

3M

Fire Test Data

Submitted by: Richard Licht

9404060070 940401
PDR ORG EMV3MCO
PDR

INTERAM™ E-50A vs INTERAM™ E-50C
INHOUSE FIRE TEST COMPARISON REPORT

3M TEST NUMBER: 86-30

DATE OF TEST: February 21, 1986

REPORT DATE: March 10, 1986

FIRE TEST OBJECTIVE:

To compare the fire protection performance of E-50A with aluminum foil to E-50C with stainless steel foil.

PASS/FAIL CRITERIA:

The fire protection performance of E-50C be equivalent or better to the fire protection performance of E-50A.

3M INTERAM™ FIRE PROTECTION PRODUCTS:

- Interam™ E-50A Mat - 3M product 98-0400-0233-3 endothermic mat, nominally .20" thick, with a nylon scrim on one surface and a 2-3 mil shiny aluminum foil on the other surface.
- Interam™ E-50C Mat - 3M product 98-0400-0509-6 endothermic mat, nominally .20" thick, with a nylon scrim on one surface and a 2 mil stainless steel foil on the other surface.
- Interam™ T-49 Tape - 3M product 98-0400-0172-3, 4" wide x 180' long, 3 mil thick shiny aluminum foil tape; used on all interior and exterior seams.
- Interam™ T-65 Tape - 3M product 98-0400-0511-2, 4" wide x 100' long, 2 mil thick stainless steel foil tape; used on all interior and exterior seams.

FIRE TEST PROGRAM:

<u>System</u>	<u>Fire Exposure</u>	<u>Time</u>
5 layers E-50A	E-119	90 minutes
5 layers E-50C	E-119	90 minutes

INSTALLATION:

Per 3M Flexible Wrap System drawing package, 5300-C8-B (except 5300-S10) and 5300-S12* (5300-S12 replaces 5300-S10). See attached drawing.

* All seams were taped with either T-49 or T-65 tape.

FURNACE:

3M's large scale, side loaded, indoor fire test propane furnace located at the 3M Chemolite plant, Bldg. 63, in Cottage Grove, Minnesota. Nominal outside dimensions of the furnace are 8' long x 5' wide x 6' high.

CONTROLLER:

Leeds and Northrup Electromax V microprocessor based digital controller in a control system with North American Burner components, all designed by Edison Controls, Inc.

ON-SITE DATA RECORDER:

Monitor Labs, Inc. Model #9302 Datalogger set up for printing up to 40 Type "K" thermocouples at 1-minute intervals for the duration of the fire test.

REMOTE COMPUTER DATA ACQUISITION SYSTEM:

Hewlett Packard Series 200, Model 9816, personal computer tied to the Monitor Labs, Inc. #9302 Datalogger via two Racal-Vadic #VA212 telephone modems.

FURNACE THERMOCOUPLES:

Nine Type "K" thermocouples with 1/2" NPT Inconel sheaths 25" up from the furnace floor penetrating into the furnace nominally 12".

TEST SPECIMEN THERMOCOUPLES:

