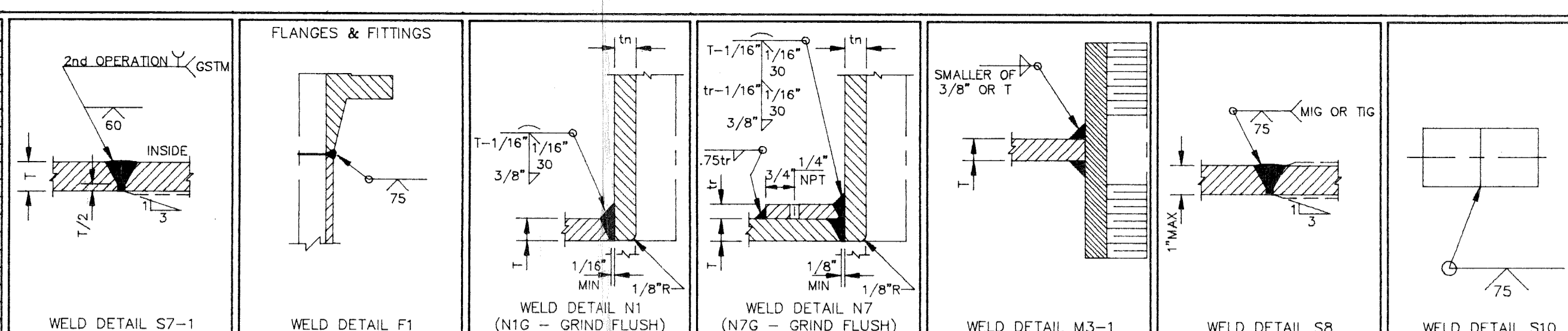
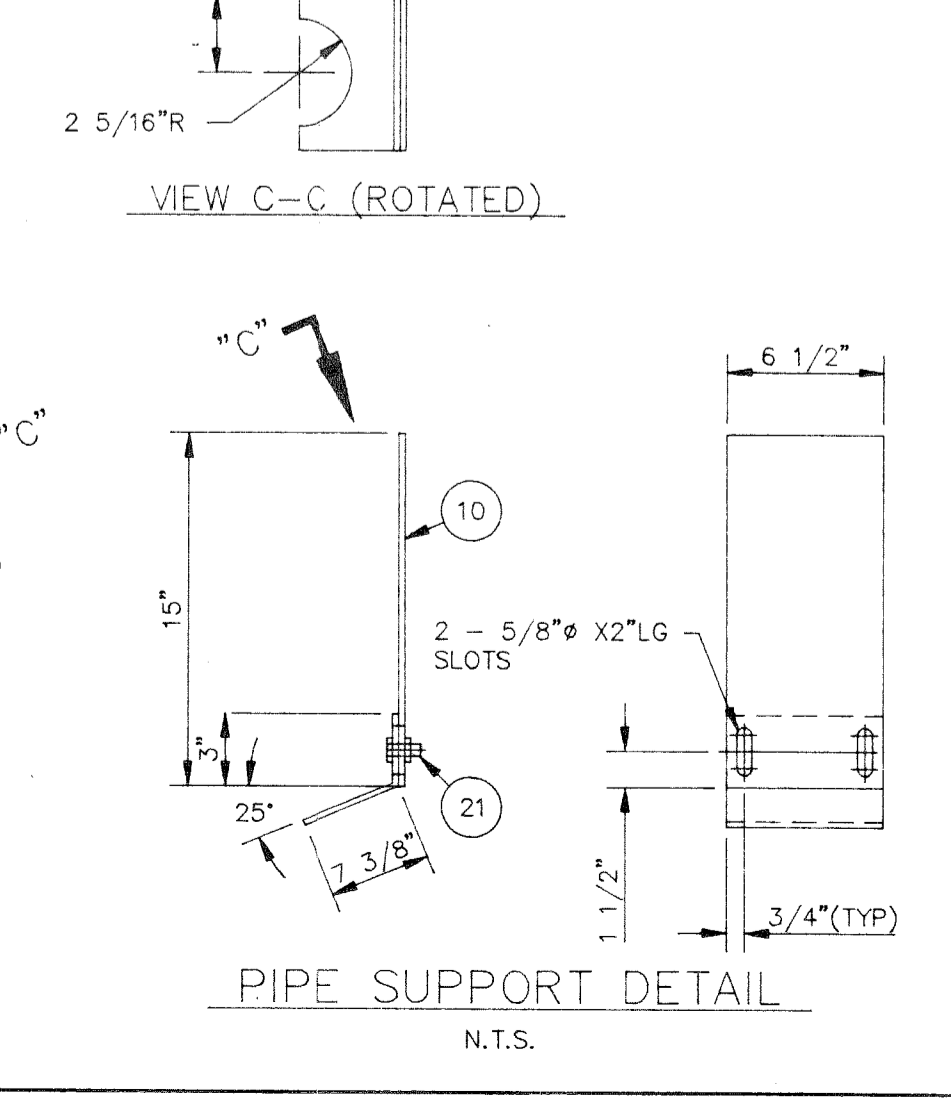
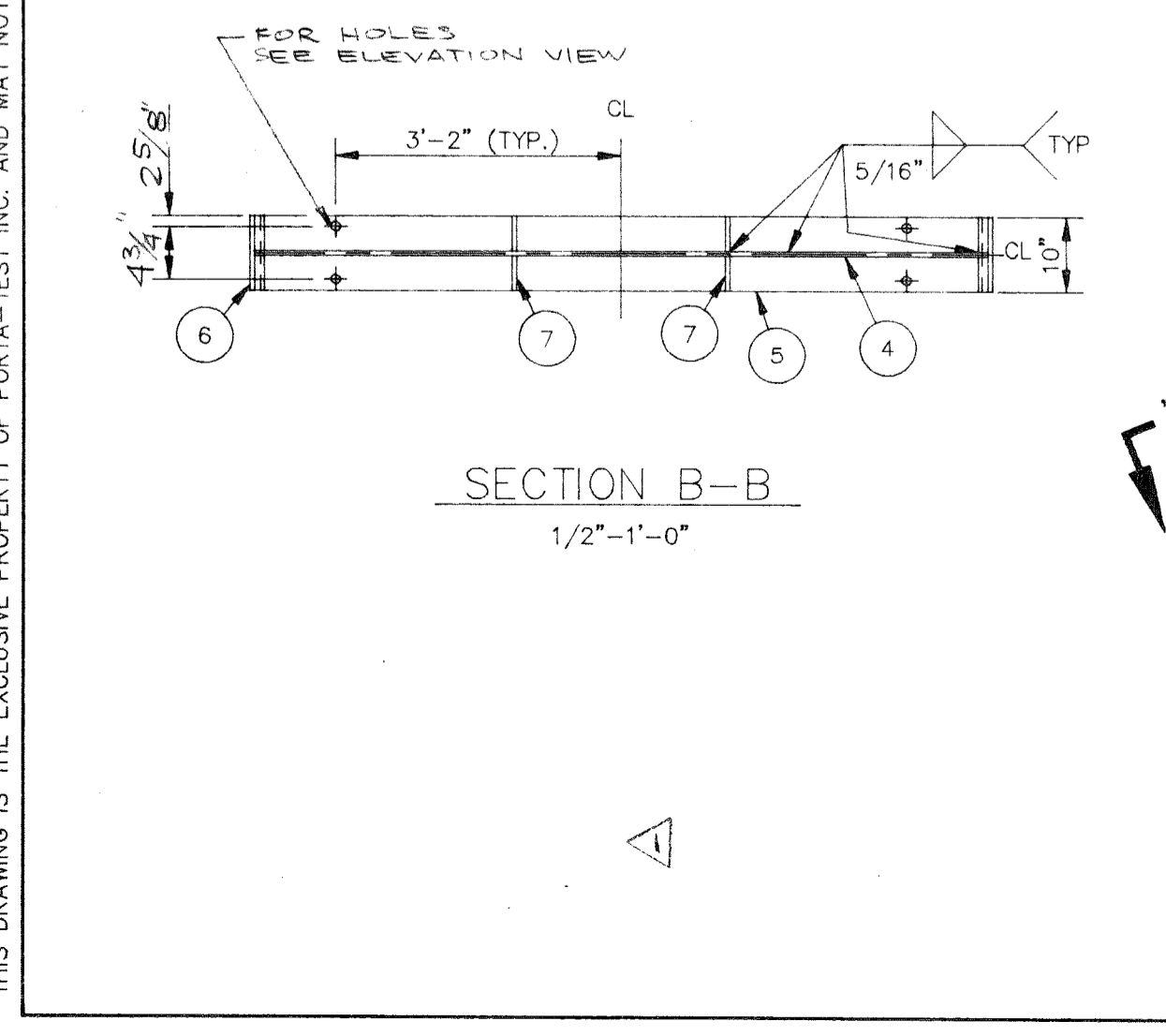
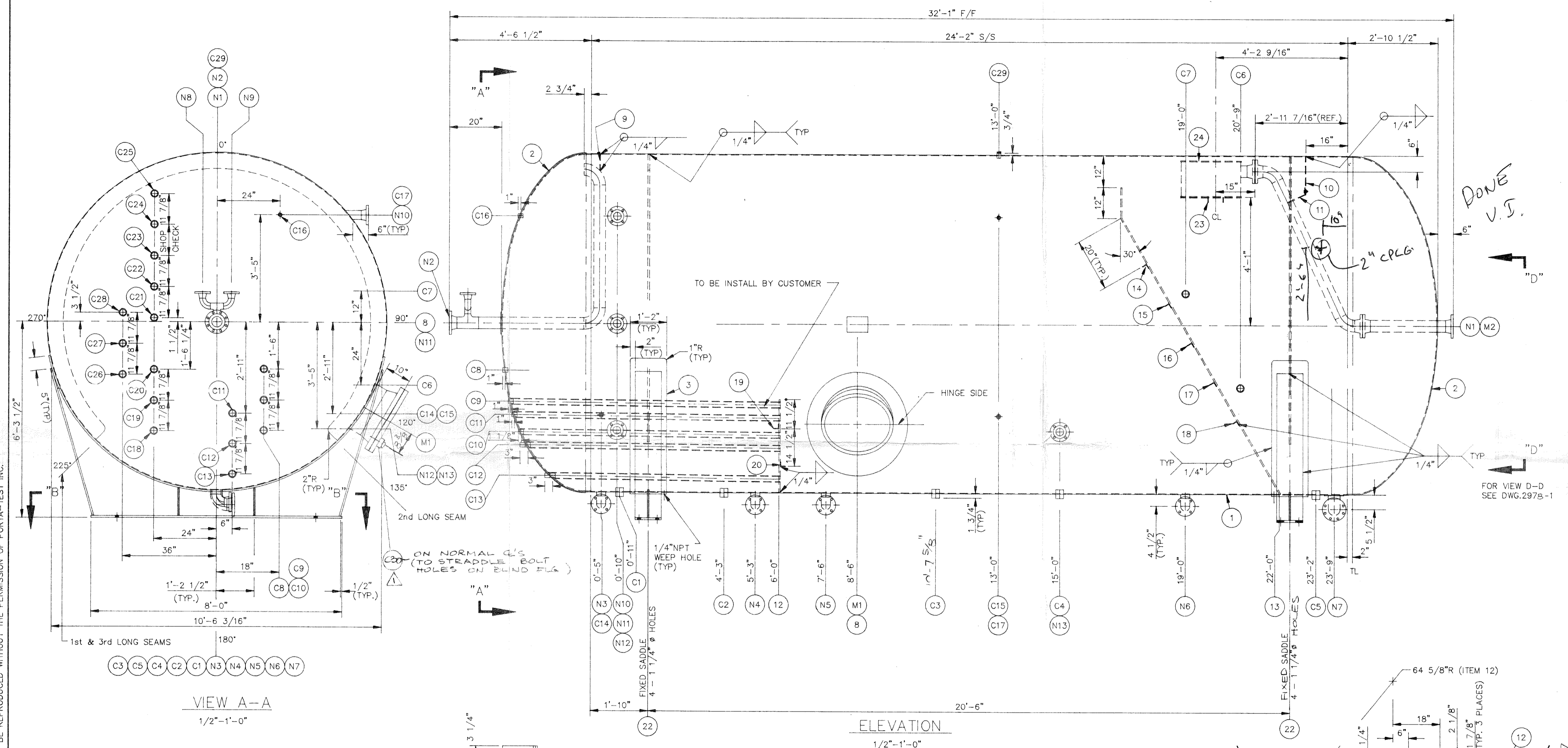


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| WELDING CONTROL | | | WELDING CONTROL | | | WELDING CONTROL | | | WELDING CONTROL | | |
|---|----------------------|-----------------------|--|----------------------|-----------------------|---|----------------------|-----------------------|--|----------------------|-----------------------|
| W.P.S. | PTM-102 | CONSUMABLE | W.P.S. | PTM-103 | CONSUMABLE | W.P.S. | PTM-106 | CONSUMABLE | W.P.S. | PTM-110 | CONSUMABLE |
| PROCESS-ROOT | GMAW | LINDE 65 | PROCESS-ROOT | GMAW | LINDE 65 | PROCESS-ROOT | SMAW | E-6010 | PROCESS-ROOT | SMAW OR FCAW | E-6010, L.A.T. 9 |
| PROCESS-FILL | SMAW | E-7018 | PROCESS-FILL | SMAW | E-7018 | PROCESS-FILL | SMAW | E-7018 | PROCESS-FILL | FCAW | L.A.T. 9 |
| PROCESS-FILL | SAW | LINCOLN L61 | PROCESS-FILL | SAW | LINCOLN L61 | PROCESS-FILL | SAW | LINCOLN L61 | PROCESS-FILL | SAW | LINCOLN L61 |
