/4" LG. HX. HD. BOLT w/ NUT  |
| 17       | 2        | N1 1/2 | SA-36            | 2" SCH. 40 PIPE                               |
| 18       | 1        | N26    | SA-105           | 3" 150# ANSI L.J. FLG.                        |
| 19       | 1        | N26    | SA-36            | 3" SCH. 40 L.J. STUB END                      |
| 20       | 1        | N26    | 304L 1/2         | 3" 150# ANSI BLIND FLG.                       |
| 21       | 1        | N26    | SA-360           | GASKET 3/4" x 5 3/8" O.D. x 3 1/2" I.D.       |
| 22       | 4        | N26    | A-193-B7         | 5/8" x 11NC x 3 1/4" LG. HX. HD. BOLT w/ NUT  |
| 23       | 3        | N11    | 304L 3/8         | SUPP.T. 3" x 3" x 3/8" ANGLE                  |
| 24       | 1        | N11    | 304L 3/8         | 3" SCH. 40 PIPE GUIDE                         |
| 25       | 1        | N28    | SA-105           | 6" 150# ANSI L.J. FLG.                        |
| 26       | 1        | N28    | SA-360           | 6 3/8" O.D. x 3 1/2" TK. L.J. STUB END        |
| 27       | 1        | N28    | SA-105           | 6" 150# ANSI BLIND FLG.                       |
| 28       | 1        | N28    | 304L 1/2         | FACING 8 1/2" O.D. x 3 1/2" TK.               |
| 29       | 1        | N28    | SA-360           | GASKET 3 1/2" x 8 3/4" O.D. x 6 3/8" I.D.     |
| 30       | 5        | N28    | A-193-B7         | 3/4" - 10NC x 3 1/2" LG. HX. HD. BOLT w/ NUT  |
| 31       | 1        | N20    | 304L 1/2         | 2" SCH. 40 45° L.R. ELBOW                     |
| 32       | 1        | N20    | 304L 1/2         | WEAR PL. 1/4" x 12" x 12"                     |
| 33       | 6        |        | SA-105           | 1 1/2" 150# ANSI L.J. FLG.                    |
| 34       | 6        |        | SA-36            | 1 1/2" SCH. 40 L.J. STUB END                  |
| 35       | 2        | N1 1/2 | SA-105           | 3" 150# ANSI L.J. FLG.                        |
| 36       | 2        | N1 1/2 | SA-36            | 3" SCH. 40 L.J. STUB END                      |
| 37       | 1        | N19    | 304L 1/2         | 6" HALF PIPE 3/16" TK.                        |
| 38       | 1        | N19    | 304L 1/2         | COVER 3/16" TK.                               |
| 39       | 1        | N16    | 304L 1/2         | STUD PAD 1 1/2" TK.                           |
| 40       | 3        |        | 304L 1/2         | SUPP.T. 3/8" TK.                              |
| 41       | 3        |        | 304L 1/2         | GUSSET 3/8" TK.                               |



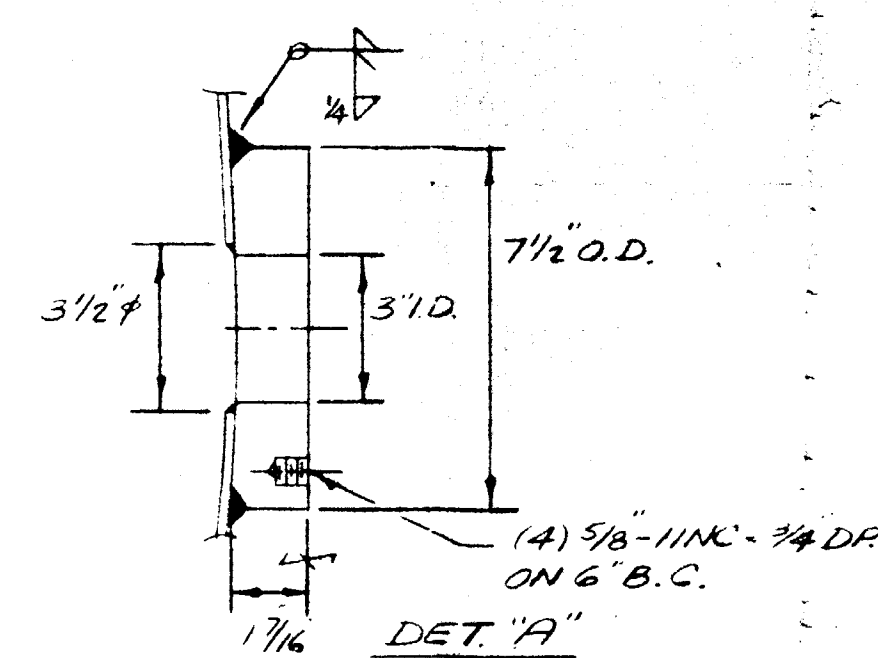
NAME PL. BRACKET  
(LOCATE ABOVE NI)