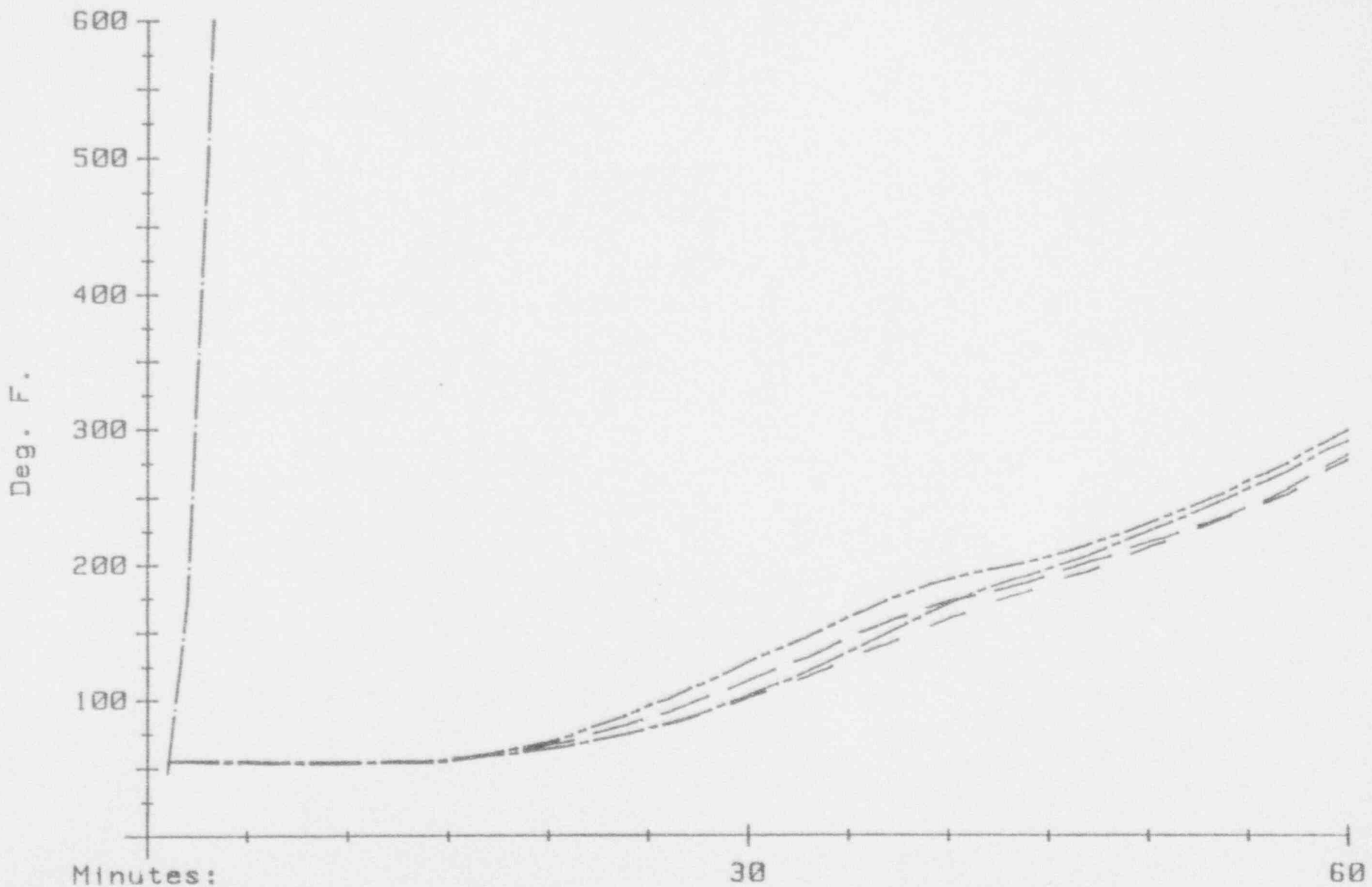
Eighteen ANSI Type "K" chromel-alumel, duplex insulated, fiberglass braid insulation with fiberglass braid overall jacket, 20 gauge thermocouples with arc melted junction beads.

TEST RESULTS:

E-119 TIME/TEMPERATURE CURVE TEST

Time (min.)	Avg. Furnace Temp °F	5 Layers E-50A		5 Layers E-50C	
		Max. Temp 7c/#12 °F	Max. Temp Bare #8 °F	Max. Temp 7c/#12 °F	Max. Temp Bare #8 °F
0	46	56	56	56	56
5	1052	55	55	55	55
10	1350	55	55	55	55
15	1441	58	57	61	59
20	1505	67	65	77	76
25	1507	83	82	103	107
30	1540	110	109	133	140
35	1576	143	147	166	171
40	1622	174	185	185	193
45	1657	194	205	206	211
50	1681	220	232	234	239
53	1694	237	251	252	258
55	1697	248	265	268	272
60	1715	286	301	309	310
65	1729	322	335	342	343

