

SYMBOL DESCRIPTION

ITEMS WITHOUT SYMBOL LOCATED IN MAIN CONTROL PANEL

LOCATED AT GAS TRAIN

FIELD DEVICE

LOCATED AT BLOWER UNIT

19	9	
18	8	
17	7	
16	6	
15	5	
14	4	
13	3	
12	2	
11	1	
10		

REVISIONS

ISSUE DATE:

FILE NO. PROJ. 3390 #31402004

PLOT DATE:

Modern Equipment Company
 planning... engineering... manufacturing... erection
 BOX 266, PORT WASHINGTON, WISCONSIN 53074
 TELEPHONE: 414-284-9431 FAX: 414-284-9433
 AN ALCO INDUSTRIES INC. CO.

FOR SANDEN INTERNATIONAL
 LOCATION WYLE, TEXAS
 DESCRIPTION ELEMENTARY SCHEMATIC DIAGRAM AL-660

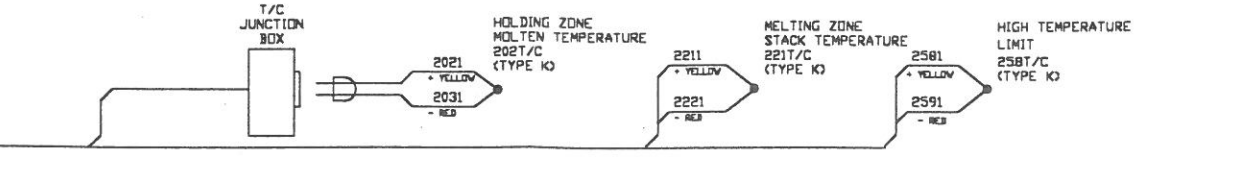
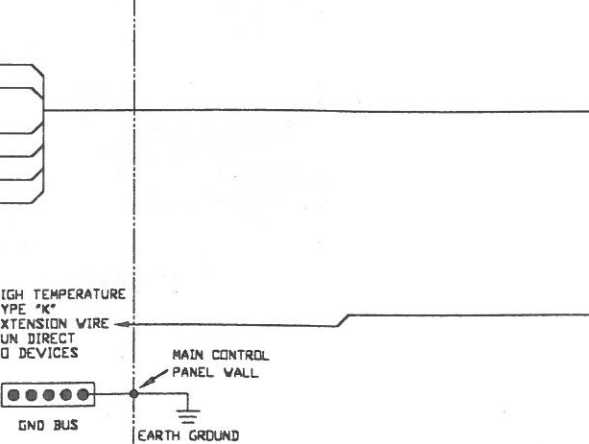
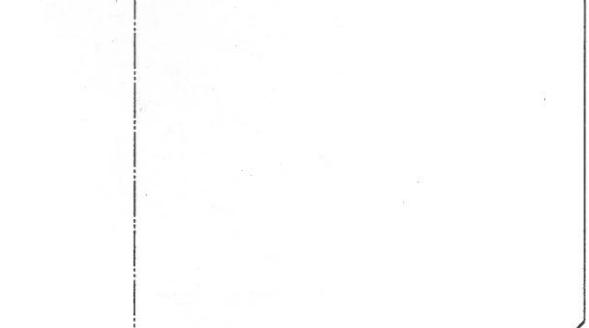
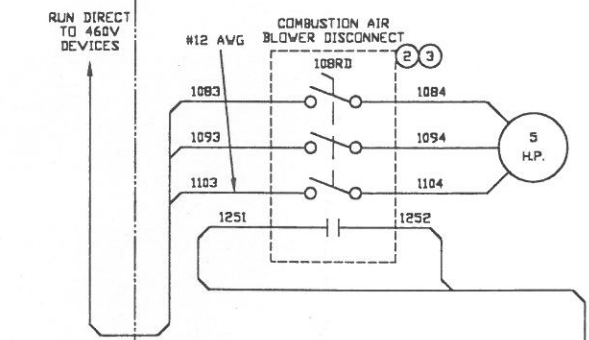
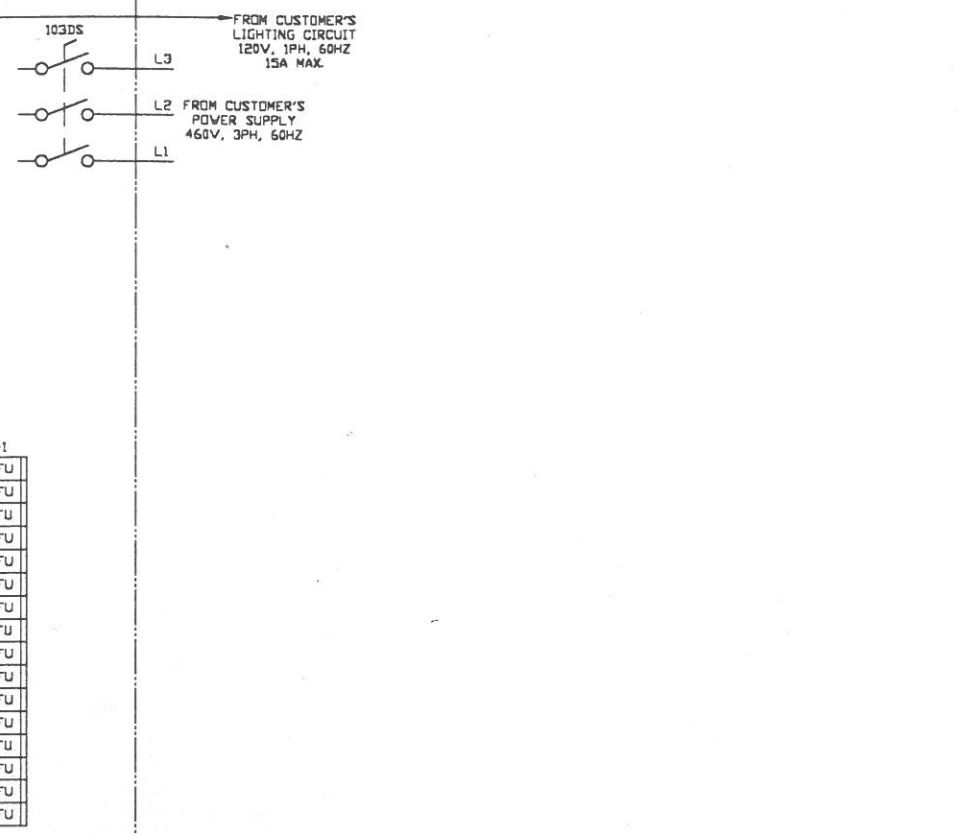
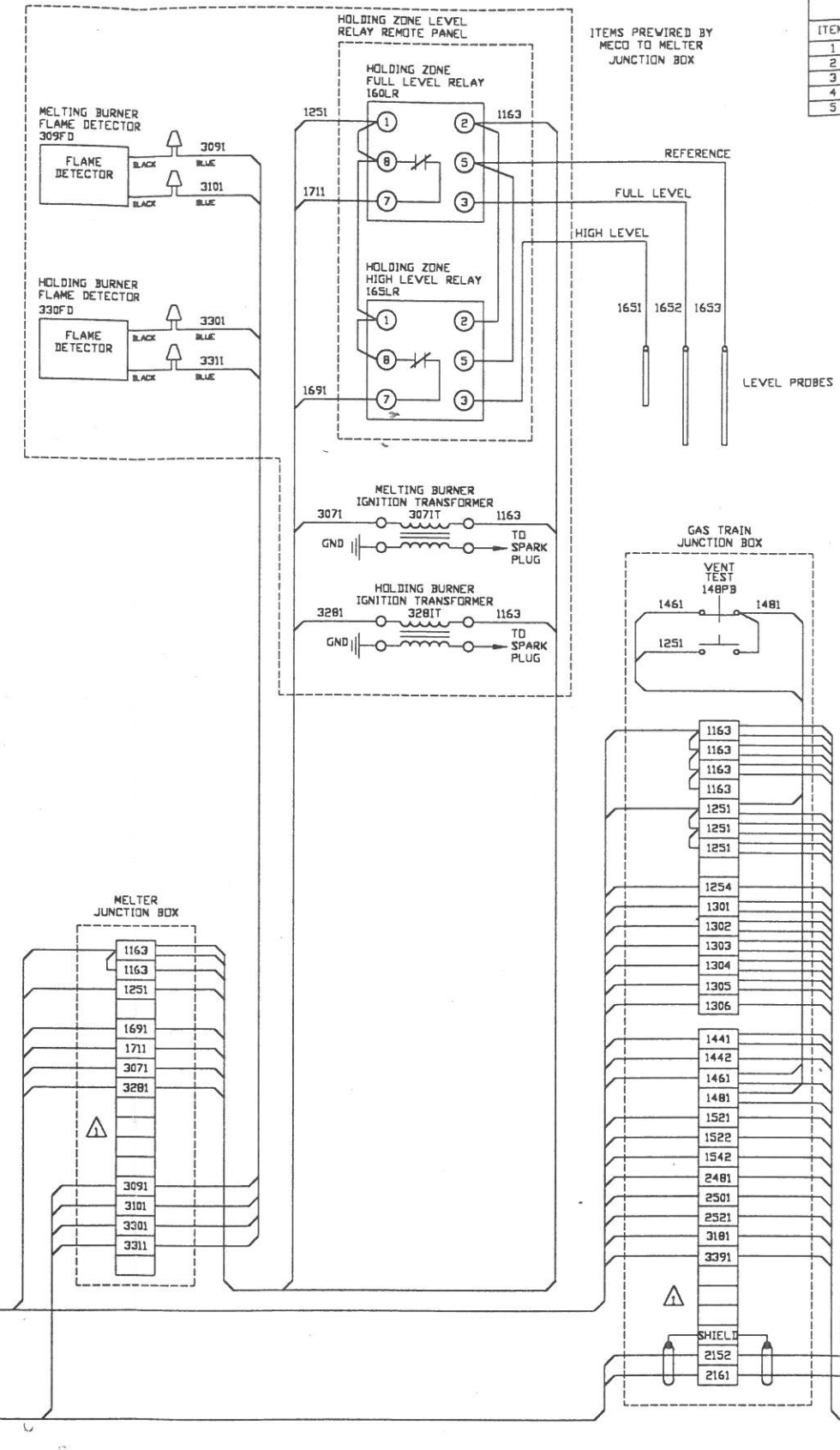
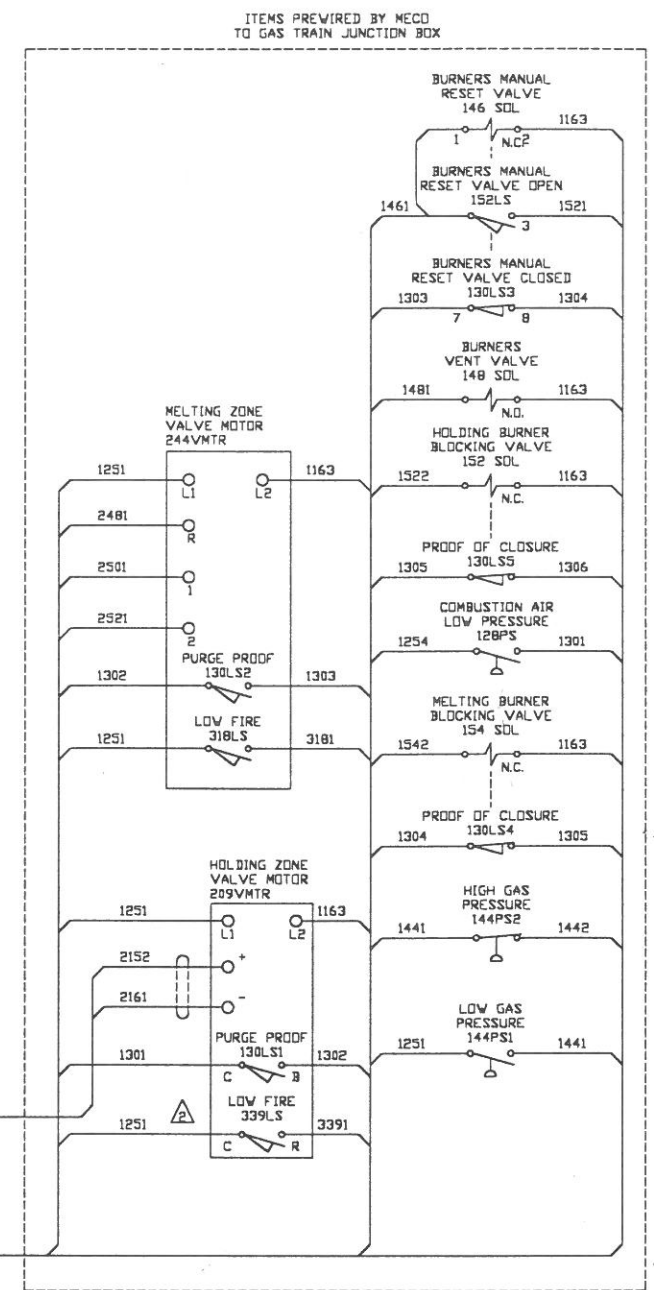
DRAWN BY DATE CHECKED BY DATE SHEET NO.
 R.J. MAKOUTZ 07-29-99
 DWG. NO. 5390-5140-2-004 SCALE N.T.S. CONTRACT 99-8809

THIS DRAWING IS THE CONFIDENTIAL PROPERTY OF MODERN EQUIPMENT COMPANY, AND IS LOANED IN CONFIDENCE UNDER AGREEMENT THAT THE INFORMATION SHOWN IS TO BE CONSIDERED PROPRIETARY, AND THAT THE DRAWING IS NOT TO BE REPRODUCED AND WILL BE RETURNED UPON REQUEST. THE DRAWING IS ALSO NOT TO BE COPIED, OR OTHERWISE DISPOSED OF WITHOUT OUR WRITTEN CONSENT AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT OUR CONSENT FOR THE MAKING OF OTHER DRAWINGS, PRINTS OR DEVICES THEREFROM. THESE CONDITIONS ARE AGREED TO BY THE ACCEPTANCE OF THIS DRAWING OR PRINT.

REMOTE PARTS LIST (BY MECO)

ITEM	QTY	DESCRIPTION	MECO NUMBER
1	1	MAIN CONTROL PANEL ASSEMBLY	0228-0301-5-103
2	1	ELECTRICAL INTERLOCK, C-H #DS200EK1	0228-0289-5-037
3	1	REMOTE DISCONNECT, 3-PDLE, 30A, C-H #DH361UDK	0228-0289-5-001
4			
5			

NOTE: ANY CONDUIT RUNS WITHIN 3' OF THE JET MELTER MUST USE HIGH TEMPERATURE SRML WIRE AND HIGH TEMPERATURE SEALTIGHT.



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19	9		
18	8		
17	7		
16	6		
15	5		
14	4		
13	3		
12	2	ADDED 120V & DELETED JUMPER	89-02-99
11	1	ADDED SPARK TERMINAL BLOCKS	89-08-99
10			
9			
8			
7			
6			
5			
4			
3			
2			
1			

FILE NO. PROJ. 3390 NS1402006
 PLOT DATE: _____
 ISSUE DATE: _____
 DRAWN BY: R.J. MAKOUTZ 67-89-99
 CHECKED BY: _____
 DATE: _____
 SHEET NO. 6
 DWG. NO. 5390-5140-2-006
 SCALE: N.T.S.
 CONTRACT: 99-8809

Modern Equipment Company
 planning... engineering... manufacturing... erection
 BOX 266, PORT WASHINGTON, WISCONSIN 53074
 TELEPHONE: 414-284-9431 FAX: 414-284-9433
 AN ALCO INDUSTRIES INC. CO.