| GAS SHIELDING | GMAW | ARGON/CO ₂ | GAS SHIELDING | GMAW | ARGON/CO ₂ | GAS SHIELDING | GMAW | ARGON/CO ₂ | GAS SHIELDING | GMAW | ARGON/CO ₂ |
| GAS SHIELDING | GMAW | ARGON/CO ₂ | GAS SHIELDING | GMAW | ARGON/CO ₂ | GAS SHIELDING | GMAW | ARGON/CO ₂ | GAS SHIELDING | GMAW | ARGON/CO ₂ |
| GAS BACKING | | | GAS BACKING | | | GAS BACKING | | | GAS BACKING | | |
| FLUX | SAW | LINCOLN 860 | FLUX | | | FLUX | | | FLUX | | |
| PREHEAT (MIN) | 10°C<25MM; 93°C>25MM | | PREHEAT (MIN) | 10°C<25MM; 93°C>25MM | | PREHEAT (MIN) | 10°C<25MM; 93°C>25MM | | PREHEAT (MIN) | 10°C<25MM; 93°C>25MM | |
| POSTHEAT | N/A | | POSTHEAT | N/A | | POSTHEAT | N/A | | POSTHEAT | N/A | |
| INTERPASS (MAX) | 260°C | | INTERPASS (MAX) | 260°C | | INTERPASS (MAX) | 260°C | | INTERPASS (MAX) | 260°C | |