5L E-50A vs 5L E-50C ON 2'' SCHED 40 CNDT



E50A-#8

E50A-7/c12

E50C-#8

E50C-7/c12

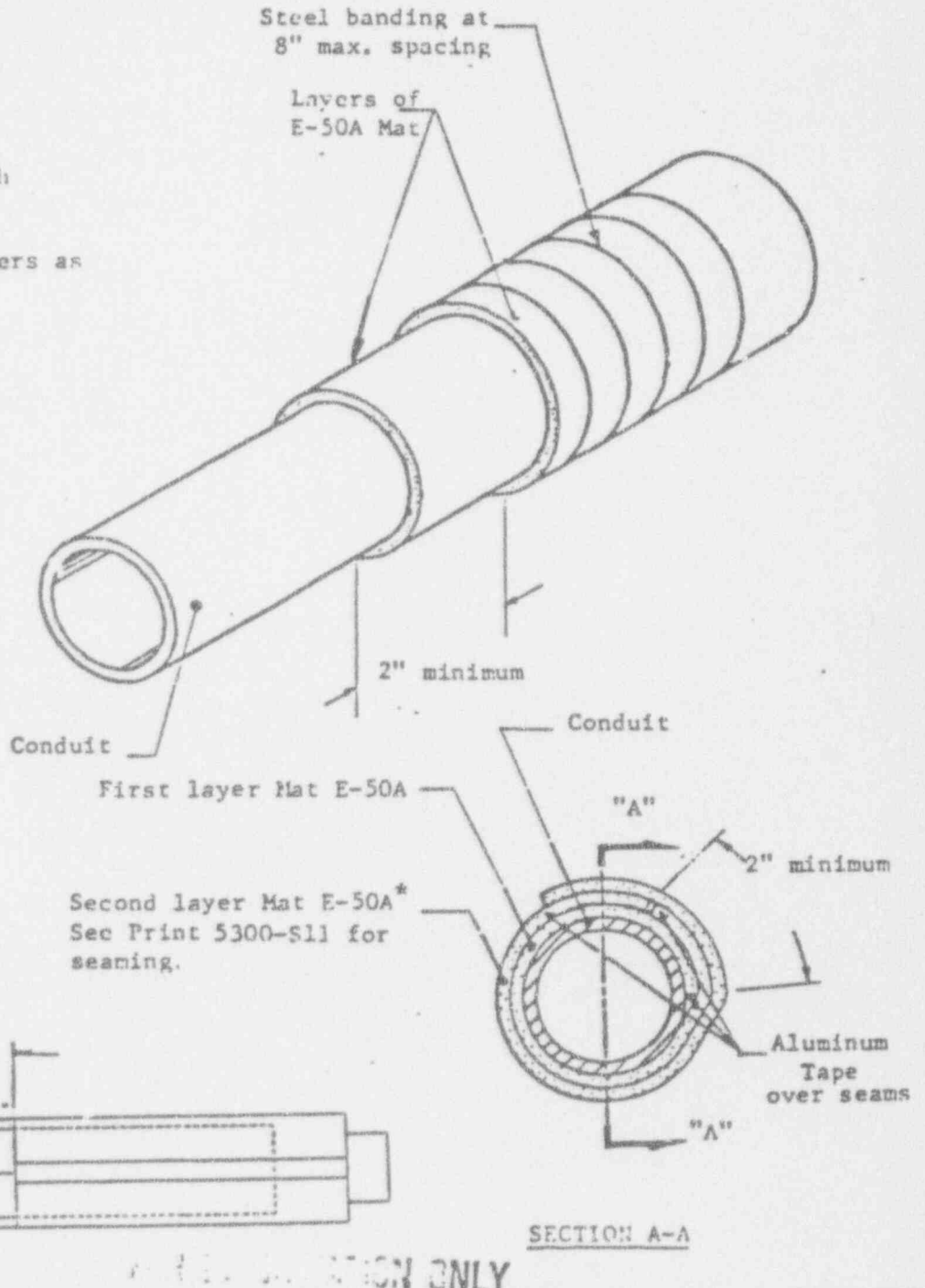
FURNACE

5300-C8-B-1
 5300-C8-B-2
 5300-C8-B-3

REFERENCE PRINT NO.
 5300-S11
 5300-S10
 5300-S11

NOTES:

1. Install Mat E-50A with Aluminum Foil out.
- * 2. Install number of layers as required in Table I, 5300-C8-B-3.

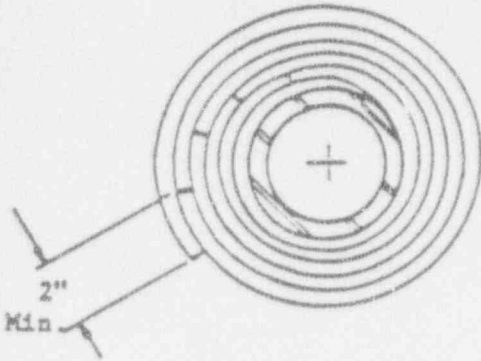


SECTION A-A

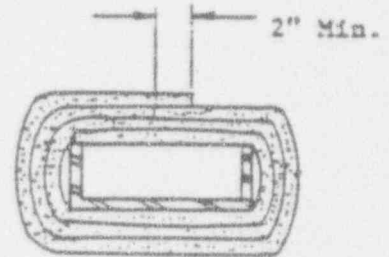
FOR INFORMATION ONLY

<p>All statements, technical information and recommendations contained herein are based on tests and theories to be used as a guide only. The user assumes all responsibility for the proper use of this material. See also the instructions on the material of design and a copy of the material shall be obtained only of the products listed in the data sheet.</p> <p>FOR INFORMATION ONLY</p> <p>Ceramic Materials Department 3M</p>	ISSUE	DATE	REV.	CH.	<p>INTERAM[®] CONDUIT</p> <p>Page 1 of 4 E-50A</p>
	6	9-25-85			
	NOT TO SCALE		BY R.G. Koza		
	BY K.A. Jensen		BY R.R. Licht		
	5300-C8-B				

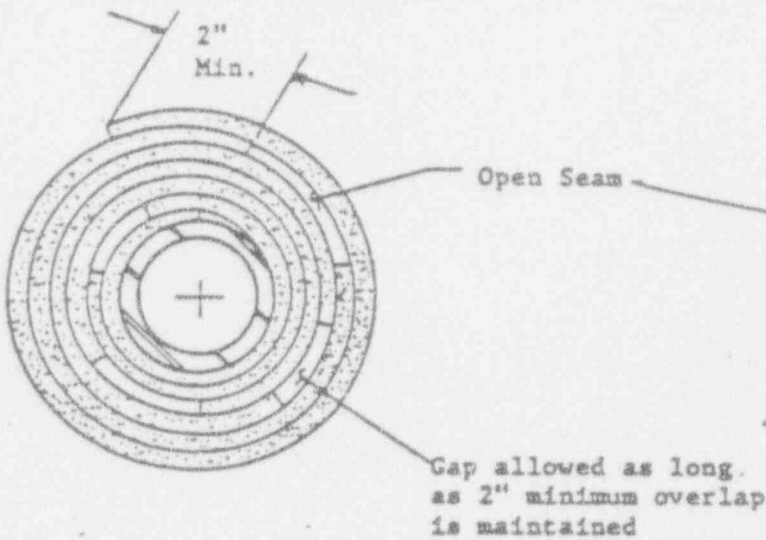
TIGHT SEAMS - CONDUIT



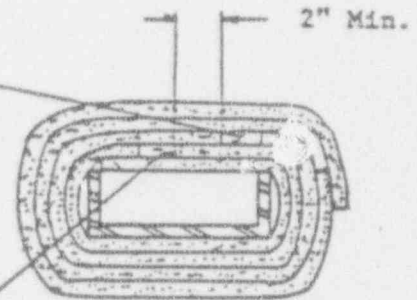
TIGHT SEAMS - CABLE TRAY



OPEN SEAMS - CONDUIT



OPEN SEAMS - CABLE TRAY



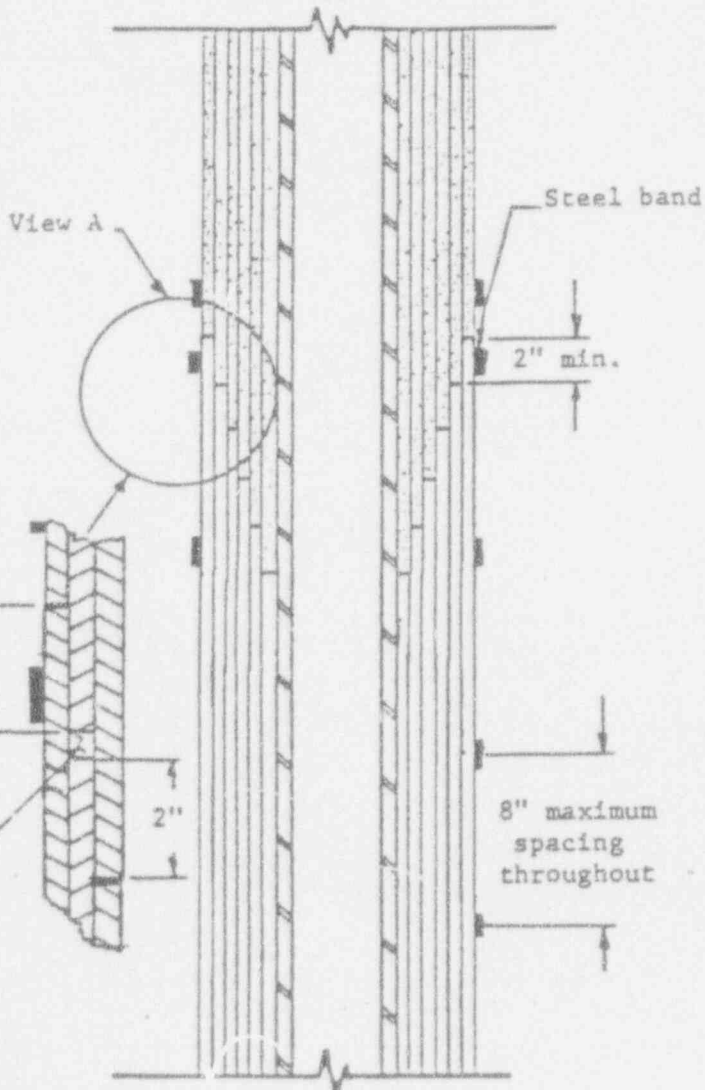
NOTE: All seams must be taped with Aluminum Foil Tape #49 or 425.