FOR SANDEN INTERNATIONAL
 LOCATION: WYLE, TEXAS
 DESCRIPTION: INTERCONNECTION DIAGRAM FOR AL-660
 DRAWN BY: R.J. MAKOUTZ 67-89-99
 DATE: _____
 CHECKED BY: _____
 DATE: _____
 SHEET NO. 6
 DWG. NO. 5390-5140-2-006
 SCALE: N.T.S.
 CONTRACT: 99-8809

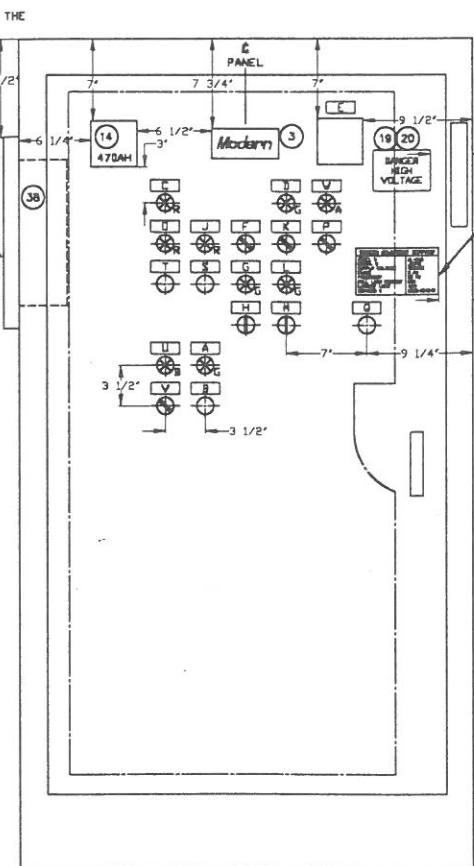
PARTS LIST

ITEM	QTY	DESCRIPTION	RSP	MECO NUMBER
1	1	ENCLOSURE, NEMA 12, 72"x39.50"x18"0, SAGINAW #SCE-72XM4018 W/SUBPANEL		0228-0286-5-218
2				
3	1	NAMEPLATE, "MODERN", MECO #148-2-32		0148-0052-2
4	1	DISCONNECT SWITCH, 600V, 30A, W/LONG CONNECT ROD, AB #1494V-DRL633		
5	1	CONTACTOR, 3-POLE, SIZE 1, 120V COIL, AB #500F-B0D93	1	
6	3	FUSE, 600V, 20A, BUSS #FRS-R-20	3	
7	2	FUSE, 600V, 6A, BUSS #FNO-R-6	2	
8	1	FUSE, 250V, 8A, BUSS #MDG-8	1	
9	3	FUSE, 600V, 15A, BUSS #FRS-R-15	3	
10	1	FUSE BLOCK, 3-POLE, 600V, 30A, MARATHON #6R30A3B		
11	1	TRANSFORMER, 480V-120V, 0.5 KVA, HEVI-DUTY #E550-3PB		
12	1	SURGE SUPPRESSOR, 120VAC, AB #1691-N3	1	
13	1	STARTER NON-REV. SIZE 1, 120V COIL AB# 509-B0D-A1F	1	
14	1	ALARM HORN, 120VAC, FEDERAL #350		
15	2	FLAME SIGNAL AMP, FIREYE #MAUV1	1	0228-0298-5-010
16	2	FLAME RELAY SYSTEM, FIREYE #MCI20	1	0228-0298-5-006
17	2	FLAME RELAY SYSTEM SUBBASE, FIREYE #61-3060	1	0228-0298-5-008
18	2	FLAME RELAY SYSTEM PROGRAMMER, FIREYE #MP100	1	0228-0298-5-007
19	1	NAMEPLATE, "DANGER - HIGH VOLTAGE", MECO STOCK #9880-0005		9880-0005
20	4	#2 DRIVE SCREWS FOR ABOVE NAMEPLATE, MECO STOCK #9903-1614		9903-1614
21	3	ILLUMINATED PUSHBUTTON, GREEN LENS, 1 NO-1 N.C., AB #800T-PB16G		
22	14	RELAY, 4-POLE, 120V COIL, 5A, W/INDICATOR, AB #700-HC24A1-4	2	
23	14	MOUNTING SOCKET FOR 4-POLE RELAY, W/MOUNTING TRACK, AB #700-HN12B	2	
24	2	TIMER, 120V, 5 MIN, EAGLE SIGNAL #8R17A6	1	
25	1	DUPLEX RECEPTACLE W/ BOX & COVER PLATE, 120V, 15A		
26	75	TERMINAL BLOCK, TRACK MOUNT, AB #1492-CAM1 W/END COVER AND CLAMPS		
27	1	GROUND BUS, COPPER, SQUARE D #PK12GTA		
28	1	PILOT LIGHT, TRANS., PUSH-TEST, AMBER LENS, AB #800T-PT16A		
29	21	NAMEPLATE, LAMICOID, 2 1/2" x 1", WHITE W/BLACK CORE, W/ENGRAVING		
30				
31	2	PUSH BUTTON, RED, EXTENDED HEAD, 1 N.C., AB #800T-B6A4		
32	1	PUSH BUTTON, YELLOW, FLUSH HEAD, AB #800T-A9D1		
33	1	PILOT LIGHT, TRANS., PUSH-TEST, BLUE LENS, AB #800T-PT16B		
34	1	PILOT LIGHT, TRANS., PUSH-TEST, GREEN LENS, AB #800T-PT16G		
35	3	PILOT LIGHT, TRANS., PUSH-TEST, RED LENS, AB #800T-PT16R		
36	1	PUSH BUTTON, RED, MUSH. HEAD, AB #800T-FXJ6A5		
37				
38	1	RECORDER/CONTROLLER, 2 PEN, T/C INPUT, HONEYWELL #DR45AT-1100-44-001	V	0228-0293-5-004
39	LOT	MOUNTING TRACK, AB #199-DR1		
40	LOT	MOUNTING TRACK, AB #1492-N44		
41	2	SELECTOR SWITCH, 3 POS., MAINT., AB #800T-J2A		
42	4	SELECTOR SWITCH, 2 POS., MAINT., AB #800T-H2B		
43	1	HI-TEMP LIMIT, TYPE "K", RELAY OUTPUT, HONEYWELL #DC200H-0-000-1F0000-0	1	0228-0291-5-008
44	1	NAMEPLATE, LAMICOID, WHITE W/BLACK CORE, 4" X 6", AS SHOWN ON PANEL		
45	1	MITSUBISHI PLC POWER SUPPLY, MITSUBISHI #A1S62PN	1	0228-0294-5-084
46	1	MITSUBISHI BASE UNIT, TWO SLOT, MITSUBISHI #A1S32B	1	0228-0294-5-140
47	1	MITSUBISHI PROCESSOR UNIT, MITSUBISHI #A1SHCPU	1	0228-0294-5-082
48	1	MITSUBISHI EEPROM MEMORY MODULE, MITSUBISHI #A1SNMCA-2KE	1	0228-0294-5-083
49	1	MITSUBISHI 16 POINT INPUT MODULE, MITSUBISHI #A1SX10	1	0228-0294-5-086
50	1	MITSUBISHI 16 POINT OUTPUT MODULE, MITSUBISHI #A1SY10	1	0228-0294-5-087
51	16	FUSE BLOCK, TRACK MOUNT, AB #1492-CE6, -EB, AND -N17		
52	16	FUSE PULLER, AB #1492-N12		
53	16	FUSE, 125V, 2A BUSS #FNA-2	5	
54				
55				

V = CALL VENDOR FOR RECOMMENDED SPARE PARTS

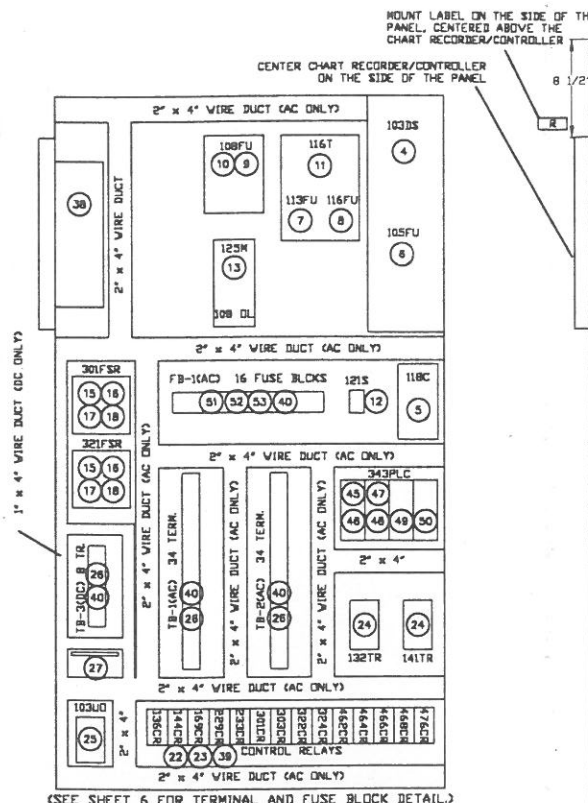
MODERN EQUIPMENT COMPANY
 MODEL # AL-660
 SERIAL # JMS43
 SUPPLY VOLTAGE 480VAC
 PHASE 3 PH
 FREQUENCY 60 HZ
 FULL LOAD CURRENT 20A
 LARGEST LOAD 7.6A
 DRAWING # 5390-5140-2

MAIN CONTROL PANEL



LETTER	ID. NO.	NAMEPLATE ENGRAVING	ITEM NO.
A	125PB2	COMBUSTION AIR BLOWER START	29, 21
B	125PB1	COMBUSTION AIR BLOWER STOP	29, 31
C	432PL	HOLDING ZONE HIGH LEVEL	29, 35
D	139PL	PURGE COMPLETE	29, 34
E	255TA	HIGH TEMPERATURE LIMIT	29, 43
F	339SS	HOLDING BURNER OFF RUN	29, 42
G	339PB	HOLDING BURNER IGNITION	29, 21
H	424SS	HOLDING ZONE LOW FIRE AUTO HIGH FIRE	29, 41
I			
J	472PL	HOLDING BURNER FLAME FAILURE	29, 35
K	318SS	MELTING BURNER OFF RUN	29, 42
L	318PB	MELTING BURNER IGNITION	29, 21
M	428SS	MELTING ZONE LOW FIRE AUTO HIGH FIRE	29, 41
N			
O	474PL	MELTING BURNER FLAME FAILURE	29, 35
P	408SS	BURNERS IGNITION RUN	29, 42
Q	144PB	EMERGENCY BURNERS OFF	29, 36
R	201R/C	TEMPERATURE RECORDER/CONTROLLER	29, 38
S	416PB	ALARM ACKNOWLEDGE	29, 31
T	418PB	ALARM RESET	29, 32
U	120PL	POWER ON	29, 33
V	118SS	POWER OFF ON	29, 42
W	134PL	PURGE IN PROGRESS	29, 28
X			
Y			
Z			

NOTE: MOUNT PILOT DEVICES ON 3 1/2" CENTERS UNLESS OTHERWISE NOTED.



(SEE SHEET 6 FOR TERMINAL AND FUSE BLOCK DETAIL.)

PANEL VENDOR TO MAKE NO SUBSTITUTIONS TO PARTS LIST

- ALL CONTROL WIRE TO BE #16 AVG. RATED AT 90° C. RED EXCEPT WHERE NOTED.
- ALL POWER WIRE TO BE #12 AVG. (MIN) RATED AT 90° C. BLACK.
- ALL DC WIRE TO BE #18 AVG. RATED AT 90° C. BLUE.
- ALL DC WIRE, T/C EXTENSION WIRE & SHIELDED CABLE TO BE KEPT SEPARATED FROM ALL AC WIRES.
- ITEM SUPPLIED TO PANEL VENDOR BY MODERN EQUIPMENT CO.
- ALL GROUND WIRES TO BE GREEN.
- ENCLOSURES TO BE PAINTED SANDEN BLUE #7. (SHERWIN-WILLIAMS, POLANE-8, #F63LX10386-7040)
- ALL DEVICES WILL HAVE A LAMICOID FOR IDENTIFICATION PER DESIGNATIONS ON ELEMENTARY DIAGRAMS.
- VENDOR TO SUPPLY MIN. 20X SPARE WIRE TO DOORS. LENGTH ABLE TO REACH ANY POINT ON SUBPANEL OR DOOR. LABELED AS TO LOCATION AND NUMBER.
- WIRE # MARKERS MUST BE EASILY READ, PERMANENTLY AFFIXED, AND RESISTANT TO SMUDGING OR BEING RUBBED OFF.
- LAMICOID WILL BE MOUNTED BY 6/32 SCREWS.

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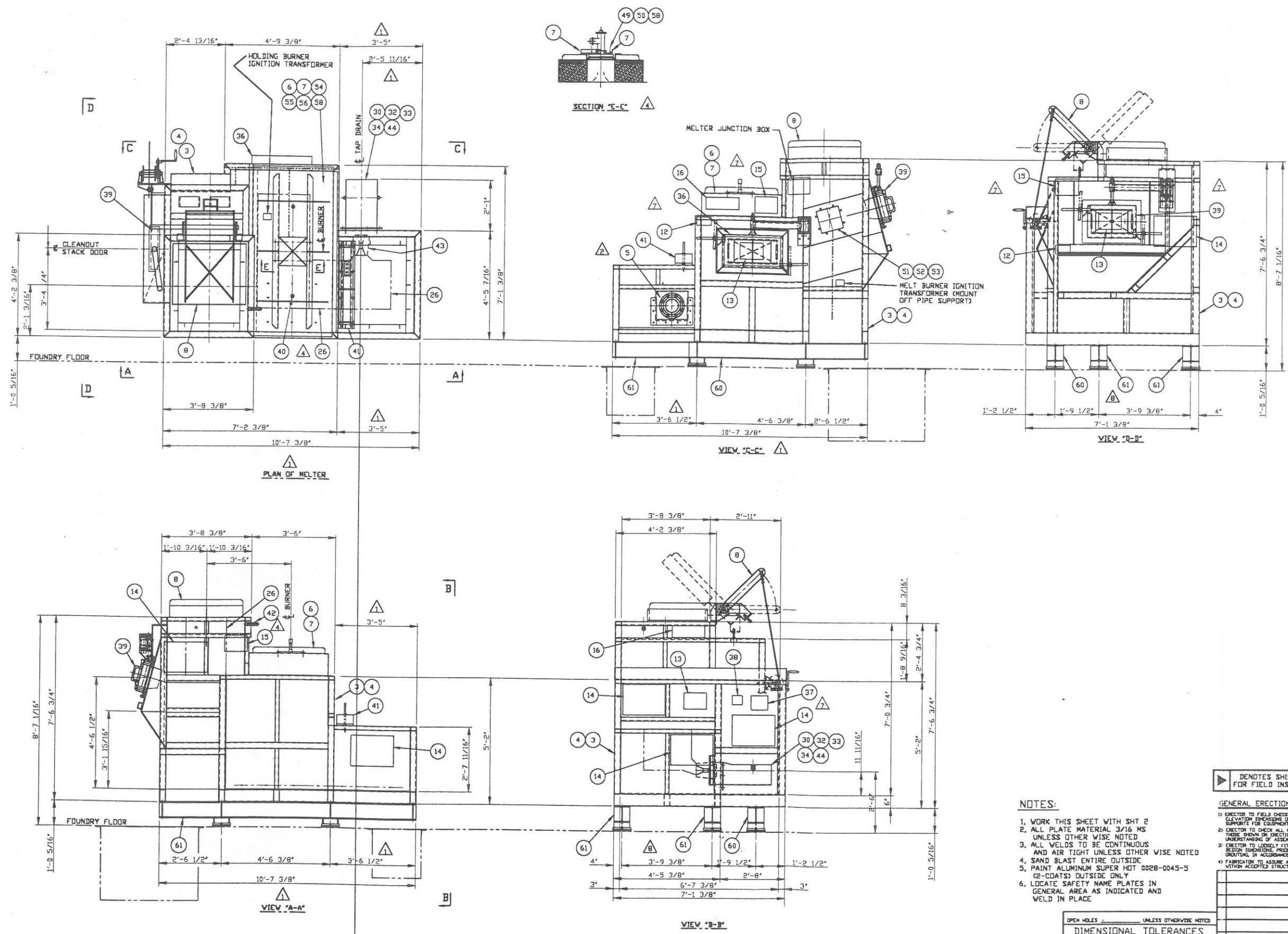
19	9
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12	2
11	1
10	

Modern Equipment Company
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 30X 266, PORT WASHINGTON, WISCONSIN 53074
 TELEPHONE: 414-284-9431 FAX: 414-284-9433
 AN ALCO INDUSTRIES INC. CO.

FOR SANDEN INTERNATIONAL
 LOCATION WYLE, TEXAS
 DESCRIPTION CONTROL PANEL LAYOUT AL-660

REVISIONS
 ISSUE DATE: _____
 DRAWN BY: R.J. MAKOUTZ DATE: 07-29-99
 CHECKED BY: _____ DATE: _____
 DWG. NO. 5390-5140-2-005
 SCALE: N.T.S.
 CONTRACT: 99-8809

FILE NO. PROJ. 5390 051402005
PLOT DATE



MATERIAL LIST				
NO.	REQD.	PART NUMBER	DESCRIPTION	WT.
1		5810-5048-4	1 - JET MELTER ASSEMBLY	
2				
3	1	0301-0434-4	MELTER SHELL 660	
4		0301-0435-4	MELTER SHELL 660 (DRAWING ONLY)	
5	1	0301-0099-3	TAP PORT (DRAWING ONLY)	
6	1	0301-0432-3-001	HEARTH COVER	
7	2	0301-0432-4-006	SUPPORT	
8	1	2180-2093-4	COVER STACK AL660	
9				
10				
11				
12	2	0168-0105-1-004	NAMEPLATE ZMS	
13	2	0168-0233-1-002	NAMEPLATE DNGR EXPLOSION	
14	6	0168-0196-1-002	NAMEPLATE HOT METAL	
15	2	0168-0227-1-002	NAMEPLATE CONFINED SPACE	
16	2	0168-0150-1-004	NAMEPLATE SERIAL PLATE	
17			MODEL: SB10-5050-4	
18			CONTR: 998809	
19			SERIAL: JM-543	
20			SIZE: 660W / HR	
21	1	0236-0004-3-001	TOOL	36
22	1	0236-0004-3-002	TOOL	41
23	1	0236-0004-3-003	TOOL	29
24	1	0236-0004-3-006	TOOL	45
25	1	0236-0004-3-004	TOOL	5
26	1	2750-1081-4	REFRACTORY ASSEMBLY (4 SHEETS)	
27				
28	1	2680-1415-4-001	PIPING BURNER 660	
29				
30	1	2900-1004-4	MANUAL TAP ASSY X 2'-10"	
31				
32	1	0092-0065-3-001	SPOUT X 2'-0"	
33	1	0092-0065-3-002	SPOUT BOLT	
34	1	0095-0819-1	GASKET SPOUT	
35				
36	1	2235-1109-4	HEARTH DOOR ASSEMBLY	
37	1	5390-5138-2-001	LEVEL RELAY JUNCTION BOX	
38	1	5390-5137-2-001	THERMOCOUPLE JUNCTION BOX	
39	1	2235-1080-4	DOOR ASSY STACK 1500	
40	1	0239-0025-5	THERMOCOUPLE X 2'-6" HRTH	
41	1	2600-1021-4	METAL LVL INDICATOR/TC	
42	1	0239-0024-5	THERMOCOUPLE X 1'-6" STK	
43	1	0303-0001-3	TAP BLK W/1 3/8" HOLE STD	
44	1	0309-0001-5	TAPPING CONE X 0'-2 1/8"	
45	1	2680-1415-4-002	BURNER GAS PIPING AL-660	
46	1	2680-1415-4-003	BURNER GAS PIPING AL-660	
47	1	2680-1420-1	PIPING AL-660	
48	1	5390-5140-2	CONTROL	
49	1	2165-1160-1	CONTROLS WIRING FURNACE	
50	4	9903-1446	FLAT WASHER 3/8"	
51	12	9903-1009	NUT HEX FULL 5/8-11NC	
52	12	9903-1448	FLAT WASHER 5/8"	
53	8	0096-0004-5	STUD	
54	4	9903-1206	SCR CAP 5/8-11NC X 1 1/2"	
55	4	9903-1009	HEX HUT FULL 5/8-11NC	
56	4	9903-1448	FLAT WASHER 5/8"	
57	4	9903-1477	LOCK WASHER 5/8"	
58	4	9903-1475	LOCK WASHER 3/8"	
59				
60	1	0301-0033-3-001	SUPPORT BEAM	
61	2	0301-0033-3-002	SUPPORT BEAMS	
62	4	9903-1006	NUT HEX FULL 3/8-16NC	
63		0309-0121-4	REFRACTORY ANCHOR DRAWING	
64		0309-0122-4	REFRACTORY ANCHOR DRAWING	
65		0309-0123-4	REFRACTORY ANCHOR DRAWING	
66		0309-0124-4	REFRACTORY ANCHOR DRAWING	