| NOTES: GMAW - ROOT ONLY. | | | NOTES: GMAW - ROOT ONLY & NOT TO BE UTILIZED ON NOZZLE, COUPLING, OR NON-PRESSURE ATTACHMENT TO SHELL WELDS. | | | NOTES: ROOT E-6010 ONLY. THE E-6010 ROOT ON 70KSI MATL. SHALL BE REMOVED. | | | NOTES: THE E-6010 ROOT SHALL BE REMOVED WHEN UTILIZED ON 70KSI MATL. | | |
| SMAW - ONE PASS FILL ONLY. THE GMAW OR SMAW PROCESS MAY OR MAY NOT BE UTILIZED. | | | | | | THE E-6010 ROOT ON 60 OR 60-70KSI MATL. MAY OR MAY NOT BE REMOVED. | | | REMOVED ON 60 OR 60 TO 70KSI MATL. | | |
| APPROVED BY: | | | APPROVED BY: | | | APPROVED BY: | | | APPROVED BY: | | |



| BILL OF MATERIALS | | | | | | | | | |
|-------------------|----------------------|---|-----------------|----------|------------|-----------|-------------|--|--|
| MARK NO. | ITEM | DESCRIPTION | MATERIAL | NO. REQD | WEIGHT LBS | WELD TYPE | PROCEDURE | | |
| 1 | SHELL | 130"OD X 0.265"PL X 24'-2" LG | A-212-B-FLG | 1 | 8360 | S7-1 | PTM-102/103 | | |
| 2 | HEAD | 130"OD X 3/8" NOM 2:1 S.E. W/2"SF | SA-516-70 | 2 | 1500 | S7-1 | PTM-102/103 | | |
| 3 | SADDLE PAD(ROLL 65R) | 5/8"PL X 14" X 14"-11 9/16"LG | SA-516-70 | 2 | 931 | | PTM-108/110 | | |