To insure a good bond, rub down the tape with a small rubber roller or the equivalent.

<small>ALL DIMENSIONS, UNLESS OTHERWISE SPECIFIED, ARE IN INCHES AND FRACTIONS THEREOF. DIMENSIONS ARE GIVEN ON THIS DRAWING TO BE USED AS A GUIDE ONLY. THE USER SHALL BE RESPONSIBLE FOR THE PROPER USE OF THIS DRAWING AND SHALL BE RESPONSIBLE FOR THE PROPER USE OF THIS DRAWING AND SHALL BE RESPONSIBLE FOR THE PROPER USE OF THIS DRAWING.</small>	ISSUE 4	DATE 11-5-84	REV. CH.	FIRE BARRIER SEAMING METHODS LONGITUDINAL
	NOT TO SCALE FOR INFORMATION ONLY		R.J. Israelson	
Ceramic Materials Department 3M		5300-S11	Page 1 of 1	E50A

NOTES:

1. All final Mat layer seams must be taped with T-49 Aluminum Foil Tape. To ensure a good bond, rub down the tape with a small rubber roller or the equivalent. Optional: All inner Mat layer seams may be taped with T-49 Aluminum Tape.
2. There is an 8" maximum spacing on banding throughout the system and on all seams. This is done on the last required layer.
3. A 2" minimum Mat overlap is to be maintained throughout the system.



Gaps allowed as long as 2" overlap is maintained.

BUTT METHOD

CONDUIT SHOWN

All statements, technical information and recommendations contained herein are based on data and criteria to the best of our knowledge and belief. They do not constitute a warranty or any other form of assurance, and they are not intended to be used for purposes other than those specifically intended. The user of this material or design shall be responsible for the proper use of our products in accordance with the data on file.	ISSUE	DATE	REV.	CM.	INTERAM ^{CM} E-50A SEAMING METHODS BUTT SEAMS PERIMETER
	2	3-5-86			
	NOT TO SCALE		R.J. Israelson		
	DR K.A. Jensen	R.R. Licht			
Ceramic Materials Department JM		5300-S12			Page 1 of 1

3L E-50A vs 5L E-50C ON 2' SCHED 40 CNDT
3M CHEM 63 FT #86-30 2-21-86

LINE 1	LINE 2	LINE 3	LINE 4	LINE 5
50A-#8	E50A-7/c12	E50C-#8	E50C-7/c12	FURNACE
GROUP 2	GROUP 3	GROUP 5	GROUP 6	GROUP 0

GROUP: 0 T/C's: 0 1 2 3 4 5 6 7 8

GROUP: 1 T/C's: 9 10 11

GROUP: 2 T/C's: 12 13 14

GROUP: 3 T/C's: 15 16 17

GROUP: 4 T/C's: 18 19 20

GROUP: 5 T/C's: 21 22 23

GROUP: 6 T/C's: 24 25 26

1 MINUTES
FURNACE

E50A-#8		E50A-7/c12		
GROUP 0	GROUP 1	GROUP 2	GROUP 3	GROUP 4
0 42°F	9 55°F	12 54°F	15 55°F	18 52°F
1 48°F	10 56°F	13 56°F	16 56°F	19 54°F
2 40°F	11 54°F	14 54°F	17 54°F	20 51°F
3 49°F				
4 57°F				
5 45°F				
6 48°F				
7 42°F				
8 45°F				
=====	=====	=====	=====	=====
46°F	55°F	55°F	55°F	52°F