▶ DENOTES SHIP LOOSE FOR FIELD INSTALLATION

NOTES:

1. WORK THIS SHEET WITH SHT 2
2. ALL PLATE MATERIAL 3/16 MS UNLESS OTHERWISE NOTED
3. ALL WELDS TO BE CONTINUOUS AND AIR TIGHT UNLESS OTHERWISE NOTED
4. SAND BLAST ENTIRE OUTSIDE
5. PAINT ALUMINUM SUPER HOT 0028-0045-5 (2-COATS) OUTSIDE ONLY
6. LOCATE SAFETY NAME PLATES IN GENERAL AREA AS INDICATED AND WELD IN PLACE

GENERAL ERECTION & ASSEMBLY NOTES

1. ERECTOR TO FIELD CHECK AND VERIFY ACCURACY OF PLAN AND ELEVATION DIMENSIONS OF ALL CONCRETE AND/OR STEEL SUPPORTS FOR EQUIPMENT PRIOR TO START OF ERECTION
2. ERECTOR TO CHECK ALL PIPING WORK ON CONSTRUCTION THESE SHOWN ON ERECTION DRAWING TO ASSURE COMPLETE UNDERSTANDING OF ASSEMBLY PRIOR TO START OF ERECTION
3. ERECTOR TO LOOSELY FIT UP ENTIRE ASSEMBLY AND ESTABLISH FINAL BEIGN DIMENSIONS PRIOR TO FINAL BOLTING, FIELD WELDING AND/OR ORIENTAL IN ACCORDANCE WITH CURRENT ASSEMBLY STANDARDS
4. FABRICATOR TO ASSURE ACCURACY OF FABRICATED COMPONENTS, WITHIN ACCEPTED STRUCTURAL FABRICATOR TOLERANCES

MATERIAL SPECIFICATION NOTES

1. ALL STEEL SHALL CONFORM TO ASTM A572 GRADE 50 FOR MECHANICAL PROPERTIES, AND SHALL BE FABRICATED IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION
2. ALL STEEL SHALL CONFORM TO ANSI/AISC 360-10 (OR LATEST EDITION) STANDARDS FOR CONSTRUCTION
3. ALL BOLTS SHALL CONFORM TO ASTM A307 STANDARDS FOR MECHANICAL PROPERTIES UNLESS OTHERWISE SPECIFIED
4. WELDING PROCEDURES TO CONFORM TO AISC FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS
5. ALL STANDARD WELDING SYMBOLS WILL BE USED FOR THE DESIGNATION OF WELDS
6. ALL SHOP AND FIELD WELDED CONNECTIONS SHALL BE MADE WITH E70 ELECTRODES UNLESS OTHERWISE SPECIFIED

DIMENSIONAL TOLERANCES - UNLESS OTHERWISE SPECIFIED -		
SIZE	MACHINED	FRACTIONAL
UNDER 12"	± 0.010	± 1/32"
12" TO 24"	± 0.020	± 1/16"
24" TO 48"	± 0.032	± 3/32"
48" TO 72"	AS SPECIFIED	± 1/8"
72" TO 240"	AS SPECIFIED	± 1/4"
OVER 240"	AS SPECIFIED	± 3/8"

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ALL MACHINED SURFACES 1/2" CHAMFER AND WELD PREP'S ±2 1/2" CORNER RADIUS 0.5" MAX. BREAK ALL CORNERS AND REMOVE ALL BURRS

FILE NO. PROJ. 5810 #50484001
 DATE 08/26/99
 REFERENCE: 5810-5032-4 (AL1500)
 5000-6105-4

Modern Equipment Company
 planning... engineering... manufacturing... erection
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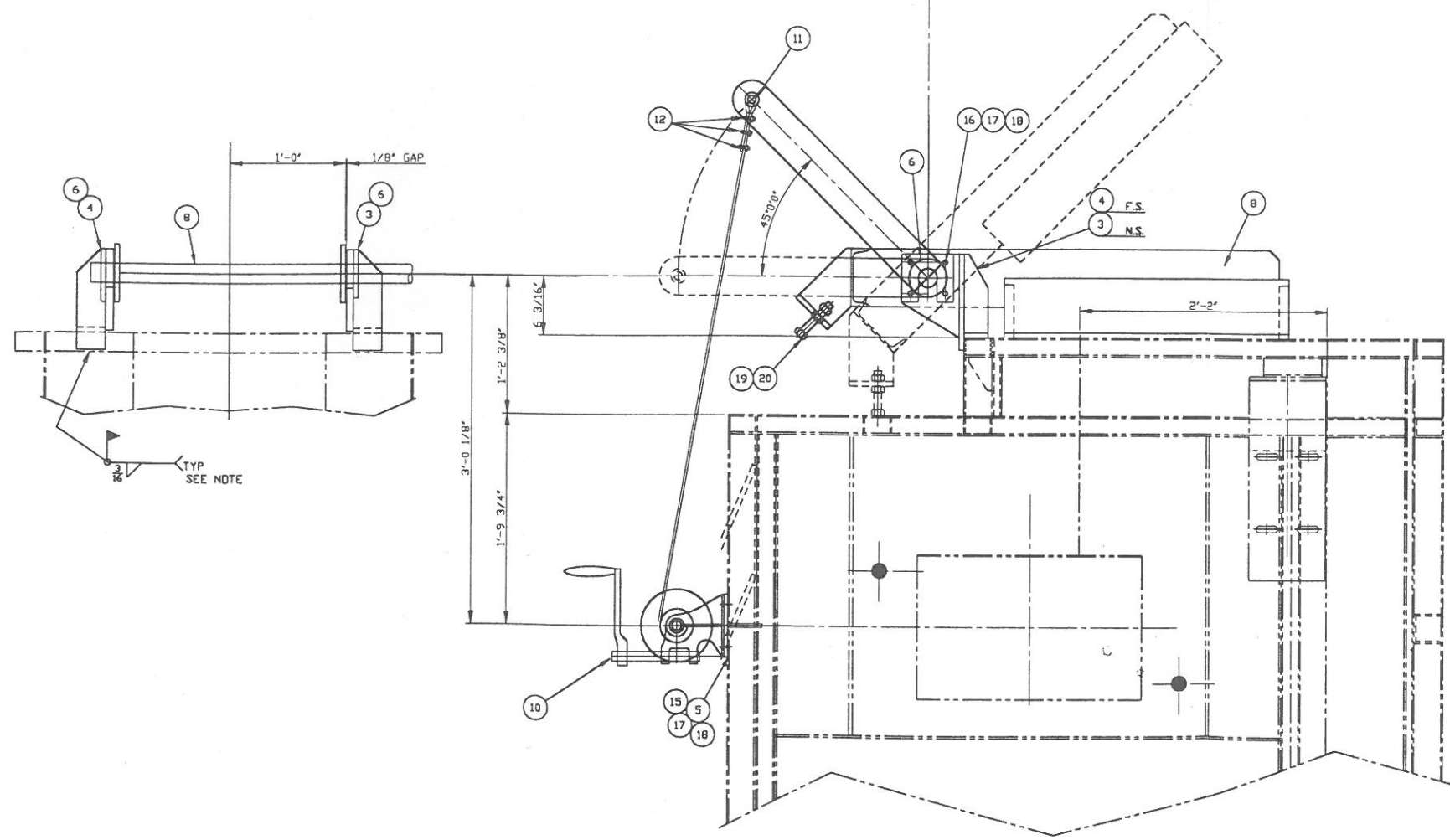
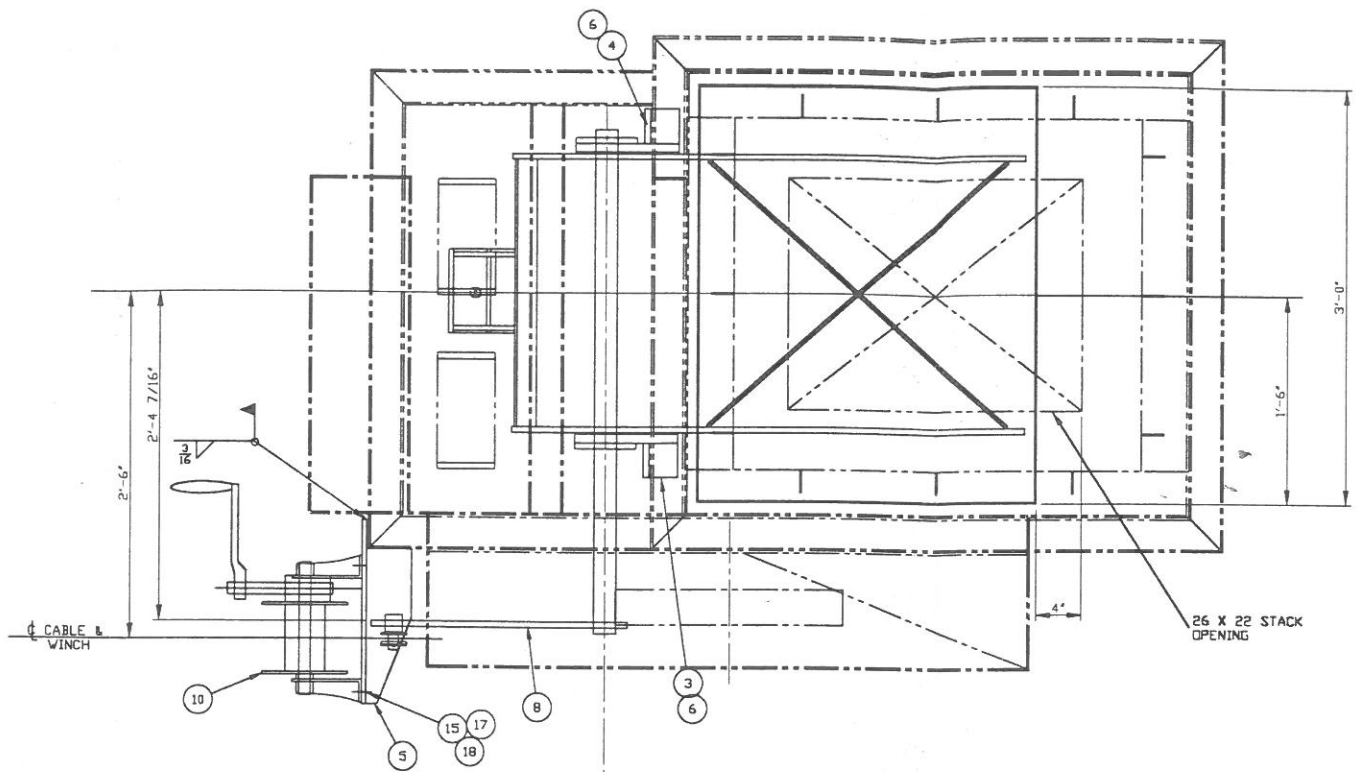
FOR SANDEN INTERNATIONAL
 LOCATION WYLIE, TEXAS
 DESCRIPTION AL660 JET MELTER

DRAWN BY: DATE: CHECKED BY: DATE: SHEET NO. OF 1
 7-8-99/DF

DWG. NO. 5810-5048-4
 SCALE 1/2" = 1'-0"
 CONTRACT 998809

MATERIAL LIST

NO. REQD	PART NUMBER	DESCRIPTION	WT.
1	2180-2093-4	1-COVER ASSEMBLY	
2			
3	0301-0432-4-002	BRACKET (AS SHOWN)	
4	0301-0432-4-003	BRACKET (OPPOSITE HAND)	
5	0301-0432-4-004	BRACKET	
6	0301-0432-4-005	KEEPER PLATE	
7			
8	0301-0433-4	STACK COVER	
9			
10	0112-0001-5	WINCH	44
11	0086-0001-5	THIMBLE	
12	0085-0001-5	ROPE CLIP	
13	0026-0024-5	CABLE (1/4") X 10'-0"	
14			
15	9903-2168	SCR CAP 1/2-13NC X 1 1/2	
16	9903-1197	SCR CAP 1/2-12NC X 2 3/4"	
17	9903-1007	HEX NUT FULL 1/2-13NC	
18	9903-1476	LOCK WASHER 1/2"	
19	9903-1232	CSR CAP 3/4-10NC X 4 1/2"	
20	9903-1010	HEX NUT FULL 3/4-10NC	
21			
22			
23		SANDBLAST COMPLETE OUTSIDE	
24	0280-0045-5	PAINT ALUMINUM SUPER HOT (2-COATS)	
25		(PAINT OUTSIDE ONLY)	



NOTE:
DO NOT WELD BRACKETS
ITEM 3 & 4 IN PLACE UNTIL COVER
IS LINED WITH 6" INSULATION
AND IS INSTALLED ON STACK
AND BRACKETS HAVE BEEN ADJUSTED

GENERAL ERECTION & ASSEMBLY NOTES

- ERECTOR TO FIELD CHECK AND VERIFY ACCURACY OF PLAN AND ELEVATION DIMENSIONS OF ALL GEOMETRIC AND/OR STEEL SUPPORTS FOR EQUIPMENT PRIOR TO START OF ERECTION.
- ERECTOR TO CHECK ALL PIECE MARKS ON EQUIPMENT AGAINST THOSE SHOWN ON ERECTION DRAWING TO ASSURE COMPLETE UNDERSTANDING OF ASSEMBLY PRIOR TO START OF ERECTION.
- ERECTOR TO LOOSELY FIT UP OVER ASSEMBLY AND ESTABLISH FINAL DESIGN DIMENSIONS PRIOR TO FINAL HOLD-UP, FIELD WELDING AND/OR ORIENTING IN ACCORDANCE WITH CURRENT ASSESSMENT STANDARDS.
- FABRICATOR TO ASSURE ACCURACY OF FABRICATED COMPONENTS, WITHIN ACCEPTED STRUCTURAL FABRICATION TOLERANCES.

MATERIAL SPECIFICATION NOTES

- ALL STEEL SHALL CONFORM TO ASTM/AISI STANDARDS FOR MINIMUM MECHANICAL PROPERTIES AND SHALL BE FABRICATED IN ACCORDANCE WITH THE RECOMMENDED PRACTICES OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- ALL STEEL SHALL CONFORM TO ASTM/AISI/AASHTO OR LATEST EDITION STANDARDS FOR DIMENSIONAL TOLERANCES.
- ALL BOLTS SHALL CONFORM TO ASTM/AISI STANDARDS FOR MINIMUM MECHANICAL PROPERTIES UNLESS OTHERWISE SPECIFIED.
- WELDING PROCEDURES TO CONFORM TO AISC FOR DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- ALL STANDARD WELDING SYMBOLS WILL BE USED FOR THE DESIGNATION OF WELDS.
- ALL SHOP AND FIELD WELDED CONNECTIONS SHALL BE MADE WITH E70 SERIES ELECTRODES UNLESS OTHERWISE SPECIFIED.

OPEN HOLES - UNLESS OTHERWISE NOTED

DIMENSIONAL TOLERANCES - UNLESS OTHERWISE SPECIFIED -

SIZE	MACHINED	FRACTIONAL
UNDER 12"	.010	± 1/32"
12" TO 24"	.020	± 1/16"
24" TO 48"	.032	± 3/32"
48" TO 72"	AS SPECIFIED	± 1/8"
72" TO 240"	AS SPECIFIED	± 1/4"
OVER 240"	AS SPECIFIED	± 3/8"

ALL MACHINED SURFACES 18° CHAMFER AND WELD PREP'S ± 1/2" CORNER RADIUS .06" MAX. BREAK ALL CORNERS AND REMOVE ALL BURRS

Modern Equipment Company
planning . . . engineering . . . manufacturing . . . erection

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TELEPHONE: 414-284-9431 FAX: 414-284-9433
AN ALCO INDUSTRIES INC. CO.