## GENERAL NOTES

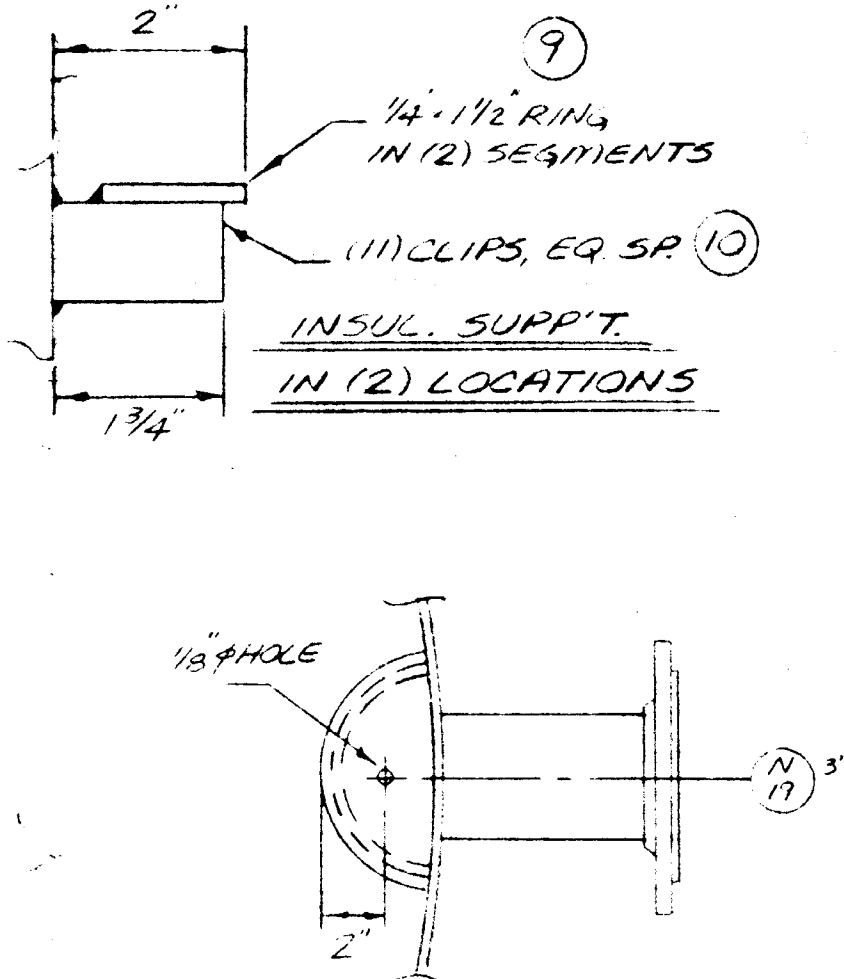
- 1) VESSEL DESIGNED \* FABRICATED PER 1983 ASME CODE SECT VIII DIV.1
- 2) CODE STAMP REQ'D.
- 3) SPOT X-RAY REQ'D.
- 4) DESIGN PRESSURE = 10 PSI
- 5) CORROSION ALLOWANCE = .132"
- 6) BOLT HOLES TO STRADDLE MAIN VESSEL CTR. LINES
- 7) ALL SURFACES TO BE FREE OF SLAG, SPATTER, GREASE ETC.
- 8) ALL INTERNAL WELDS GRIND SMOOTH
- 9) INTERIOR, INCLUDING MANWAY, NOZZLES \* COVERS TO BE PASSIVATED