| 4 | SADDLE LEG | 5/8"PL X 4'-1" X 10'-1 3/4"LG | SA-36 | 2 | 1000 | | PTM-108/110 | | |
| 5 | BASE PLATE | 3/4"PL X 10' X 4'-10 3/4"LG | SA-36 | 2 | 1349 | | PTM-108/110 | | |
| 6 | SIDE PLATE | 5/8"PL X 10' X 4'-10 3/4"LG | SA-36 | 4 | 298 | | PTM-108/110 | | |
| 7 | SADDLE RIB | 5/8"PL X 4 1/16" X 10 13/16"LG | SA-36 | 8 | 69 | | PTM-108/110 | | |
| 8 | NAME PL & BRACKET | 3/16"PL W/2"LEG (STD-162-0-0) | BRKT SA-516-70 | 1 | 5 | | PTM-108/110 | | |
| 9 | SUPPORT PLATE | 1/4"PL X 2" X 6"LG | SA-516-70 | 1 | 1 | | PTM-108/110 | | |
| 10 | SUPPORT PLATE | 1/4"PL X 6 1/2" X 15"LG | SA-516-70 | 1 | 4 | | PTM-108/110 | | |
| 11 | SUPPORT BRACKET | 1/4"PL X 6 1/2" X 10 3/8"LG(BEND ANGLE) | SA-516-70 | 1 | 4 | | PTM-108/110 | | |
| 12 | WEAR PLATE | 1/2"PL X 36" X 9'-8"LG | SA-516-70 | 1 | 500 | | PTM-108/110 | | |
| 13 | WEAR PLATE | 1/2"PL X 129 3/8" X 11'-1 7/8"LG | SA-516-70 | 1 | 2000 | | PTM-108/110 | | |
| 14 | SUPPORT ANGLE | 2" X 2" X 1/4" ANGLE X 9'-5 1/4"LG | SA-36 | 1 | 30 | | PTM-108/110 | | |