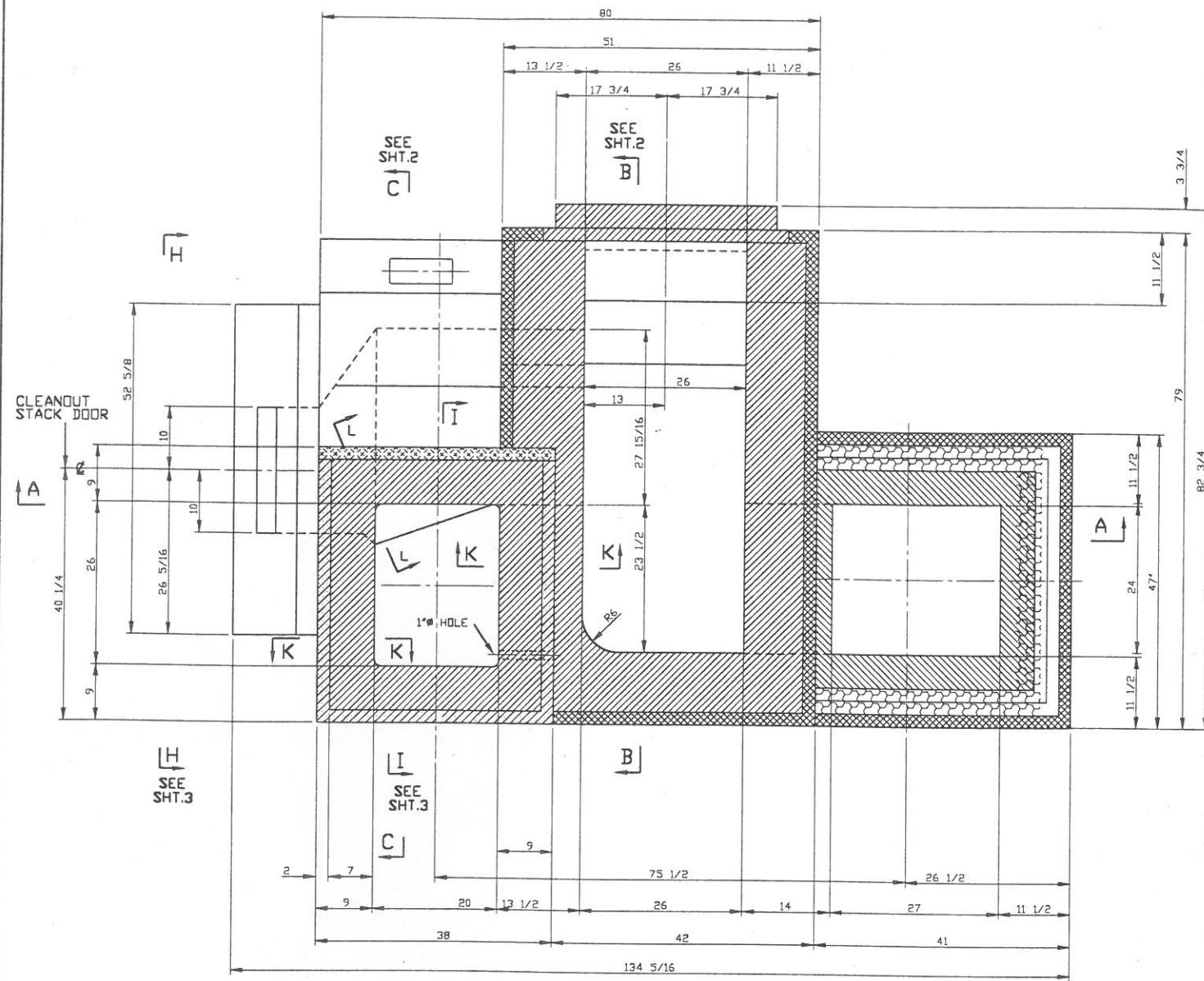
FOR: _____
LOCATION: _____
DESCRIPTION: AL 660 STACK COVER

REVISIONS

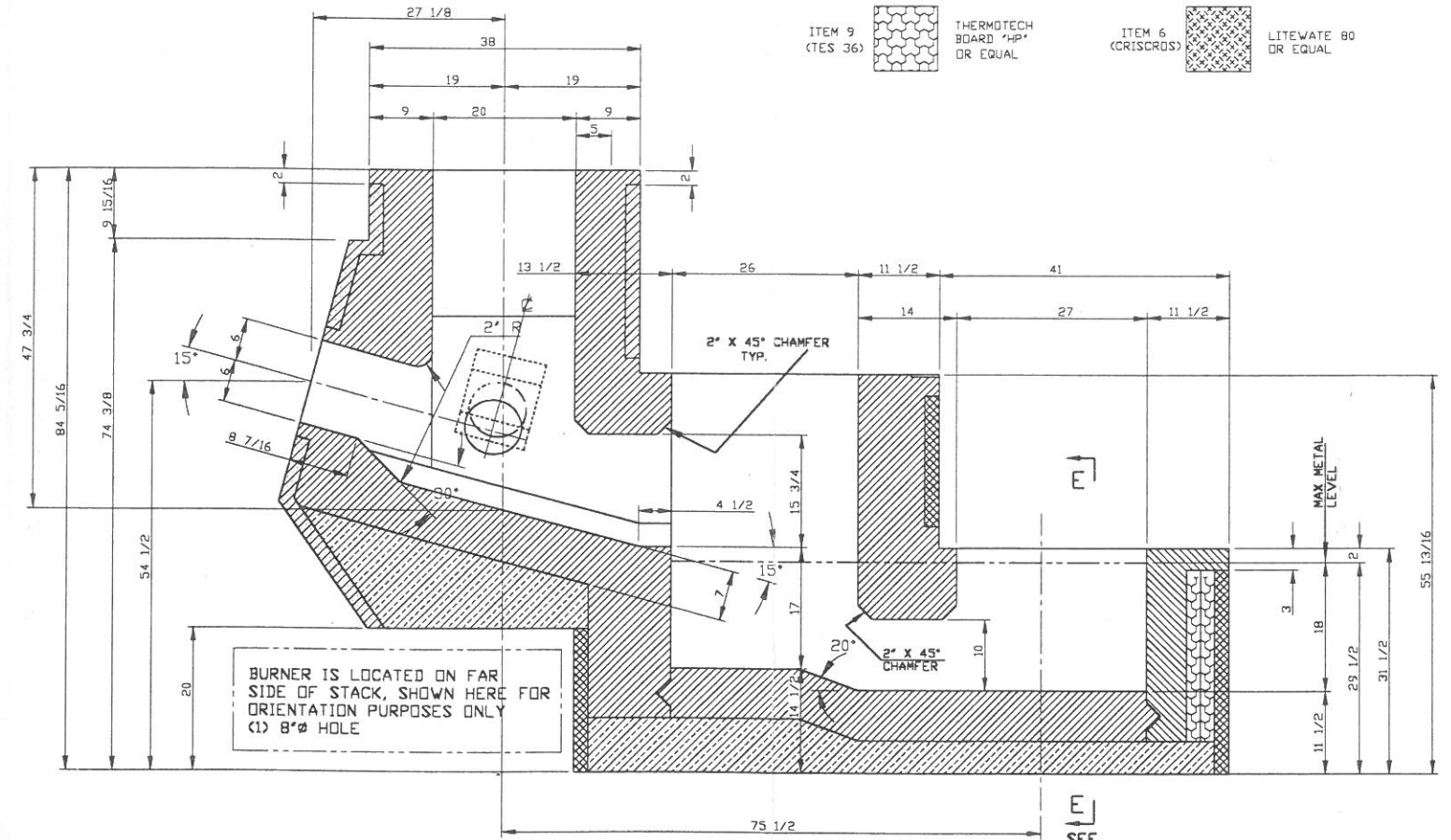
NO.	DATE	DESCRIPTION

FILE NO. PROJ 2180 #20934000
DRAWN BY: _____ DATE CHECKED BY: _____ SHEET NO. 1 OF 1
PLOT DATE: 09/03/99 REFERENCED: 2180-2049-4 DWG. NO. 2180-2093-4
VOR E998809F CONTRACT 998809

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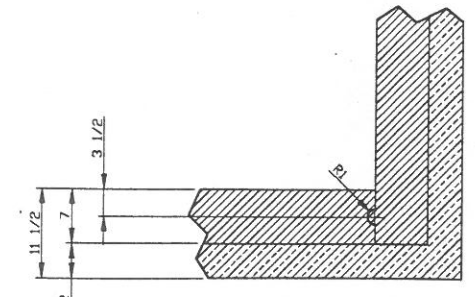


PLAN OF ALUMINUM MELTER

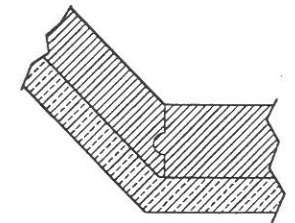


SECTION "A-A"

- | | | | |
|--------------------|--------------------------------|-------------------|--|
| ITEM 10 (SACNCR) | THERMOTEC BOARD "A" OR EQUAL | ITEM 1 (ANSI31) | ALUGARD 70 XL NON-WETTING CAST OR EQUAL |
| ITEM 11 (AR-HBONE) | PREMAX HTZ-12 MODULES OR EQUAL | ITEM 2 (ANSI32) | CRITERION 60 LOW CEMENT ABRASIVE RESISTANT CAST OR EQUAL |
| ITEM 12 (CROSS) | THERMOTEC BOARD "AR" OR EQUAL | ITEM 3 (ANSI33) | ALUGARD H&B HIGH DUTY NON-WETTING CAST OR EQUAL |
| ITEM 7 (NET3) | BLUE RAM HS PLASTIC OR EQUAL | ITEM 4 (ANSI37) | CAL-SIL INSULATION (1900 DEGREES) OR EQUAL |
| ITEM 8 (ZIG-ZAG) | 1" BLANKET 8 PCF OR EQUAL | ITEM 5 (ANSI38) | ALUGARD 75 LW INSULATING NON-WETTING CAST OR EQUAL |
| ITEM 9 (TES 36) | THERMOTEC BOARD "HP" OR EQUAL | ITEM 6 (CRICROSS) | LITWATE 80 OR EQUAL |



SECTION "K-K"
TYPICAL JOINT DETAIL AT BOTTOM OF STACK



SECTION "L-L"
TYPICAL JOINT DETAIL AT BOTTOM OF STACK

- GENERAL ERECTION & ASSEMBLY NOTES**
- 1) ERECTOR TO FIELD CHECK AND VERIFY ACCURACY OF PLAN AND ELEVATION DIMENSIONS OF ALL CONCRETE AND/OR STEEL SUPPORTS FOR EQUIPMENT PRIOR TO START OF ERECTION.
 - 2) ERECTOR TO CHECK ALL PIECE MARKS ON EQUIPMENT AGAINST THESE SHOWN ON ERECTION DRAWING TO ASSURE COMPLETE UNDERSTANDING OF ASSEMBLY PRIOR TO START OF ERECTION.
 - 3) ERECTOR TO LOOSELY FIT UP ENTIRE ASSEMBLY AND ESTABLISH FINAL DESIGN DIMENSIONS PRIOR TO FINAL SET-UP. FIELD WELDING AND/OR ORIENTAL IN ACCORDANCE WITH CURRENT ASCE ERECTION STANDARDS.
 - 4) FABRICATOR TO ASSURE ACCURACY OF FABRICATED COMPONENTS, WITHIN ACCEPTED STRUCTURAL FABRICATION TOLERANCES.

- MATERIAL SPECIFICATION NOTES**
- 1) ALL STEEL SHALL CONFORM TO ASTM STANDARDS FOR MECHANICAL PROPERTIES AND SHALL BE FABRICATED IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
 - 2) ALL STEEL SHALL CONFORM TO ANSI/AISC 360 OR LATEST EDITION STANDARDS FOR DIMENSIONAL TOLERANCES.
 - 3) ALL BOLTS SHALL CONFORM TO ASTM STANDARDS FOR MECHANICAL PROPERTIES UNLESS OTHERWISE SPECIFIED.
 - 4) WELDING PROCEDURES TO CONFORM TO ASSE FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
 - 5) ASSE STANDARDS WELDING SYMBOLS WILL BE USED FOR THE DESIGNATION OF WELDS.
 - 6) ALL SHEET AND FIELD WELDED CONNECTIONS SHALL BE MADE WITH E70 SERIES ELECTRODES UNLESS OTHERWISE SPECIFIED.

DIMENSIONAL TOLERANCES - UNLESS OTHERWISE SPECIFIED -	
SIZE	FRACTIONAL
UNDER 12"	± 1/32"
12" TO 24"	± 1/16"
24" TO 48"	± 3/32"
48" TO 72"	± 1/8"
72" TO 240"	± 1/4"
OVER 240"	± 3/8"

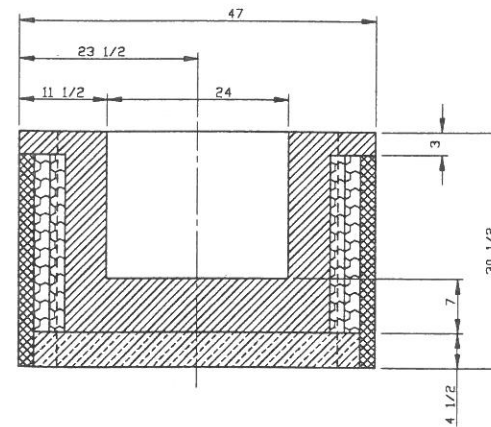
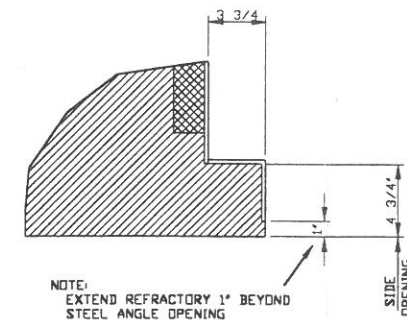
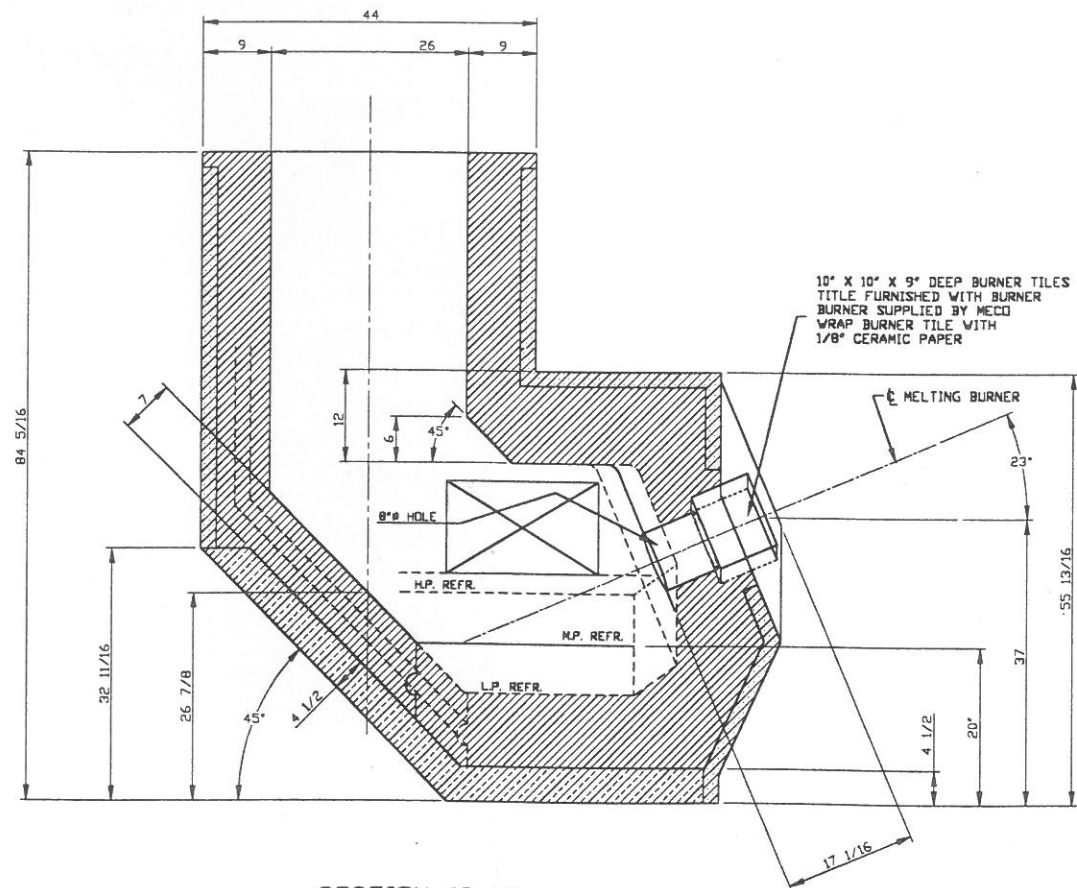
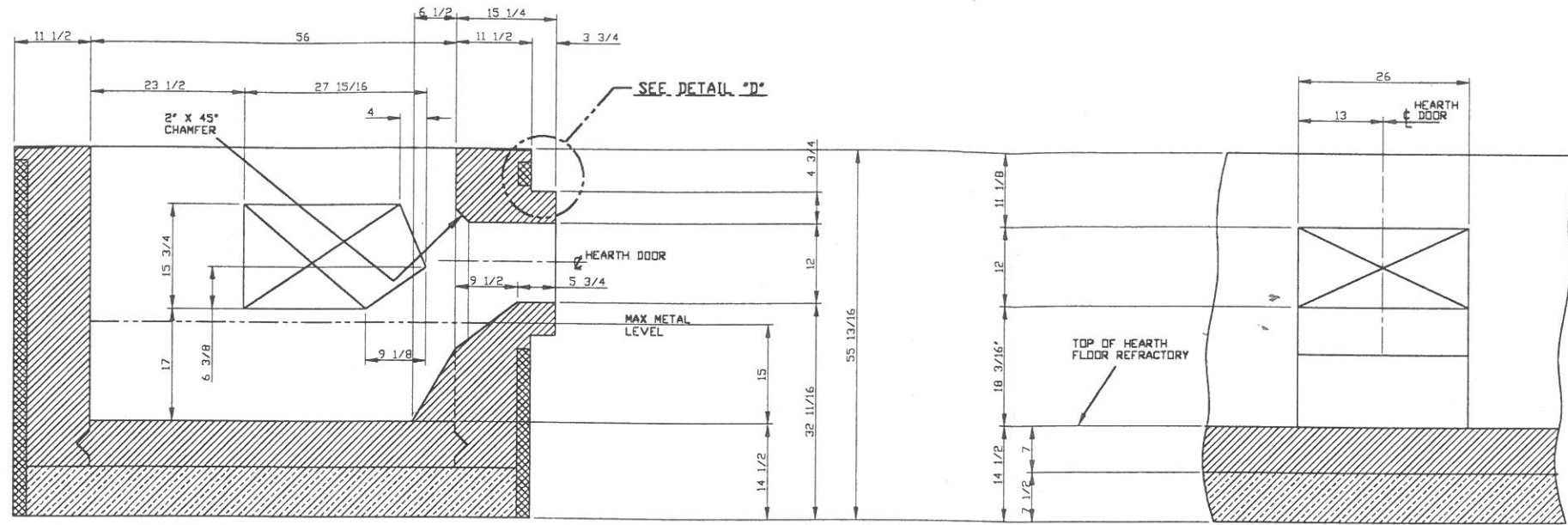
ALL MACHINED SURFACES 1/8" CHAMFER AND WELD PREP'S ± 1/2" CORNER RADII .06" MAX. BREAK ALL CORNERS AND REMOVE ALL BURRS

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 TELEPHONE: 414-284-9431 FAX: 414-284-9433
 AN ALCO INDUSTRIES INC. CO.