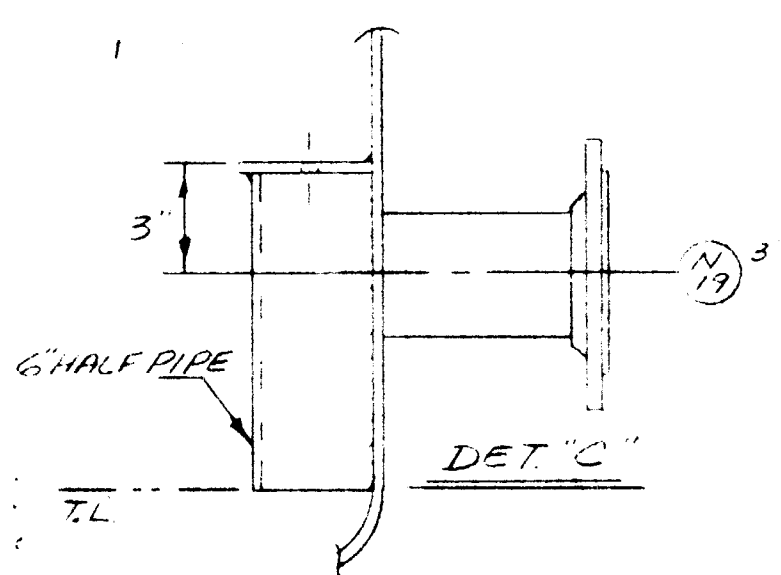
GROUNDING LUG (1) REQ'D



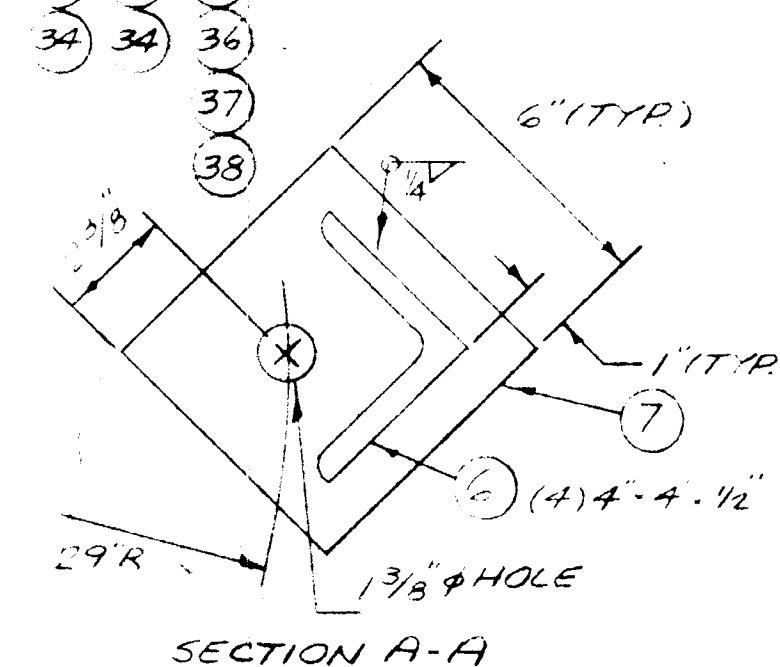
DET. "A"