| 15 | SUPPORT ANGLE | 2" X 2" X 1/4" ANGLE X 10'-2 1/2"LG | SA-36 | 1 | 33 | | PTM-108/110 | | |
| 16 | SUPPORT ANGLE | 2" X 2" X 1/4" ANGLE X 9'-6"LG | SA-36 | 1 | 30 | | PTM-108/110 | | |
| 17 | SUPPORT ANGLE | 2" X 2" X 1/4" ANGLE X 9'-0"LG | SA-36 | 1 | 28 | | PTM-108/110 | | |
| 18 | SUPPORT ANGLE | 2" X 2" X 1/4" ANGLE X 6'-8"LG | SA-36 | 1 | 21 | | PTM-108/110 | | |
| 19 | SUPPORT ANGLE | 2" X 2" X 1/4" ANGLE X 7'-9 7/16"LG | SA-36 | 1 | 26 | | PTM-108/110 | | |
| 20 | SUPPORT ANGLE | 2" X 2" X 1/4" ANGLE X 4'-8 1/4"LG | SA-36 | 1 | 21 | | PTM-108/110 | | |
| 21 | BOLT | 1/2" BOLT X 1 1/4"LG C/W 1 HEX HD NUT | 304 SS | 2 | 1 | | PTM-108/110 | | |
| 22 | RING | 3/4"PL X 6" X 129 1/4"OD (270°) | SA-516-70 | 2 | 776 | | PTM-108/110 | | |
| 23 | CHANNEL | 1/4"PL X 10" X 7'-0 1/2"LG | SA-516-70 | 1 | 60 | | PTM-108/110 | | |
| 24 | INVOLUTE | FABRICATE CHANNEL 6" X 2" FLANGE | SEE DWG. 2978-1 | | | | | | |



NOTES

- ONE (1) UNIT REQUIRED.