FOR SANDEN INTERNATIONAL
 LOCATION WYLLIE, TEXAS
 DESCRIPTION AL-6608 JET MELTER REFRACTORY

FILE NO. PROJ. 2750 W10814001	DATE CHECKED BY 7-13-99	SHEET NO. 1 OF 4
DATE 07/23/99	DATE 6-17-99	SCALE 1"=1'-0"
REFERENCES: 2750-1079-4-001	NO. 2750-1081-4-001	CONTRACT 998809

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- ITEM 1 (ANSI131) ALUGARD 70 XL NON-WETTING CAST OR EQUAL
- ITEM 2 (ANSI132) CRITERION 60 LOW CEMENT ABRASIVE RESISTANT CAST OR EQUAL
- ITEM 3 (ANSI133) ALUGARD H&B HIGH DUTY NON-WETTING CAST OR EQUAL
- ITEM 4 (ANSI137) CAL-SIL INSULATION (1900 DEGREES) OR EQUAL
- ITEM 5 (ANSI138) ALUGARD 75 LW INSULATING NON-WETTING CAST OR EQUAL
- ITEM 6 (CRISCRDS) LITEWATE 80 OR EQUAL
- ITEM 7 (NET3) BLUE RAM HS PLASTIC OR EQUAL
- ITEM 8 (ZIG-ZAG) 1" BLANKET B PCF OR EQUAL
- ITEM 9 (TES 36) THERMOTECH BOARD "HP" OR EQUAL
- ITEM 10 (SACNCR) THERMOTECH BOARD "A" OR EQUAL
- ITEM 11 (AR-HBDNE) PREMAX HTZ-12 MODULES OR EQUAL
- ITEM 12 (CROSS) THERMOTECH BOARD "AR" OR EQUAL

GENERAL ERECTION & ASSEMBLY NOTES

- 1) ERECTOR TO FIELD CHECK AND VERIFY ACCURACY OF PLAN AND ELEVATION DIMENSIONS OF ALL CONCRETE AND/OR STEEL SUPPORTS FOR EQUIPMENT PRIOR TO START OF ERECTION.
- 2) ERECTOR TO CHECK ALL FIELD MARKS ON EQUIPMENT AGAINST THOSE SHOWN ON ERECTION DRAWING TO ASSURE COMPLETE UNDERSTANDING OF ASSEMBLY PRIOR TO START OF ERECTION.
- 3) ERECTOR TO LOOSELY FIT UP ENTIRE ASSEMBLY AND ESTABLISH FINAL DIMENSIONS PRIOR TO FINAL BOLT-UP, FIELD WELDING AND/OR GROUTING IN ACCORDANCE WITH CURRENT ASME ERECTOR STANDARDS.
- 4) FABRICATOR TO ASSURE ACCURACY OF FABRICATED COMPONENTS WITHIN ACCEPTED STRUCTURAL FABRICATION TOLERANCES.

MATERIAL SPECIFICATION NOTES

- 1) ALL STEEL SHALL CONFORM TO ASTM STANDARDS FOR MECHANICAL PROPERTIES AND SHALL BE FABRICATED IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION STANDARDS FOR STRUCTURAL TOLERANCE.
- 2) ALL STEEL SHALL CONFORM TO AISC/AASHTO/AAS-78 OR LATEST EDITION.
- 3) ALL BOLTS SHALL CONFORM TO ASTM A307 STANDARDS FOR MECHANICAL PROPERTIES UNLESS OTHERWISE SPECIFIED.
- 4) WELDING PROCEDURES TO CONFORM TO AISC FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- 5) AISC STANDARD WELDING SYMBOLS WILL BE USED FOR THE DESIGNATION OF WELDS.
- 6) ALL SHOP AND FIELD WELD CONNECTIONS SHALL BE MADE WITH E70 SERIES ELECTRODES UNLESS OTHERWISE SPECIFIED.

UNLESS OTHERWISE NOTED

DIMENSIONAL TOLERANCES - UNLESS OTHERWISE SPECIFIED -		
SIZE	MACHINED	FRACTIONAL
UNDER 1/2"	.010	± 1/32"
1/2" TO 24"	.020	± 1/16"
24" TO 48"	.032	± 3/32"
48" TO 72"	AS SPECIFIED	± 1/8"
72" TO 240"	AS SPECIFIED	± 1/4"
OVER 240"	AS SPECIFIED	± 3/8"

ALL MACHINED SURFACES 1/8" CHAMFER AND WELD PREP'S 42 1/2" CORNER RADII .06" MAX BREAK ALL CORNERS AND REMOVE ALL BURRS

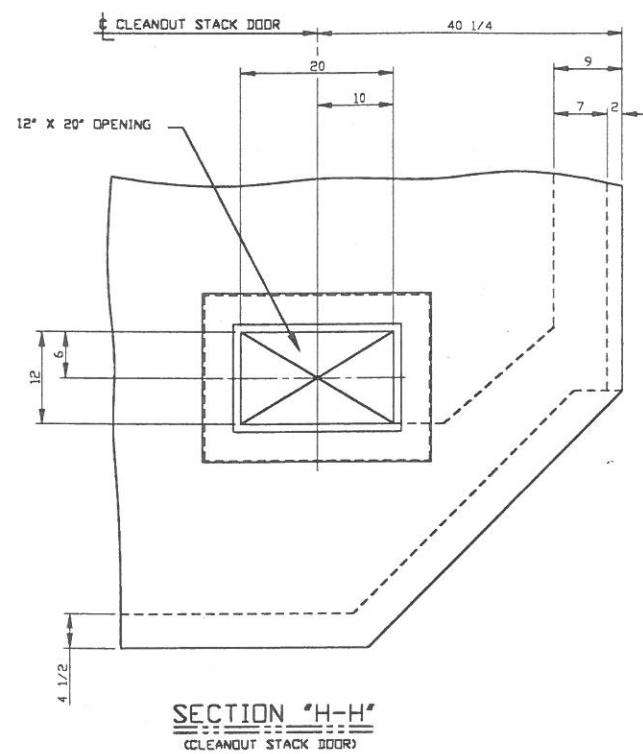
REVISIONS			
NO.	DATE	BY	REASON

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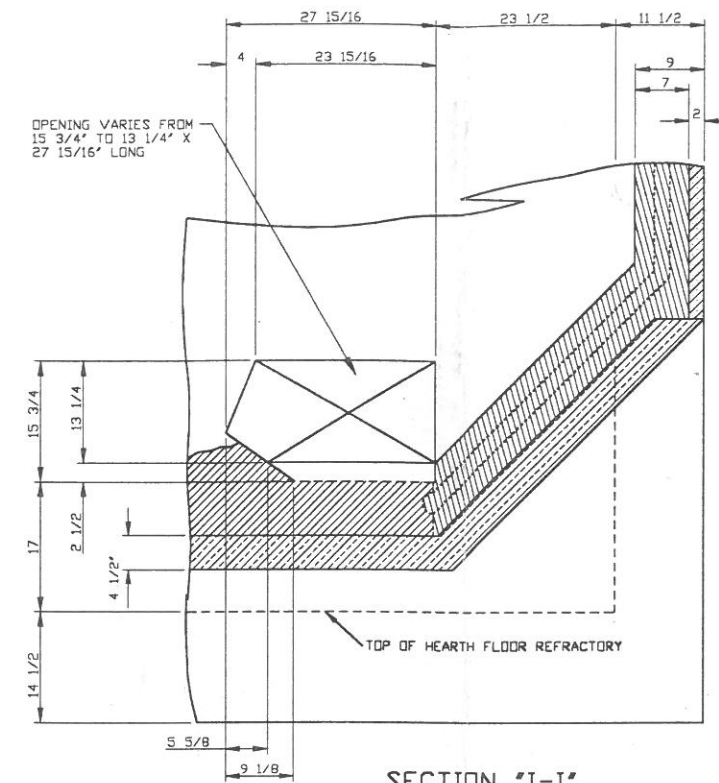
FOR SANDEN INTERNATIONAL
 LOCATION WYLIE, TEXAS
 DESCRIPTION AL-6608 JET MELTER REFRACTORY

FILE NO. PROJ 2750 H10814002
 DRAWN BY M.W. DATE CHECKED BY J.P. DATE 7-13-99 SHEET NO. 2 OF 4
 17/23/99 REFERENCED: 2750-1079-4-001 DWG. NO. 2750-1081-4-002 CONTRACT 9988009

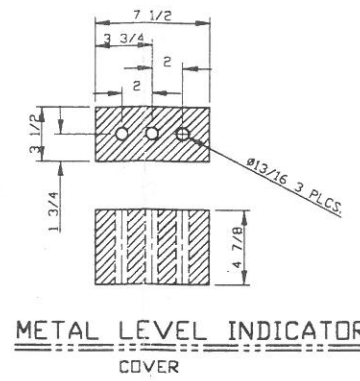
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SECTION "H-H"
(CLEANOUT STACK DOOR)



SECTION "I-I"
(OPENING BETWEEN STACK & HEARTH)



METAL LEVEL INDICATOR
COVER

- ITEM 1 (ANSI31) ALUGARD 70 XL NON-WETTING CAST OR EQUAL
- ITEM 2 (ANSI32) CRITERION 60 LOW CEMENT ABRASIVE RESISTANT CAST OR EQUAL
- ITEM 3 (ANSI33) ALUGARD H&B HIGH DUTY NON-WETTING CAST OR EQUAL
- ITEM 4 (ANSI37) CAL-SIL INSULATION (1900 DEGREES) OR EQUAL
- ITEM 5 (ANSI38) ALUGARD 75 LW INSULATING NON-WETTING CAST OR EQUAL
- ITEM 6 (CRISCROS) LITEWATE 80 OR EQUAL
- ITEM 7 (NET3) BLUE RAM HS PLASTIC OR EQUAL
- ITEM 8 (ZIG-ZAG) 1" BLANKET 8 PCF OR EQUAL
- ITEM 9 (TES 36) THERMOTEC BOARD "HP" OR EQUAL
- ITEM 10 (SACNCR) THERMOTEC BOARD "A" OR EQUAL
- ITEM 11 (AR-HBONE) PREMAX HTZ-12 MODULES OR EQUAL
- ITEM 12 (CROSS) THERMOTEC BOARD "AR" OR EQUAL

- NOTES:
- 1) ALL REQUIRED REFRACTORY ANCHORS SUPPLIED BY REFRACTORY CONTRACTOR.
 - 2) REFRACTORY CONTRACTOR TO SPECIFY ANCHOR LOCATION AND MODULES LAYOUT.
 - 3) REFRACTORY CONTRACTOR TO SUPPLY DRYOUT SCHEDULE.
 - 4) MODERN EQUIPMENT CO. TO SUPPLY TAPPING BLOCKS.
 - 5) ROUND ALL CORNERS OF REFRACTORY.

- GENERAL ERECTION & ASSEMBLY NOTES
- 1) ERECTOR TO FIELD CHECK AND VERIFY ACCURACY OF PLAN AND ELEVATION DIMENSIONS OF ALL CONCRETE AND/OR STEEL SUPPORTS FOR EQUIPMENT PRIOR TO START OF ERECTION.
 - 2) ERECTOR TO CHECK ALL PIECE MARKS ON EQUIPMENT AGAINST THOSE SHOWN IN ERECTION DRAWINGS TO ASSURE COMPLETE UNDERSTANDING OF ASSEMBLY PRIOR TO START OF ERECTION.
 - 3) ERECTOR TO LOOSELY FIT UP ENTIRE ASSEMBLY AND ESTABLISH FINAL DESIGN DIMENSIONS PRIOR TO FINAL SET-UP, FIELD WELDING AND/OR DRIFTING IN ACCORDANCE WITH CURRENT ASCE ERECTION STANDARDS.
 - 4) FABRICATOR TO ASSURE ACCURACY OF FABRICATED COMPONENTS, WITHIN ACCEPTED STRUCTURAL FABRICATION TOLERANCES.
- MATERIAL SPECIFICATION NOTES
- 1) ALL STEEL SHALL CONFORM TO ASTM A36 STANDARDS FOR MECHANICAL PROPERTIES AND SHALL BE FABRICATED IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
 - 2) ALL STEEL SHALL CONFORM TO ANSI/ASME B31.3 OR LATEST EDITION STANDARDS FOR DIMENSIONAL TOLERANCE.
 - 3) ALL BOLTS SHALL CONFORM TO ASTM A325 STANDARDS FOR MECHANICAL PROPERTIES UNLESS OTHERWISE SPECIFIED.
 - 4) WELDING PROCEDURES TO CONFORM TO ASSE FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING.
 - 5) ALSO STANDARD WELDING SYMBOLS WILL BE USED FOR THE DESIGNATION OF WELDS.
 - 6) ALL SHEET AND FIELD WELDED CONNECTIONS SHALL BE MADE WITH E70 SERIES ELECTRODES UNLESS OTHERWISE SPECIFIED.

UNLESS OTHERWISE NOTED

DIMENSIONAL TOLERANCES
- UNLESS OTHERWISE SPECIFIED -

SIZE	MACHINED	FRACTIONAL
UNDER 12"	.010	± 1/32"
12" TO 24"	.020	± 1/16"
24" TO 48"	.030	± 3/32"
48" TO 72"	AS SPECIFIED	± 1/8"
72" TO 240"	AS SPECIFIED	± 1/4"
OVER 240"	AS SPECIFIED	± 3/8"

ALL MACHINED SURFACES 1/8"
CHAMFER AND WELD PREP'S ± 1/2"
CORNER RADIUS .06" MAX.
BREAK ALL CORNERS AND REMOVE ALL BURRS

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 TELEPHONE: 414-284-9431 FAX: 414-284-9433
 AN ALCO INDUSTRIES INC. CO.

FOR SANDEN INTERNATIONAL
 LOCATION WYLIE, TEXAS
 DESCRIPTION AL-6608 JET MELTER REFRACTORY

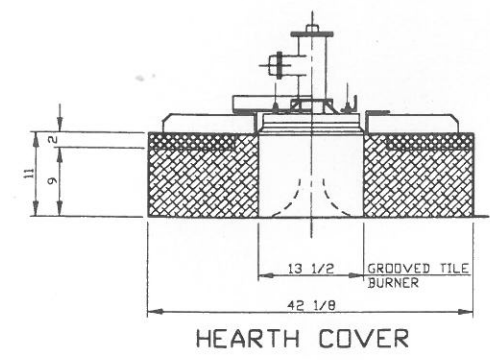
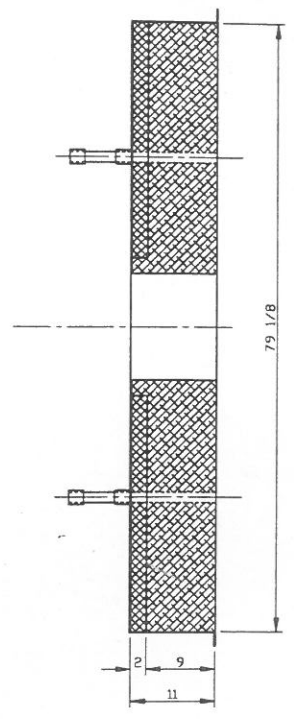
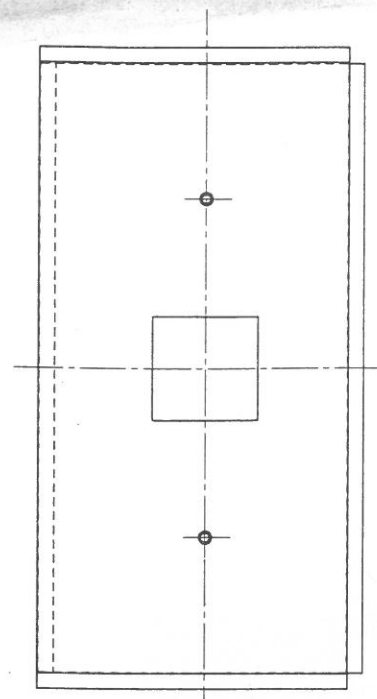
REVISIONS

NO.	DATE	BY	DESCRIPTION
1	6-17-99	JP	

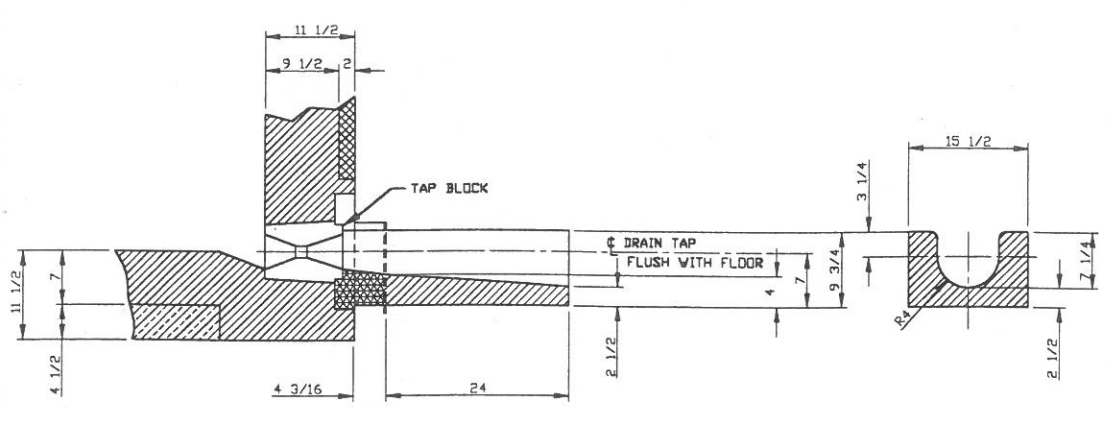
FILE NO. PROJ 2750 H10814003
 PLOT DATE 08/18/99
 REFERENCES 2750-1079-4-001
 WOB E998809F