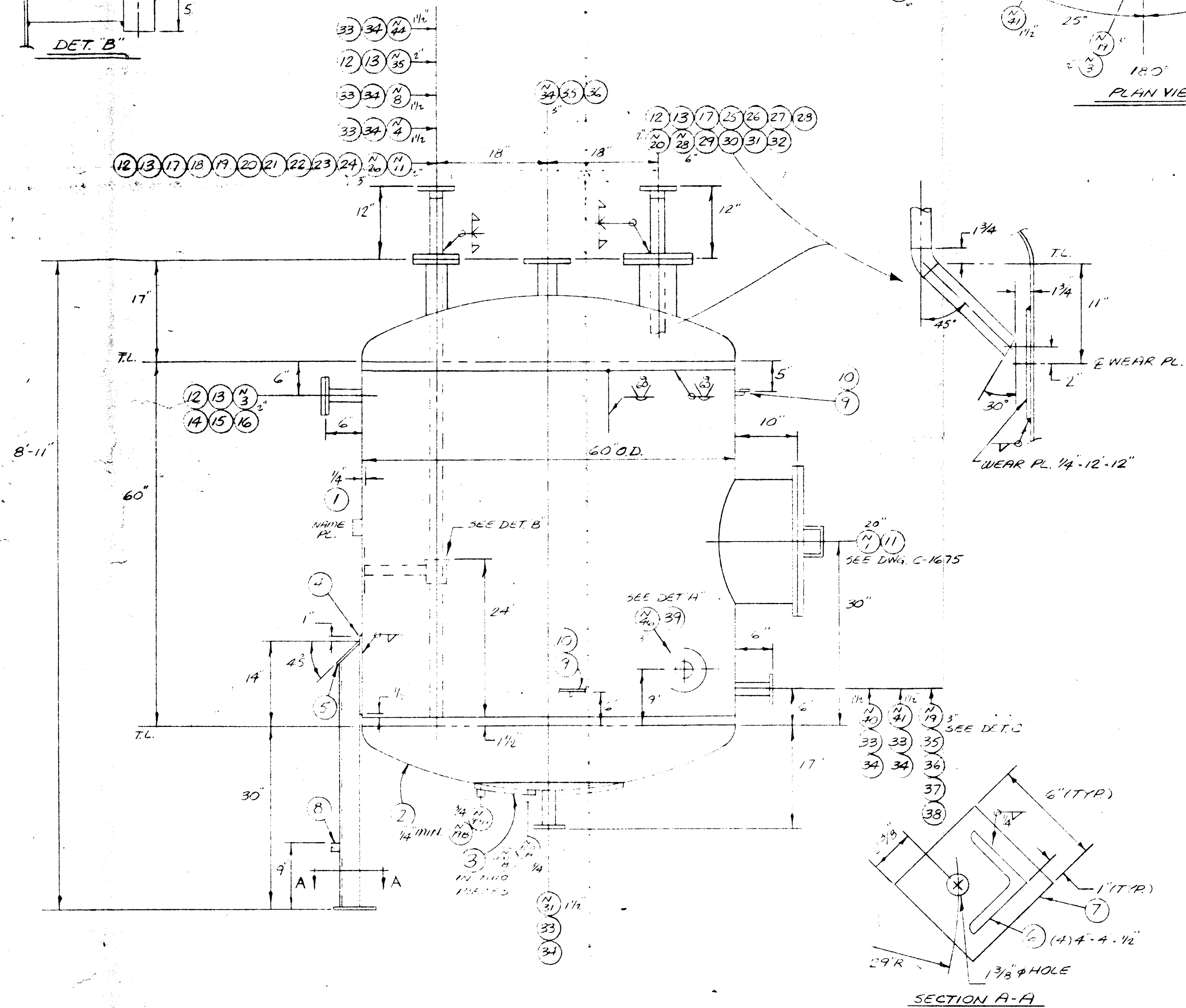
INSUL. SUPP'T.  
IN (2) LOCATIONS



DET "C"



SECTION A-A



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                       |          |                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------|--------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                       | 310      | 6-2                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                       | P.O. NO. | R.D. NO.           |
| 2208                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | FMT 4429                                                                              | 10       |                    |
| JOB NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TAG NO.                                                                               | V.D. NO. |                    |
| <p>THESE COMMENTS DO NOT RELIEVE THE VENDOR OF HIS RESPONSIBILITY TO MEET ALL THE REQUIREMENTS OF THE PURCHASE ORDER</p> <p>NL - REPRODUCIBLE NOT LEGIBLE. RESUBMIT</p> <p>APPROVED PROCESSED WITH FABRICATION</p> <p>SUBMIT CERTIFIED DRAWING</p> <p>APPROVED NOTED PROCESSING WITH FABRICATION IN ACCORDANCE WITH</p> <p>COMMENTS: SUBMIT CERTIFIED CORRECTED DRAWING</p> <p>DISAPPROVED. DO NOT ANNOTATE RESUBMIT DRAWING FOR APPROVAL</p> <p>NON-COMMENT. RE-SUBMIT BY DATE</p> <p>THE LUMMUS COMPANY</p> <p>Ground and</p> |                                                                                       |          |                    |
| BY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |          | 1100 02 0282-5 REV |

CUST. - LUMMUS  
P.O. # 1-2853-310  
ITEM # T-4429

EST WTS.  
EMPTY - 2500#  
FULL H<sub>2</sub>O - 9900#  
OPERATING - 5700

REF. DWG.  
C-1675

$U$   $RT_3$   
 $W$

|        |    |
|--------|----|
| SHELL  | 50 |
| WATER  |    |
| POWDER |    |
| SOILS  |    |

ITEM # T-

NATIONAL BOARD NO. 1072  
MEGRS. SERIAL NO. 2752  
YEAR BUILT 1935

|    |     |     |        |    |
|----|-----|-----|--------|----|
| AT | 323 | 7F. | SHELL  | 25 |
| AT | —   | 7F. | THK.   |    |
|    |     |     | HEAD   | 25 |
|    |     |     | THK.   |    |
| AT | —   | 7F. | JACKET | —  |
| AT | —   | 7F. | THK.   | —  |

CE LUMINUS

HYDRO TEST SHELL S. 75 P.S.I.  
HYDRO TEST JACKET S. — P.S.I.

ALLOY FAB, INC.  
CERTIFIED

2858-F64429-1D

PN. 21908

|      |                     |          |      |
|------|---------------------|----------|------|
| C    | REV. PAID. 10/11/54 | 10-35    | B.P. |
| B    | PER CUST. DWG.      | 3-23-55  | B.P. |
| A    | PER CUST. DWG.      | 12-11-54 | B.P. |
| REV. | DESCRIPTION         | DATE     | BY   |

ALLOY FAB INC.  
SOUTH PLAINFIELD N. J.

(ONE) 60" O.D. 304L YS 900 SHL.  
LIGHTS CUT SURGE TANK

WORK ORDER NO.      DR. B: B.P.      DATE: 9-18-54  
CH. B: HK  
SCALE      L-1589-C