- REPAIR AND ALTERNATION TO GASOLINE STORAGE TANK, MFG. SERIAL No. EP1173-B, CRN A-1818.2, A# 55779, FABRICATED MARCH, 1963.
- PORTA-TEST SERIAL No. FOR REPAIR AND ALTERNATION PT-4420.
- PORTA-TEST TAG No. FOR REPAIR AND ALTERNATION V-2.
- NEW A# FOR ALTERNATION AND REPAIR.
- SHELL MARK No. 1 (130"OD X 24'-2"LG) IS EXISTING FROM VESSEL SERIAL No. EP1173-B, CRN A-1818.2, A# 55779.
- FLANGE, BLIND FLANGE AND NECK FOR MANWAY MARK No. M2 ARE EXISTING FROM GASOLINE STORAGE TANK, MFG. SERIAL No. EP1173-B, CRN A-1818.2, A# 55779.
- EXISTING SHELL TO BE ULTRASONIC INSPECTED FOR THICKNESS AND WELD BUILD UP APPLIED IN LOW OR PITTED AREAS TO OBTAIN MINIMUM SHELL THICKNESS.
- MPI SHELL CIRC SEAMS IN CORRODED AREAS.
- RADIOGRAPH EXISTING WELDS IN CORRODED SECTION AND REPAIR IF NECESSARY.
- BRINELL HARDNESS TO BE TAKEN ON SHELL MATERIAL AND WELDS.
- PORTA-TEST INC. WILL NOT BE HELD RESPONSIBLE FOR ANY ATTACHMENTS OR CHANGES TO UNIT THAT ARE NOT PERFORMED IN OUR SHOP.
- BOLT HOLES TO STRADDLE NORMAL CENTERLINES.

| NO. | ADDED | REVISION | APP'D | CHK'D | DWN BY | DATE |
|-----|-------|----------|-------|-------|--------|-------------|
| 1 | ADDED | C30 | | | | JUNE 25, 93 |

DESIGN DATA

| | |
|------------------|--|
| DESIGN PRESS | 50 PSIG |
| DESIGN TEMP | 100°F |
| ASME CODE | SECT.VIII, DIV.1, 1962 EDITION, 1962 WINTER ADD. |
| RADIOGRAPHY | RT-1(FULL) PWHT NO |
| EFFY SHELL JT | 1.0 HEAD JT 1.0 |
| SHELL THK NOM | 0.265" MIN 0.265" |
| HEADS THK NOM | 0.375" MIN 0.3125" |
| C.A. HEADS | 0.0625" SHELL |
| DESIGN LTD BY | ESIGN PRESSURE |
| MAMP | 50 PSIG |
| HYDRO TEST PRESS | 75 PSIG |
| WT EMPTY | 18550 LBS |
| WT FULL OF WATER | 178231 LBS |
| VOLUME | 2559 CU.FT |
| OVER-ALL LENGTH | 32'-1" F/F |
| PAINT: | NO |

| | | | | | | | |
|---------|--------------------|--|--------------|----|-----|-------|-------------|
| N1 | FLGE(INLET) | 4"-150ANSI RFWN (SCH.160 BORE) | SA-105 | 4 | 60 | F1 | PTM-103 |
| | HOR. NECK | 4"-SCH.160 PIPE X 2'-4 5/8"LG | SA-106-B | 1 | 54 | N1 | PTM-108 |
| | ANGLE PIPE | 4"-SCH.160 PIPE X 4'-9 7/16"LG | SA-106-B | 1 | 90 | SB | PTM-108 |
| | ELBOW | 4"-SCH.160 LR BW 65° ELL(CUT 90° ELL) | SA-234-WPB | 2 | 36 | F1,SB | PTM-108 |
| | GASKET | 4"-150# RF X 1/8"THK. GASKET | ASBESTOS | 2 | 2 | | |
| | STUDS | 5/8" X 3 1/2"LG C/W 2 HEX NUTS | 304 SS | 16 | 8 | | |
| N2 | FLGE (GAS OUTLET) | 4"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 16 | F1 | PTM-103 |