DWG. NO. 2750-1081-4-003
 SCALE 1"=1'-0"
 CONTRACT 998809

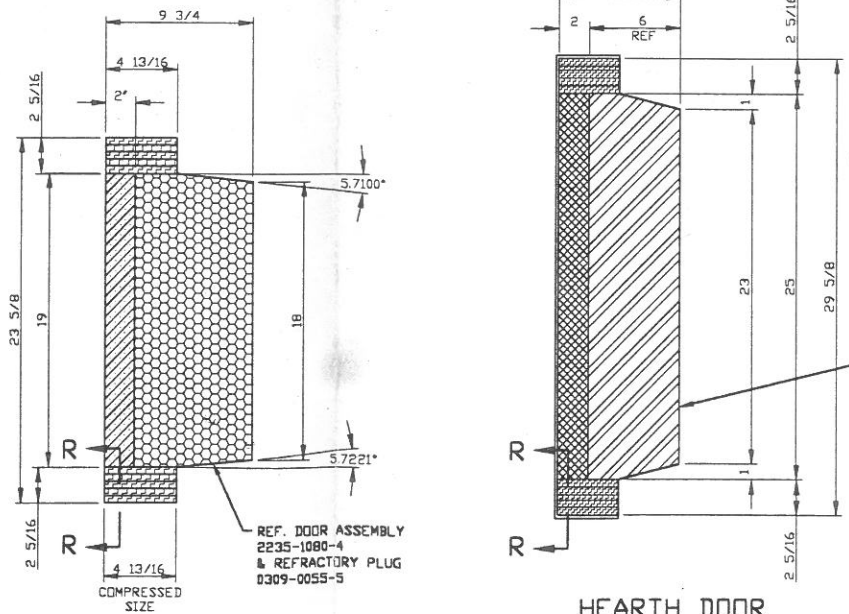
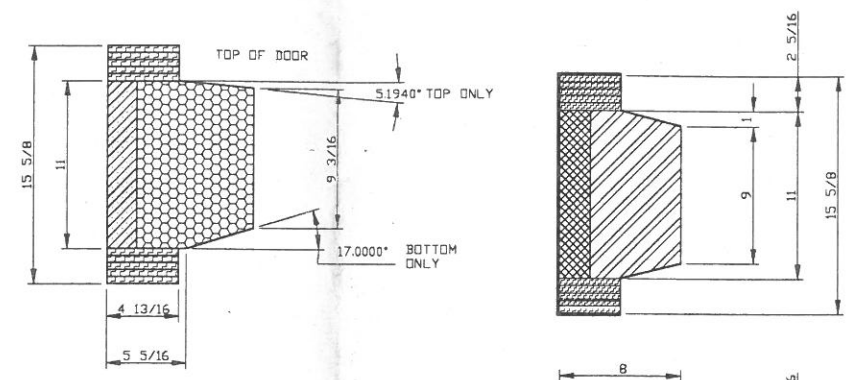
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HEARTH COVER

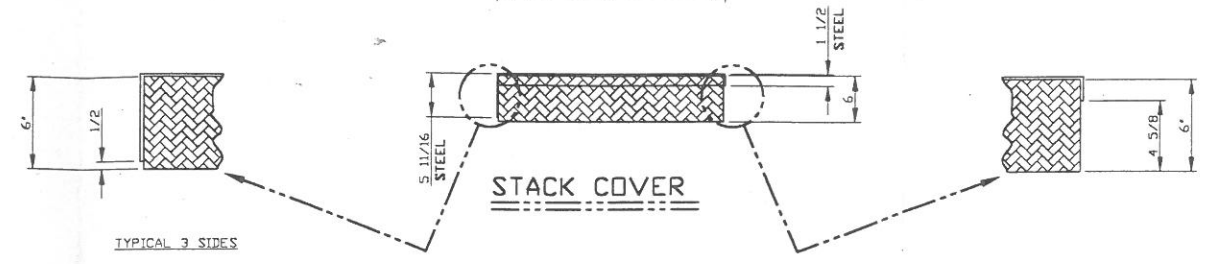
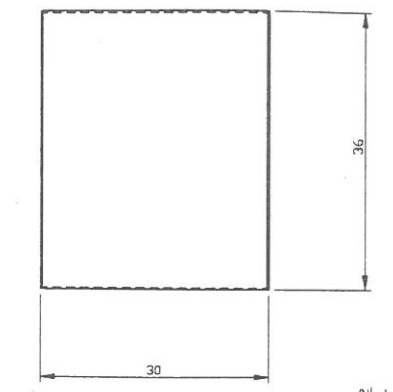


SECTION "D-D"
(DRAIN TAP)



HEARTH DOOR
SCALE = 2X

STACK DOOR
SCALE = 2X



STACK COVER

VIEW "R-R"
SHIP LAP DETAIL AT CORNERS
OF ACCESS DOORS
4XSIZE

- ITEM 1 (ANSI31) ALUGARD 70 XL NON-WETTING CAST OR EQUAL
- ITEM 2 (ANSI32) CRITERION 60 LOW CEMENT ABRASIVE RESISTANT CAST OR EQUAL
- ITEM 3 (ANSI33) ALUGARD H&B HIGH DUTY NON-WETTING CAST OR EQUAL
- ITEM 4 (ANSI37) CAL-SIL INSULATION (1900 DEGREES) OR EQUAL
- ITEM 5 (ANSI38) ALUGARD 75 LW INSULATING NON-WETTING CAST OR EQUAL
- ITEM 6 (CRISCRCS) LITWATE 80 OR EQUAL
- ITEM 7 (NET3) BLUE RAM HS PLASTIC OR EQUAL
- ITEM 8 (ZIG-ZAG) 1" BLANKET 8 PCF OR EQUAL
- ITEM 9 (TES 36) THERMOTEC BOARD "HP" OR EQUAL
- ITEM 10 (SACNR) THERMOTEC BOARD "A" OR EQUAL
- ITEM 11 (AR-HBONE) PREMEX HTZ-12 MODULES OR EQUAL
- ITEM 12 (CROSS) THERMOTEC BOARD "AR" OR EQUAL

COMPRESSED FROM 4 LAYERS OF 1" THICK BLANKET ITEM #8. NO FOLDS IN BLANKET, LAY WITH EXPOSED EDGES.

- NOTES:
- 1) ALL REQUIRED REFRACTORY ANCHORS SUPPLIED BY REFRACTORY CONTRACTOR.
 - 2) REFRACTORY CONTRACTOR TO SPECIFY ANCHOR LOCATION AND MODULES LAYOUT.
 - 3) REFRACTORY CONTRACTOR TO SUPPLY DRYOUT SCHEDULE.
 - 4) MODERN EQUIPMENT CO. TO SUPPLY TAPPING BLOCKS.
 - 5) ROUND ALL CORNERS OF REFRACTORY.

- MATERIAL SPECIFICATION NOTES
- 1) ALL STEEL SHALL CONFORM TO ASTM A572 GRADE 50 FOR MECHANICAL PROPERTIES AND SHALL BE FABRICATED IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION STANDARDS FOR STRUCTURAL STEELWORK.
 - 2) ALL STEEL SHALL CONFORM TO ANSI/AISC 360-28 OR LATEST EDITION FOR MECHANICAL PROPERTIES UNLESS OTHERWISE SPECIFIED.
 - 3) ALL WELDING SHALL CONFORM TO AWS D1.1 FOR BUILDING FABRICATION AND PRECISION OF STRUCTURAL STEEL FOR BUILDINGS UNLESS OTHERWISE SPECIFIED.
 - 4) WELDING PROCEDURES TO CONFORM TO AWS D1.1 FOR BUILDING FABRICATION AND PRECISION OF STRUCTURAL STEEL FOR BUILDINGS UNLESS OTHERWISE SPECIFIED.
 - 5) ALL SHEET AND FIELD WELDED CONNECTIONS SHALL BE MADE WITH E70 SERIES ELECTRODES UNLESS OTHERWISE SPECIFIED.

- GENERAL ERECTION & ASSEMBLY NOTES
- 1) ERECTOR TO FIELD CHECK AND VERIFY ACCURACY OF PLAN AND ELEVATION DIMENSIONS OF ALL CONCRETE AND/OR STEEL SUPPORTS FOR EQUIPMENT PRIOR TO START OF ERECTION.
 - 2) ERECTOR TO CHECK ALL FEET MARKS ON EQUIPMENT AGAINST THOSE SHOWN ON ERECTION DRAWING TO ASSURE COMPLETE UNDERSTANDING OF ASSEMBLY PRIOR TO START OF ERECTION.
 - 3) ERECTOR TO LOOSELY FIT UP ENTIRE ASSEMBLY AND ESTABLISH FINAL DESIGN DIMENSIONS PRIOR TO FINAL BOLT-UP, FIELD WELDING AND/OR DRIGHTS IN ACCORDANCE WITH CURRENT ASSESSMENT STANDARDS.
 - 4) FABRICATOR TO ASSURE ACCURACY OF FABRICATED COMPONENTS, WITHIN ACCEPTED STRUCTURAL FABRICATION TOLERANCES.

OPEN HOLES - UNLESS OTHERWISE NOTED

DIMENSIONAL TOLERANCES - UNLESS OTHERWISE SPECIFIED -

SIZE	MACHINED	FRACTIONAL
UNDER 12"	.010	± 1/32"
12" TO 24"	.020	± 1/16"
24" TO 48"	.032	± 3/32"
48" TO 72"	AS SPECIFIED	± 1/8"
72" TO 240"	AS SPECIFIED	± 1/4"
OVER 240"	AS SPECIFIED	± 3/8"

ALL MACHINED SURFACES 1/8" CHAMFER AND WELD PREP'S AS 1/2" CORNER RADII 65° MAX. BREAK ALL CORNERS AND REMOVE ALL BURRS

Modern Equipment Company
planning . . . engineering . . . manufacturing . . . erection
 BOX 993, PORT WASHINGTON, WISCONSIN 53074-0993
 TELEPHONE: 414-284-9431 FAX: 414-284-9433
 AN ALCO INDUSTRIES INC. CO.

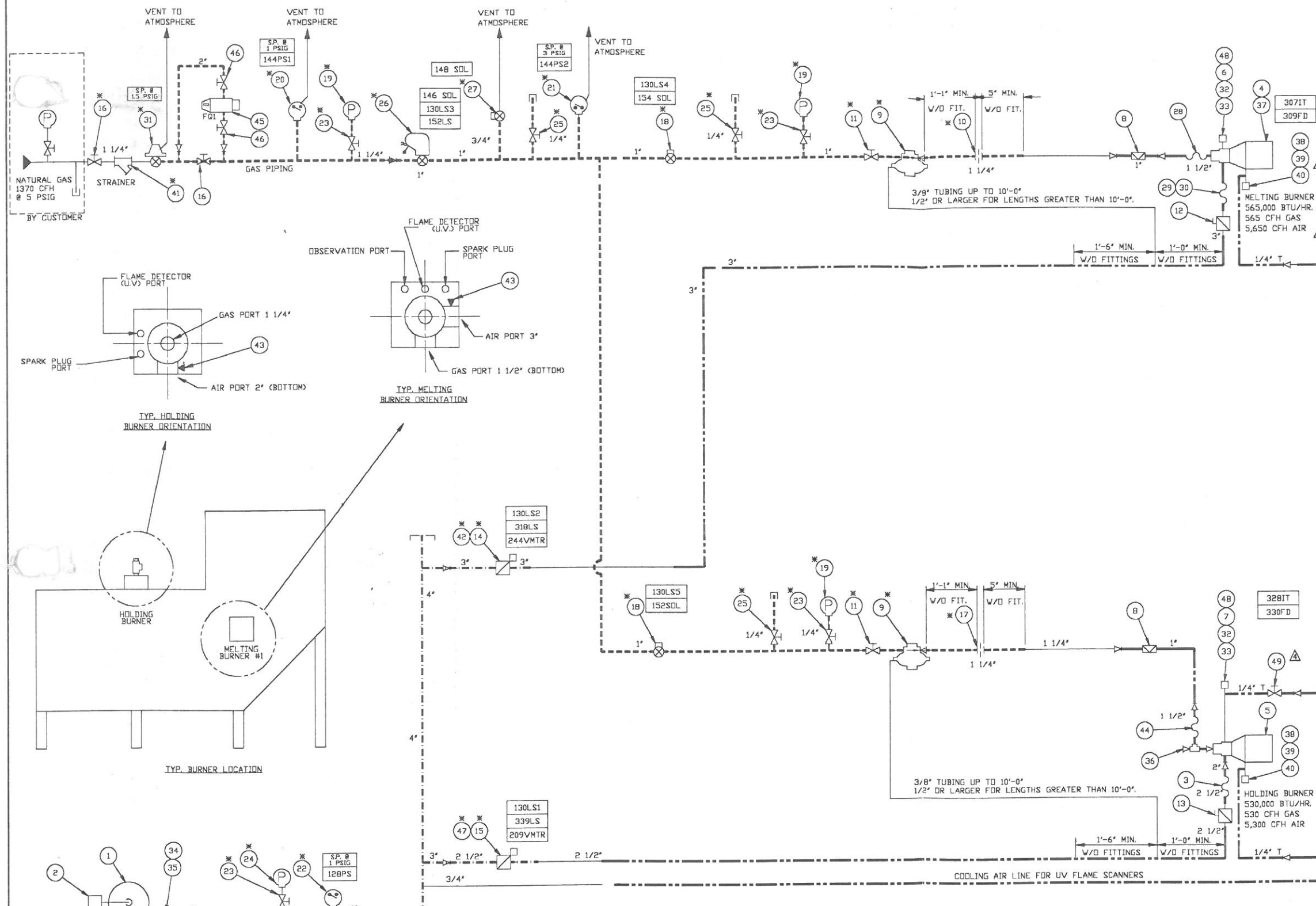
FOR SANDEN INTERNATIONAL
 LOCATION WYLIE, TEXAS
 DESCRIPTION AL-660H JET MELTER REFRACTORY

REVISIONS

FILE NO.	PROJ.	DRAWING NO.	DATE	CHECKED BY	DATE	SHEET NO.
2750-1079-4-003	2750-1079-4-003	2750-1081-4-004	6-18-99	JP	7-13-99	4 OF 4

DWG. NO. 2750-1081-4-004
 CONTRACT 998809

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MATERIAL LIST					
ITEM	QTY	DESCRIPTION	PART NUMBER	FURN. BY	REL. DATE
1	1	COMBUSTION AIR BLOWER, ECLIPSE SMJ 4623-5	0059-0168-5	MECO	7/30/99
2	1	FILTER SILENCER, UNIVERSAL CS-6 W/PRE-FILTER	0240-0055-5	MECO	7/30/99
3	1	2 1/2 C.S. 321 S.S. BRAIDED AIR HOSE, FLEXONICS FCS250MMT	0272-0101-5	MECO	8/2/99
4	1	MELT BURNER, N.A. SPECIAL 6421-5	0200-0346-5	MECO	7/28/99
5	1	HOLD BURNER - FLAT FLAME, N.A. 4833-4	0200-0397-5	MECO	7/28/99
6	1	SPARK IGNITOR, N.A. 4055-M	0200-0402-5	MECO	7/28/99
7	1	SPARK IGNITOR, N.A. 4051-C	0200-0404-5	MECO	8/2/99
8	2	1" LIMITING ORIFICE VALVE, N.A. 1807-1	0200-0231-5	MECO	8/2/99
9	2	1" RATIO REGULATOR, N.A. 7218-1	0200-0400-5	MECO	7/28/99
10	1	1 1/4" METER DRIFICE, N.A. 8697-2 W/#675 PLATE	0153-0626-5	MECO	8/2/99
11	2	1" SHUT OFF VALVE, APOLLO 80-105-01	0153-0873-5	MECO	8/2/99
12	1	3" BUTTERFLY VALVE, ECLIPSE 112BV	9830-0013	MECO	8/2/99
13	1	2 1/2" BUTTERFLY VALVE, ECLIPSE #110 BV-R	0153-0872-5	MECO	8/2/99
14	1	3" MOTORIZED VALVE MOD, ECLIPSE 12BV-AR	0276-0071-5	MECO	8/2/99
15	1	ELECTRIC ACTUATOR, HONEYWELL #H7284C1000	0153-0627-5	MECO	8/2/99
16	2	1 1/4" SHUT OFF VALVE, APOLLO #80-106-01	0200-0399-5	MECO	7/28/99
17	1	1 1/4" METER DRIFICE, N.A. 8697-2 W/#558 PLATE	0153-1093-5	MECO	7/30/99
18	2	1" BLOCKING VALVE, ASCO JB821450C	0234-0016-5	MECO	8/2/99
19	3	PRESS GAUGE (0-600SI), ASHCROFT 1190A-02L	0200-0105-5	MECO	8/2/99
20	1	PRESS SWITCH, HONEYWELL C437H1027 (LOW GAS)	0062-0056-5	MECO	8/2/99
21	1	PRESS SWITCH, HONEYWELL C437H1028 (HIGH GAS)	0062-0055-5	MECO	8/2/99
22	1	PRESS. SWITCH, HONEYWELL C437H1001 (LOW AIR)	0153-0585-5	MECO	8/2/99
23	4	1/4" BALL VALVE, APOLLO #80-101-B1	0234-0015-5	MECO	8/2/99
24	1	PRESSURE GAUGE (0-30 DSI), ASHCROFT 1190AA-021	0153-0306-5	MECO	8/2/99
25	3	1/4" COCK, McMASTER-CARR 4793K72	0153-1092-5	MECO	7/28/99
26	1	1" MANUAL REST VALVE, MAXON 808	0200-0228-5	MECO	8/2/99
27	1	3/4" VENT VALVE, ASCO B215A33	0200-0214-5	MECO	8/2/99
28	1	1 1/2" FLEX NIPPLE, N.A. 8777-3	0200-0281-5	MECO	8/2/99
29	1	3 1/2" I.D. X 2'-0" LG, GATES AIR VENT HOSE	0027-0001-3-001	MECO	8/2/99
30	2	12" LONG BAND CLAMP	0268-0098-5	MECO	7/28/99
31	1	1 1/4" REGULATOR, EQUIMETER 143-80-2 W/1 1/2 TO 2 PSI SPRING	9877-0004	MECO	8/2/99
32	2	IGNITION CABLE, WHITTAKER #706, 5'-0"	0153-0681-5	MECO	8/2/99
33	2	IGNITION TRANS., WEBSTER 612-647	0200-0215-5	MECO	8/2/99
34	1	4" BOOT, VULCANIZED RUBBER	0027-0001-3-002	MECO	8/2/99
35	4	2'-0" LONG BAND CLAMP	0200-0398-5	MECO	7/28/99
36	1	OBSERVATION PORT, N.A. 8790-0	0095-0811-1	MECO	8/2/99
37	1	GASKET (MELTING BURNER)	9867-0004	MECO	8/2/99
38	2	FLAME SCANNER, FIREYE #UV1A3	9867-0006	MECO	8/2/99
39	2	1/2" NPT INSULATOR	9867-0007	MECO	8/2/99
40	2	1/2" N.P.T. SEAL UNION WITH QUARTZ WINDOW	9824-0092	MECO	7/28/99
41	1	STRAINER, KECKLEY *Y* TYPE, STYLE 'B', 1 1/4" SCRD.	0276-0076-5	MECO	8/2/99
42	1	ACTUATOR, THREE WIRE HONEYWELL M6284A1071	0153-1058-5	MECO	8/2/99
43	2	VALVE, TEST PLUG ECLIPSE 13445	0272-0099-5	MECO	8/2/99
44	1	1 1/2 C.S. 321 S.S. BRAIDED AIR HOSE, FLEXONICS FCS150 MMT	0200-0401-5	MECO	7/28/99
45	1	2" FLANGED GAS METER, ROOTS 15C175LCPS	0153-0636-5	MECO	8/2/99
46	2	2" BALL VALVES, APOLLO #80-103-01	0153-0876-5	MECO	8/2/99
47	1	2 1/2" MOTORIZED VALVE MOD, ECLIPSE 10BV-AR	9877-0003	MECO	8/2/99
48	2	CAP, IGNITION (CROW ENG. 5511-50)	0153-0374-5	MECO	
49	1	PETCOCK VALVE 1/8"			

- PIPING SPECIFICATIONS:**
- THIS SCHEMATIC DRAWING IS INTENDED AS A GUIDE TO SHOW THE RELATIVE CONNECTIONS AND IS NOT INTENDED TO SHOW THE EXACT POSITION OR ORIENTATION OF VARIOUS COMPONENTS EXCEPT AS NOTED SPECIFICALLY ON THIS DRAWING.
 - ALL PIPING TO BE DONE IN ACCORDANCE WITH JIC, CUSTOMER AND COMPONENT MANUFACTURERS SPECIFICATIONS.
 - PIPING CONTRACTOR TO INSTALL ALL COMPONENTS FURNISHED BY MODERN EQUIPMENT COMPANY.
 - ALL PIPING TO BE SCH. 40 UNLESS OTHERWISE NOTED.
 - ALL PIPE 3 1/2" AND LARGER TO HAVE FLANGED CONNECTIONS WITH GASKETS. ALL PIPE 3" AND SMALLER TO BE SCREWED CONNECTIONS.
 - ALL VENT LINES TO BE RUN TO OUTSIDE OF BUILDING AND TERMINATED WITH ELBOW POINTING DOWN WITH SCREENING 10 TO 16 MESH 1 MIN. 40Z OPEN AREA.
 - IF VENT LINES ARE TO BE MANIFOLD TOGETHER 1 1/2" SCH 40 IPS MINIMUM SIZE IS TO BE USED. VENT VALVES MUST BE SEPARATE RUNS
 - ALL VENTS MUST GO UP. NO DOWN RUNS.
 - ALL PIPE JOINTS OVER 500' USE HIGH-TEMP NEVER SEEZ.
 - ALL FIELD PIPING COLORS TO FOLLOW GAS SKID COLORS.
 - CONTRACTOR TO INSTALL DRIP LEGS AT ALL LOW POINTS IN PIPING.

PIPING LEGEND

---	PREPIPED AIR PIPING ON SKID (BY MODERN)
---	PREPIPED GAS PIPING ON SKID (BY MODERN)
---	PREPIPED ON JET MELTER (BY MODERN)
---	FIELD PIPING (BY CUSTOMER)

* ITEMS LOCATED ON PREPIPED SKID

230/460V 60HZ
5 H.P. 3600 RPM
350 CFM #41.1" W.C.
BOTTOM HORIZONTAL CW ROTATION

MATERIAL SPECIFICATION NOTES

- ALL STEEL SHALL CONFORM TO ASTM A36 STANDARDS FOR MINIMUM MECHANICAL PROPERTIES AND SHALL BE FABRICATED IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- ALL STEEL SHALL CONFORM TO ANSI/A583M-98 (OR LATEST EDITION) STANDARDS FOR DIMENSIONAL TOLERANCES.
- ALL BOLTS SHALL CONFORM TO ASTM A307 STANDARDS FOR MINIMUM MECHANICAL PROPERTIES UNLESS OTHERWISE SPECIFIED.
- WELDING PROCEDURES TO CONFORM TO AISC FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- ALL SHOP AND FIELD WELDES SHALL BE MADE WITH 670 SERIES ELECTRODES UNLESS OTHERWISE SPECIFIED.

TOLERANCES: - UNLESS OTHERWISE SPECIFIED -

FRAC.	XX	XXX	XXXX	XX'
±	1/32"	± .05	± .005	± .0005

FILE NO. PROJ. 2680 #11454000
PLOT DATE 08/11/99

- GENERAL ERECTION & ASSEMBLY NOTES**
- ERECTOR TO FIELD CHECK AND VERIFY ACCURACY OF PLAN AND ELEVATION DIMENSIONS OF ALL CONCRETE AND/OR STEEL SUPPORTS FOR EQUIPMENT PRIOR TO START OF ERECTION.
 - ERECTOR TO CHECK ALL PIECE MARKS ON EQUIPMENT AGAINST THOSE SHOWN ON ERECTION DRAWING TO ASSURE COMPLETE UNDERSTANDING OF ASSEMBLY PRIOR TO START OF ERECTION.
 - ERECTOR TO LOOSELY FIT UP ENTIRE ASSEMBLY AND ESTABLISH FINAL BIDDING DIMENSIONS PRIOR TO FINAL BOLT-UP. FIELD WELDING AND/OR GROUTING, IN ACCORDANCE WITH CURRENT AISC ERECTION STANDARDS.
 - FABRICATOR TO ASSURE ACCURACY OF FABRICATED COMPONENTS, WITHIN ACCEPTED STRUCTURAL FABRICATION TOLERANCES.

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Modern Equipment Company
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TELEPHONE: 414-284-9431 FAX: 414-284-9433
AN ALCO INDUSTRIES INC. CO.

FOR SANDEN INTERNATIONAL
LOCATION WYLIE, TX

DESCRIPTION AL 660 COMBUSTION SCHEMATIC

DRAWN BY DATE CHECKED BY DATE SHEET NO.
W.V. 7/26/99 DFZ 8/6/99 1 OF 1

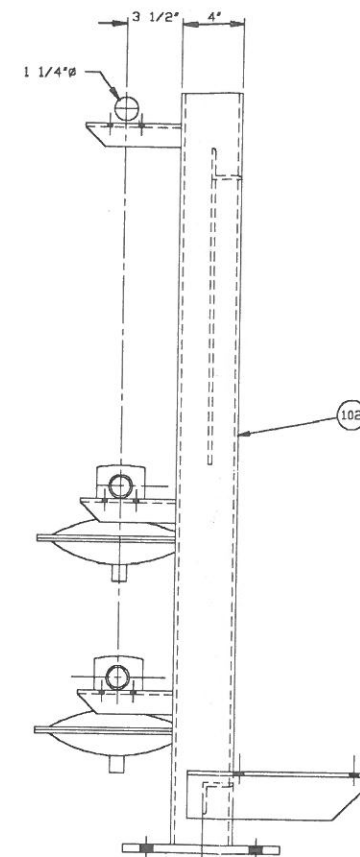
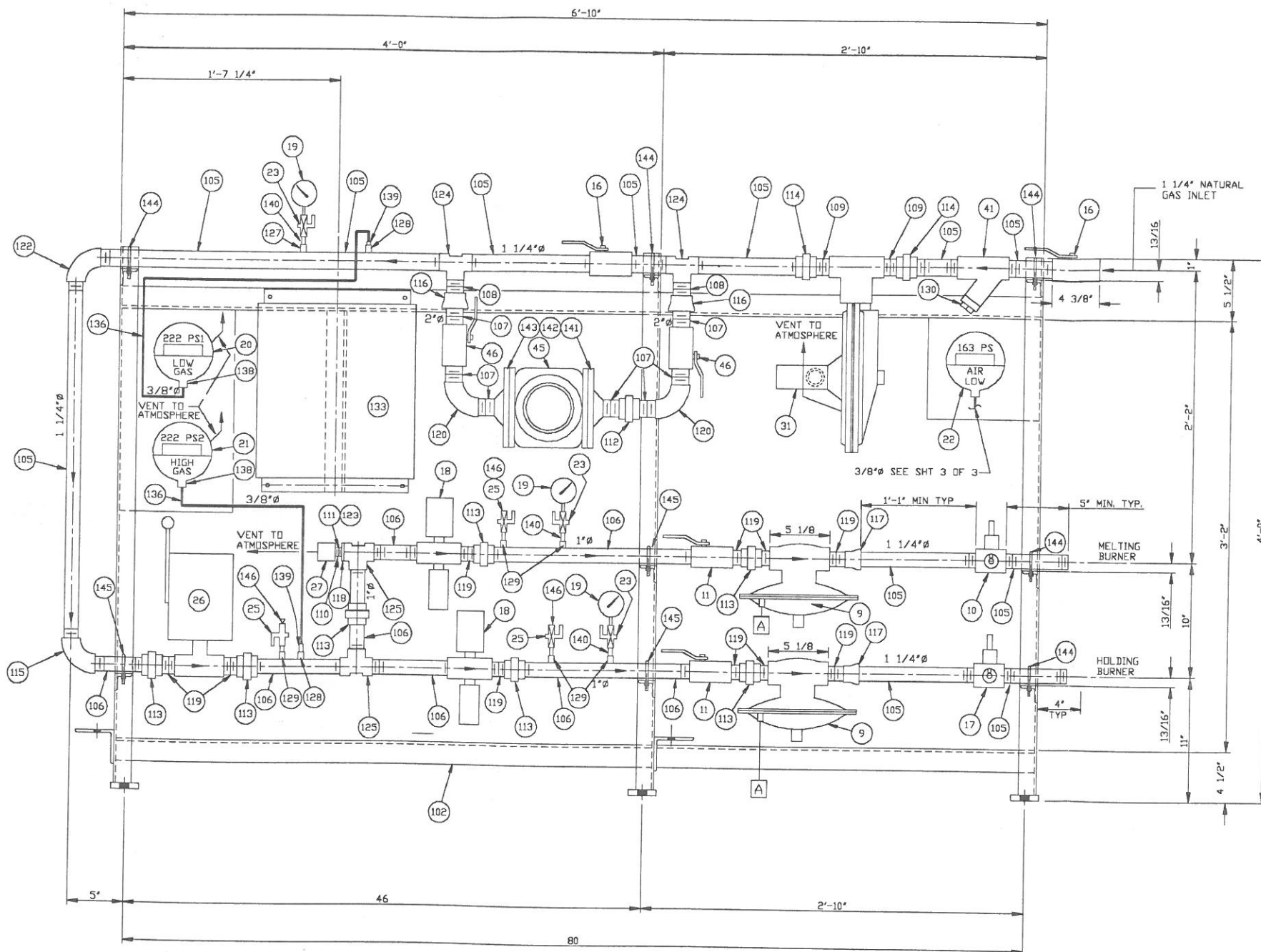
ISSUE DATE: 8/26/99

SCALE: NTS

missyq Oct 29, 1999 07:59:33

MATERIAL LIST

NO.	REQD	PART NUMBER	DESCRIPTION
101	1	2680-1415-4-002	1 - PIPING GAS BURNER
102	1	0164-0051-4	PIPE SKID
103			
104			
105	1	9900-1239	PIPE BLK 1 1/4 S40 X 240 (CUT TO SUIT)
106	1	9900-1238	PIPE BLK 1 S40 X 120 (CUT TO SUIT)
107	7	9901-1244	NIPPLE BLK 2 X 2
108	2	9901-1597	NIPPLE BLK 1 1/4 X 2
109	2	9901-1241	NIPPLE BLK 1 1/4 X 3
110	1	9901-1236	NIPPLE 3/4 X 1 1/2
111	1	9901-1418	UNION GND JT 3/4 150# MI
112	1	9901-1422	UNION GND JT 2 150# MI
113	7	9901-1419	UNION GND JT 1 1/4 150# MI
114	2	9901-1420	UNION GND JT 1 1/4 150# MI
115	1	9901-1614	EL 90 BLK 1 1/4 X 1 150# MI
116	2	9901-1654	RDC BELL BLK 2 X 1 1/4
117	2	9901-1448	RDC BELL SCR BLK 1 1/4 X 1
118	1	9901-1010	BSHG HEX 1 X 3/4
119	10	9901-1239	NIPPLE BLK 1 X 2
120	2	9901-1149	EL 90 BLK 2 150# MI
121			
122	1	9901-1147	EL 90 BLK 1 1/4 150# MI
123	1	9901-1145	EL 90 BLK 3/4 150# MI
124	2	9901-1311	TEE BLK STR 1 1/4 150# MI
125	2	9901-1310	TEE BLK STR 1 1/4 150# MI
126			
127	1	9901-1540	THREDOLET 36-3 X 1/4 3000#
128	2	9901-1541	THREDOLET 1-3/4 X 3/8 3000#
129	5	9901-1540	THREDOLET 36-3 X 1/4 3000#
130	1	9901-1279	PLUG SCR BLK 3/4 150 MI
131			
132			
133	1	2660-1034-2	PANEL ELECTRICAL
134			
135			
136	1	9900-1220	TBG COPPER 3/8 X RFGT X 180 (CUT TO SUIT)
137			
138	2	9901-2166	EL MALE 3/8 X 1/2
139	2	9901-2177	CONN MALE 3/8 X 3/8
140	4	9901-1229	NIPPLE BLK 1/4 X 1 1/2
141	2	9901-2320	FLG THD F.F. 2" 150#
142	2	9901-1650	GSKT FF 2"
143	8	9903-2050	HSSB 5/8-11NC X 1 1/2
144	5	9903-1494	BOLT U 1 1/4
145	3	9903-1493	BOLT U 1"
146	2	9901-1276	PLUG SCR BLK 1/4 150# MI
147			
148			
149			
150		0280-0024-5	PAINT SAFETY YELLOW (GAS PIPING)



A 3/8" TUBING UP TO 10'-0" AND 1/2" TUBING OR LARGER FOR LENGTHS GREATER THAN 10'-0"
 1) SHOP TO PRE-PIPE, PAINT & PRE-WIRE PIPING SKID.

GENERAL ERECTION & ASSEMBLY NOTES

- 1) ERECTOR TO FIELD CHECK AND VERIFY ACCURACY OF PLAN AND ELEVATION DIMENSIONS OF ALL CONCRETE AND/OR STEEL SUPPORTS FOR EQUIPMENT PRIOR TO START OF ERECTION.
- 2) ERECTOR TO CHECK ALL PRE-PIPE MARKS ON EQUIPMENT AGAINST THOSE SHOWN ON ERECTION DRAWING TO ASSURE COMPLETE UNDERSTANDING OF ASSEMBLY PRIOR TO START OF ERECTION.
- 3) ERECTOR TO LOOSELY FIT UP ENTIRE ASSEMBLY AND ESTABLISH FINAL DESIGN DIMENSIONS PRIOR TO FINAL BOLT-UP, FIELD WELDING AND/OR GRINDING, IN ACCORDANCE WITH CURRENT ASSE ERECTION STANDARDS.
- 4) FABRICATOR TO ASSURE ACCURACY OF FABRICATED COMPONENTS WITHIN ACCEPTED STRUCTURAL FABRICATION TOLERANCES.

MATERIAL SPECIFICATION NOTES

- 1) ALL STEEL SHALL CONFORM TO ASTM A36 STANDARDS FOR MINIMUM MECHANICAL PROPERTIES, AND SHALL BE FABRICATED IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION STANDARDS FOR DIMENSIONAL TOLERANCE.
- 2) ALL STEEL SHALL CONFORM TO ANSI/ASTM A6-78 (OR LATEST EDITION) STANDARDS FOR DIMENSIONAL TOLERANCE.
- 3) ALL BOLTS SHALL CONFORM TO ASTM A305 STANDARDS FOR MINIMUM MECHANICAL PROPERTIES UNLESS OTHERWISE SPECIFIED.
- 4) WELDING PROCEDURES TO CONFORM TO ASSP FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- 5) ALSO STANDARD WELDING SYMBOLS WILL BE USED FOR THE DESIGNATION OF WELDS.
- 6) ALL SHOP AND FIELD WELDER CONNECTIONS SHALL BE MADE WITH E70 SERIES ELECTRODES UNLESS OTHERWISE SPECIFIED.