| | HOR. NECK | 4"-XH PIPE X 3'-4 1/2"LG | SA-106-B | 1 | 51 | N1 | PTM-108 |
| | VERT. PIPE | 4"-XH PIPE X 3'-11" | SA-106-B | 1 | 60 | SB | PTM-108 |
| | PAD (DISH TO HEAD) | 5/16"PL X 8 1/2"OD X 4 5/8"ID | SA-516-70 | 1 | 4 | N7G | PTM-108 |
| | ELBOW | 4"-XH LR BW 90° ELL | SA-234-WPB | 2 | 27 | SB | PTM-108 |
| | REDUCING TEE | 4"-XH X 2"-SCH.160 RED.TEE | SA-234-WPB | 1 | 15 | F1,SB | PTM-108 |
| N3 | FLGE (OUTLET) | 3"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 12 | F1 | PTM-103 |
| | NECK | 3"-XH PIPE X 1 3/4"LG | SA-106-B | 1 | 1 | N1G | PTM-108 |
| | ELBOW | 3"-XH SR BW 90° ELL | SA-234-WPB | 1 | 4 | F1,SB | PTM-108 |
| N4 | FLGE (OUTLET) | 3"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 12 | F1 | PTM-103 |
| | NECK | 3"-XH PIPE X 1 3/4"LG | SA-106-B | 1 | 1 | N1G | PTM-108 |
| | ELBOW | 3"-XH SR BW 90° ELL | SA-234-WPB | 1 | 4 | F1,SB | PTM-108 |
| N5 | FLGE (OUTLET) | 3"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 12 | F1 | PTM-103 |
| | NECK | 3"-XH PIPE X 1 3/4"LG | SA-106-B | 1 | 1 | N1G | PTM-108 |
| | ELBOW | 3"-XH SR BW 90° ELL | SA-234-WPB | 1 | 4 | F1,SB | PTM-108 |
| N6 | FLGE (OUTLET) | 3"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 12 | F1 | PTM-103 |
| | NECK | 3"-XH PIPE X 1 3/4"LG | SA-106-B | 1 | 1 | N1G | PTM-108 |
| | ELBOW | 3"-XH SR BW 90° ELL | SA-234-WPB | 1 | 4 | F1,SB | PTM-108 |
| N7 | FLGE (CLEAN OUT) | 4"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 16 | F1 | PTM-103 |
| | NECK | 4"-XH PIPE X 1 13/16"LG | SA-106-B | 1 | 1 | N7G | PTM-108 |
| | PAD (ROLL 65R) | 5/16"PL X 7 1/2"OD X 4 5/8"ID | SA-516-70 | 1 | 4 | N7G | PTM-108 |
| | ELBOW | 4"-XH SR BW 90° ELL | SA-234-WPB | 1 | 9 | F1,SB | PTM-108 |
| N8 | FLGE (RELIEF) | 2"-150ANSI RFWN (SCH.160 BORE) | SA-105 | 1 | 6 | F1 | PTM-103 |
| | ELBOW | 2"-SCH.160 LR BW 90° ELL | SA-234-WPB | 1 | 4 | F1,SB | PTM-108 |
| N9 | FLGE (RELIEF) | 2"-150ANSI RFWN (SCH.160 BORE) | SA-105 | 1 | 6 | F1 | PTM-103 |
| | ELBOW | 2"-SCH.160 LR BW 90° ELL | SA-234-WPB | 1 | 4 | F1,SB | PTM-108 |
| N10 | FLGE | 3"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 12 | F1 | PTM-103 |
| | NECK | 3"-XH PIPE X 6 7/16"LG | SA-106-B | 1 | 5 | N1G | PTM-108 |
| N11 | FLGE | 3"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 12 | F1 | PTM-103 |
| | NECK | 3"-XH PIPE X 3 1/2"LG | SA-106-B | 1 | 3 | N1G | PTM-108 |
| N12 | FLGE | 3"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 12 | F1 | PTM-103 |
| | NECK | 3"-XH PIPE X 6 7/16"LG | SA-106-B | 1 | 5 | N1G | PTM-108 |
| N13 | FLGE | 3"-150ANSI RFWN (XH BORE) | SA-105 | 1 | 12 | F1 | PTM-103 |
| | NECK | 3"-XH PIPE X 6 7/16"LG | SA-106-B | 1 | 5 | N1G | PTM-108 |
| M1 | FLGE (MANWAY) | 20"-150ANSI RFWN (STD BORE) | SA-105 | 1 | 170 | F1 | PTM-102/103 |
| | NECK | 20"OD X 3/8"PL X 5 5/16"LG | SA-516-70 | 1 | 35 | F1 | PTM-103/108 |
| | PAD (ROLL 65R) | 5/16"PL X 31"OD X 20 1/8"ID | SA-516-70 | 1 | 40 | N7G | PTM-108 |
| | BLIND | 20"-150ANSI RF BLIND FLGE | SA-105 | 1 | 272 | | |
| | GASKET | 20"-150# RF X 1/8"THK. GASKET | ASBESTOS | 1 | 1 | | |
| | STUDS | 1 1/8" X 6 3/4"LG C/W | SA-193-B7 | 20 | 52 | | |
| | HINGE | 2- HEX NUTS EACH | SA-194-2H | 1 | 24 | | |
| | HINGE | 20"-150# HINGE (STD-104-0-0) | SA-516-70/CS | 1 | 30 | | PTM-108 |
| M2 | FLGE (MANWAY) | 18"-150ANSI RFWN (17" BORE) | A-181-GR11 | 1 | 155 | F1 | PTM-102/103 |
| | NECK | 18"OD X 0.556"PL X 3 1/4"LG | A-212-B | 1 | 20 | N1G | PTM-103/108 |
| | PAD(ROLL TO DISH) | 5/16"PL X 27"OD X 18 1/8"ID | A-181-GR11 | 1 | 34 | N7G | PTM-108 |
| | BLIND | 18"-150ANSI RF BLIND FLGE | SA-105 | 1 | 209 | | |
| | GASKET | 18"-150# RF X 1/8"THK. GASKET | ASBESTOS | 1 | 1 | | |
| | STUDS | 1 1/8" X 5 3/4"LG C/W | SA-193-B7 | 16 | 41 | | |
| | HINGE | 2- HEX NUTS EACH | SA-194-2H | 1 | 24 | | |
| | HINGE | 18"-150# HINGE (STD-104-0-0) | SA-516-70/CS | 1 | 41 | | PTM-108 |
| C20 | CPLG (DRAIN) | 1/2"-3000# NPT FULL CPLG (1 5/8" OP'G) | SA-105 | 1 | 1 | | PTM-108 |
| | PLUG | 1/2"-3000# NPT HEX HD PLUG | SA-105 | 1 | 1 | | |
| C1-C7 | CPLG (SPARING) | 2"-3000# NPT FULL CPLG (3 1/8" OP'G) | SA-105 | 7 | 7 | M3-1 | PTM-108 |
| C8-C13 | CPLG (LG) | 3/4"-6000# NPT FULL CPLG (1 7/8" OP'G) | SA-105 | 8 | 4 | M3-1 | PTM-108 |
| C14 | CPLG (TI) | 3/4"-6000# NPT FULL CPLG (1 7/8" OP'G) | SA-105 | 1 | 1 | M3-1 | PTM-108 |
| C15 | CPLG (TI) | 3/4"-6000# NPT FULL CPLG (1 7/8" OP'G) | SA-105 | 1 | 1 | M3-1 | PTM-108 |
| C16 | CPLG (PI) | 1/2"-6000# NPT FULL CPLG (1 5/8" OP'G) | SA-105 | 1 | 1 | M3-1 | PTM-108 |
| C17 | CPLG (PI) | 1/2"-6000# NPT FULL CPLG (1 5/8" OP'G) | SA-105 | 1 | 1 | M3-1 | PTM-108 |
| C18-C19 | CPLG (LG) | 3/4"-6000# NPT FULL CPLG (1 7/8" OP'G) | SA-105 | 11 | 5 | M3-1 | PTM-108 |
| C29 | CPLG (VENT) | 1/2"-6000# NPT FULL CPLG (1 5/8" OP'G) | SA-105 | 1 | 1 | M3-1 | PTM-108 |
| | PLUG | 1/2"-6000# NPT HEX HD PLUG | SA-105 | 1 | 1 | | |

PORTA-TEST INC.
MANUFACTURING DIVISION