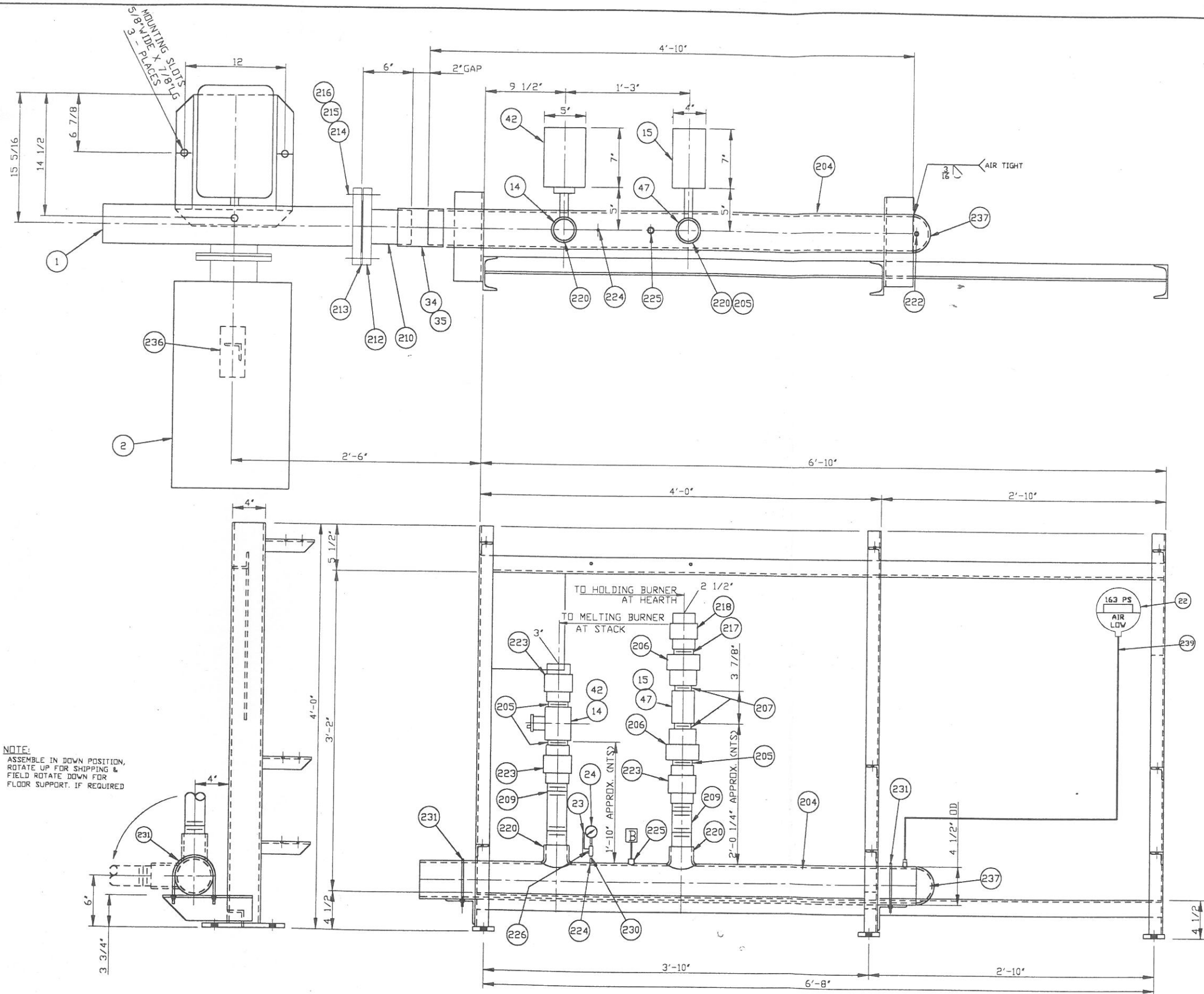
DIMENSIONAL TOLERANCES - UNLESS OTHERWISE SPECIFIED -	
SIZE	TOLERANCE
UNDER 12"	± 1/32"
12" TO 24"	± 1/16"
24" TO 48"	± 3/32"
48" TO 72"	± 1/8"
72" TO 240"	± 1/4"
OVER 240"	± 3/8"

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 TELEPHONE 414-284-9431 FAX 414-284-9433
 AN ALCO INDUSTRIES INC. CO.

FOR SANDEN INTERNATIONAL
 LOCATION WYLIE, TEXAS
 DESCRIPTION AL-660 BURNER GAS PIPING
 DRAWN BY DATE CHECKED BY DATE SHEET NO.
 W.V. 7-30-99/M.T.J. 8/6/99 2 OF 3
 TWR/ SCALE:

FILE NO. PROJ. 2680 #14154002
 PLOT DATE REFERENCE: 5439-5000-4

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NOTE:
ASSEMBLE IN DOWN POSITION,
ROTATE UP FOR SHIPPING &
FIELD ROTATE DOWN FOR
FLOOR SUPPORT, IF REQUIRED

MATERIAL LIST				
NO. REQD	PART NUMBER	DESCRIPTION	WT.	
201	2680-1409-4-003	1 - PIPING BURNER AIR		
202				
203				
204	9900-1245	PIPE BLK 4" S40 X 3/8	52	
205	9901-1249	NIPPLE BLK 3" X 3	6	
206	9901-1487	RDC BELL GALV 3" X 2 1/2"		
207	9901-1247	NIPPLE BLK 2 1/2 X 3		
208				
209	9900-1244	PIPE BLK 3 S40 X 40	25	
210	9900-1245	PIPE BLK 4" S40 X 6"	5	
211				
212	9901-1808	FLG SLIP-ON 4 RF 150#	13	
213	9901-1508	GSKT RING 4"		
214	9903-1631	SCR CAP 5/8-11NC X 2 3/4"	2	
215	9903-1009	NUT HEX FULL 5/8-11NC	1	
216	9903-1477	LOCK WASHER 5/8"		
217	9901-1247	NIPPLE BLK 2 1/2 X 3		
218	9901-1423	UNION GND JT 2 1/2" 150# MI	6	
219				
220	9901-2174	THREDOLET 4 X 3 3000#	9	
221				
222	9901-1542	THREDOLET B-3 X 1/2 3000#		
223	9901-1718	UNION GND JT 3" 150# BLK	18	
224	9901-1540	THREDOLET 3/4 X 1/4 3000#	1	
225	9901-2187	THREDOLET 12-6 X 3/4 3000#	1	
226	9901-1229	NIPPLE BLK 1/4 X 1 1/2		
227				
228				
229				
230	9901-1142	EL 90 BLK 1/4 150 MI		
231	9903-1499	BOLT U 4"	2	
232				
233				
234				
235				
236	0028-0954-2-003	BRACKET (SHIP LOOSE)	5	
237	9901-1600	CAP WELD SCH40 4	6	
238				
239	9900-1220	TBG COPPER 3/8 X WGT X 72" (CUT TO SUIT)	1	
240				
241				
242	0280-0037-3	PAINT SAFETY BLUE (AIR PIPING)		
243				
244				
245	9920-0006	LABOR TO PIPE		
246		CAL-660 GAS TRAIN		
247		PER DWGS.		
248		2680-1415-4-001		
249		2680-1415-4-002		
250		2680-1415-4-003		
251				
252				
253	9920-0003	LABOR AND MATERIAL TO WIRE		
254		CAL-660 GAS TRAIN PER DWG		
255		S390-S140-2		
256				
257		ALL CONDUIT TO BE RIGID		
258		TYPE, WIRE PER NEC CODES		
259				
260	2165-1157-1	CONTROL WIRING FUEL TRAIN		

□ = 3/4" COOLING LINE FOR UV SCANNERS
AND STOCKLINE INDICATORS.

GENERAL ERECTION & ASSEMBLY NOTES
1) ERECTOR TO FIELD CHECK AND VERIFY ACCURACY OF PLAN AND ELEVATION DIMENSIONS OF ALL CONCRETE AND/OR STEEL SUPPORTS FOR EQUIPMENT PRIOR TO START OF ERECTION.
2) ERECTOR TO CHECK ALL PIECE MARKS ON EQUIPMENT AGAINST THOSE SHOWN ON ERECTION DRAWINGS TO ASSURE COMPLETE UNDERSTANDING OF ASSEMBLY PRIOR TO START OF ERECTION.
3) ERECTOR TO LOOSELY FIT UP ENTIRE ASSEMBLY AND ESTABLISH FINAL DESIGN DIMENSIONS PRIOR TO FINAL SET-UP, FIELD WELDING AND/OR DRIFTING, IN ACCORDANCE WITH CURRENT ASSE ERECTION STANDARDS.
4) FABRICATOR TO ASSURE ACCURACY OF FABRICATED COMPONENTS WITHIN ACCEPTED STRUCTURAL FABRICATION TOLERANCES.

MATERIAL SPECIFICATION NOTES
1) ALL STEEL SHALL CONFORM TO AISC/LRFD STANDARDS FOR MINIMUM MECHANICAL PROPERTIES, AND SHALL BE FABRICATED IN ACCORDANCE WITH THE RECOMMENDED PRACTICE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
2) ALL STEEL SHALL CONFORM TO AISC/LRFD OR LATEST CURRENT STANDARDS FOR DIMENSIONAL TOLERANCES.
3) ALL BOLTS SHALL CONFORM TO AISC/LRFD STANDARDS FOR MINIMUM MECHANICAL PROPERTIES UNLESS OTHERWISE SPECIFIED.
4) WELDING PROCEDURES TO CONFORM TO ASSE FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
5) ALSO STANDARD WELDING SYMBOLS WILL BE USED FOR THE DESIGNATION OF WELLS.
6) ALL SHOP AND FIELD WELDED CONNECTIONS SHALL BE MADE WITH E70 SERIES ELECTRODES UNLESS OTHERWISE SPECIFIED.

DIMENSIONAL TOLERANCES - UNLESS OTHERWISE SPECIFIED -		
SIZE	MACHINED	FRACTIONAL
UNDER 12"	.010	± 1/32"
12" TO 24"	.020	± 1/16"
24" TO 48"	.032	± 3/32"
48" TO 72"	AS SPECIFIED	± 1/8"
72" TO 240"	AS SPECIFIED	± 1/4"
OVER 240"	AS SPECIFIED	± 3/8"

ALL MACHINED SURFACES 1/2" CHAMFER AND WELD PREP'S ± 1/2" CORNER RADIUS .06" MAX.
BREAK ALL CORNERS AND REMOVE ALL BURRS

Modern Equipment Company
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BOX 993, PORT WASHINGTON, WISCONSIN 53074-0993
TELEPHONE: 414-284-9431 FAX: 414-284-9433
AN ALCO INDUSTRIES INC. CO.

FOR SANDEN INTERNATIONAL
LOCATION WYLLIE, TEXAS
DESCRIPTION AL-660 BURNER AIR PIPING

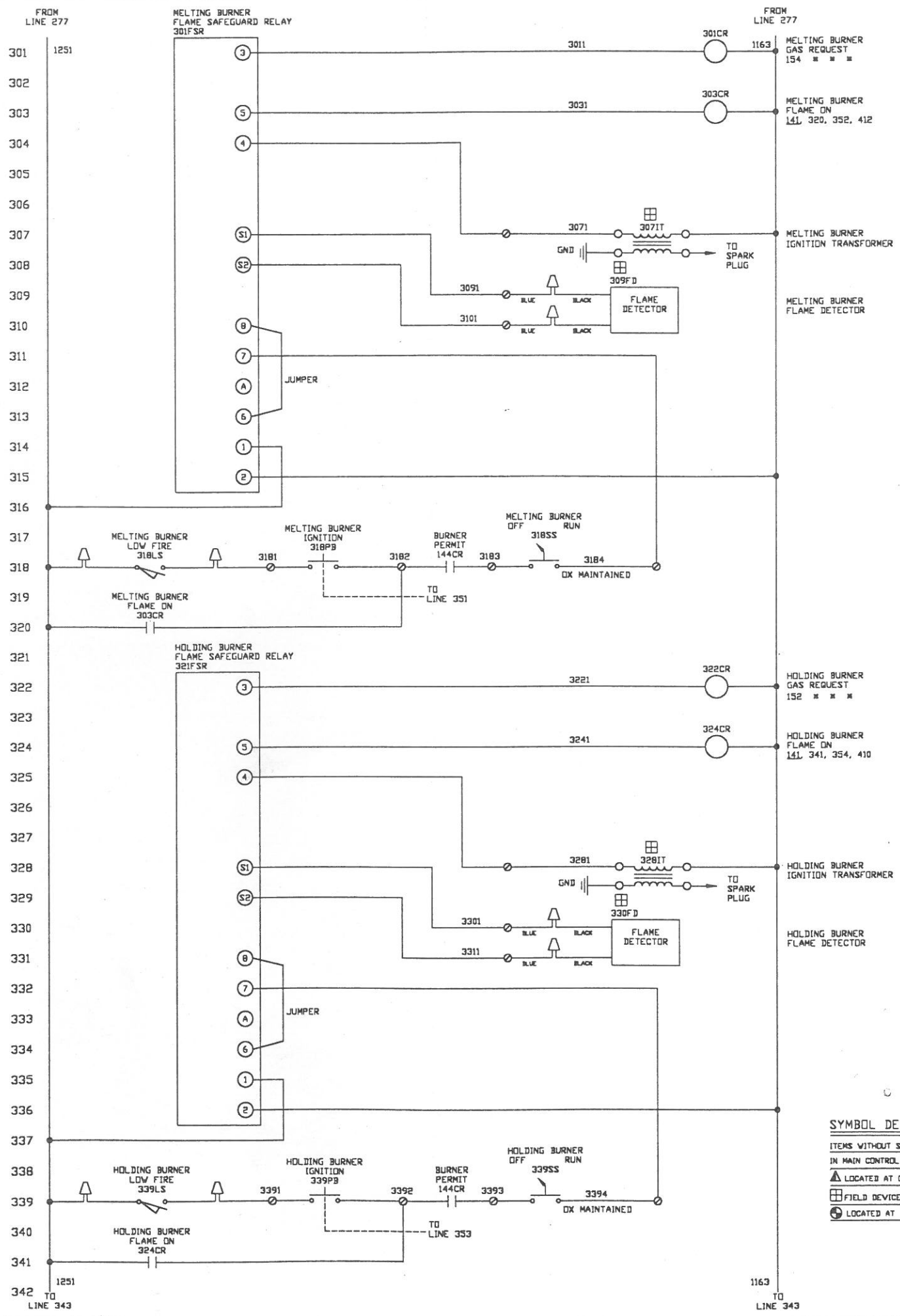
REVISIONS

NO.	DATE	BY	DESCRIPTION
1	7-30-99	MT/J	

FILE NO. PROJ. 2680 014154003
PLOT DATE 8/6/99
REFERENCES 5635-5050-4
2680-1409-4-003 WD #E99809F

DWG. NO. 2680-1415-4-003
SCALE: N.T.S.
SHEET NO. 3 OF 3
CONTRACT

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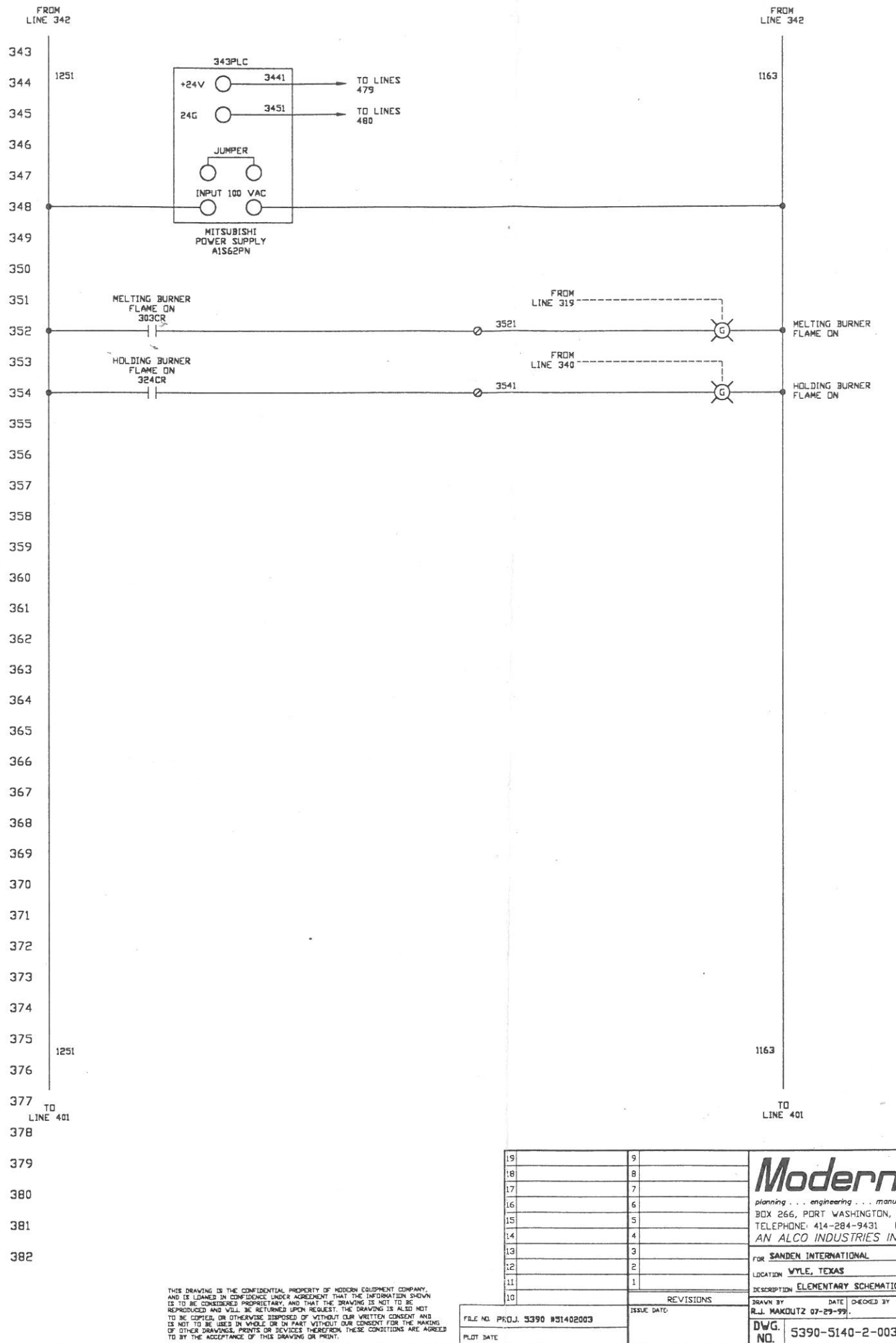
SYMBOL DESCRIPTION

ITEMS WITHOUT SYMBOL LOCATED IN MAIN CONTROL PANEL

▲ LOCATED AT GAS TRAIN

□ FIELD DEVICE

⊙ LOCATED AT BLOWER UNIT



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19	9	
18	8	
17	7	
16	6	
15	5	
14	4	
13	3	
12	2	
11	1	
10		

FILE NO.	PROJ. 3390 #51402003	ISSUE DATE	
PLT DATE		REVISIONS	

DRAWN BY	R.J. MAKOUTZ 07-29-99	DATE		CHECKED BY		DATE		SHEET NO.	3
DWG. NO.	5390-5140-2-003	SCALE	N.T.S.	CONTRACT	99-0809				

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 AN ALCO INDUSTRIES INC. CO.

FOR SANDEN INTERNATIONAL
 LOCATION WYLE, TEXAS
 DESCRIPTION ELEMENTARY SCHEMATIC DIAGRAM AL-660