E50C-#8	E50C-7/c12
GROUP 5	GROUP 6
21 55°F	24 56°F
22 56°F	25 56°F
23 54°F	26 54°F
=====	=====
55°F	55°F

2 MINUTES
FURNACE

E50A-#8		E50A-7/c12		
GROUP 0	GROUP 1	GROUP 2	GROUP 3	GROUP 4
0 139°F	9 55°F	12 54°F	15 55°F	18 52°F
1 165°F	10 56°F	13 56°F	16 56°F	19 54°F
2 138°F	11 54°F	14 54°F	17 54°F	20 51°F
3 186°F				
4 253°F				
5 170°F				
6 159°F				
7 144°F				
8 177°F				
=====	=====	=====	=====	=====
170°F	55°F	55°F	55°F	52°F

E50C-#8	E50C-7/c12
GROUP 5	GROUP 6
21 55°F	24 56°F
22 56°F	25 56°F
23 54°F	26 54°F
=====	=====
55°F	55°F

3 MINUTES

FURNACE

GROUP 0

0 411°F
 1 489°F
 2 447°F
 3 510°F
 4 683°F
 5 476°F
 6 489°F
 7 429°F
 8 515°F

=====
 494°F

GROUP 1

9 53°F
 10 55°F
 11 54°F

=====
 55°F

E50A-#8

GROUP 2

12 54°F
 13 56°F
 14 53°F

=====
 54°F

E50A-7/c12

GROUP 3

15 55°F
 16 56°F
 17 54°F

=====
 55°F

GROUP 4

18 52°F
 19 54°F
 20 51°F

=====
 52°F

E50C-#8

GROUP 5

21 54°F
 22 56°F
 23 54°F

=====
 55°F

E50C-7/c12

GROUP 6

24 55°F
 25 56°F
 26 54°F

=====
 55°F

4 MINUTES

FURNACE

GROUP 0

0 748°F
 1 847°F
 2 815°F
 3 869°F
 4 1059°F
 5 829°F
 6 861°F
 7 792°F
 8 874°F

=====
 855°F

GROUP 1

9 54°F
 10 55°F
 11 53°F

=====
 54°F

E50A-#8

GROUP 2

12 54°F
 13 56°F
 14 53°F

=====
 54°F

E50A-7/c12

GROUP 3

15 55°F
 16 56°F
 17 53°F

=====
 55°F

GROUP 4

18 52°F
 19 54°F
 20 51°F

=====
 52°F

E50C-#8

GROUP 5

21 54°F
 22 56°F
 23 54°F

=====
 55°F

E50C-7/c12

GROUP 6

24 55°F
 25 56°F
 26 54°F

=====
 55°F

5 MINUTES
FURNACE

GROUP 0
0 1009°F
1 1082°F
2 1072°F
3 1093°F
4 1251°F
5 1077°F
6 1093°F
7 1052°F
8 1100°F
=====

GROUP 1
9 55°F
10 55°F
11 53°F
=====

E50A-#8
GROUP 2
12 53°F
13 55°F
14 53°F
=====

E50A-7/c12
GROUP 3
15 54°F
16 55°F
17 53°F
=====

GROUP 4
18 52°F
19 54°F
20 51°F
=====

1092°F

54°F

54°F

54°F

52°F

E50C-#8
GROUP 5
21 54°F
22 55°F
23 53°F
=====

E50C-7/c12
GROUP 6
24 55°F
25 55°F
26 54°F
=====

54°F

55°F

6 MINUTES
FURNACE

GROUP 0
0 1157°F
1 1206°F
2 1204°F
3 1225°F
4 1347°F
5 1212°F
6 1226°F
7 1193°F
8 1223°F
=====

GROUP 1
9 55°F
10 55°F
11 53°F
=====

E50A-#8
GROUP 2
12 53°F
13 55°F
14 52°F
=====

E50A-7/c12
GROUP 3
15 54°F
16 55°F
17 53°F
=====

GROUP 4
18 52°F
19 54°F
20 50°F
=====

1221°F

54°F

53°F

54°F

52°F

E50C-#8
GROUP 5
21 54°F
22 55°F
23 53°F
=====

E50C-7/c12
GROUP 6
24 54°F
25 55°F
26 53°F
=====

54°F

54°F

7 MINUTES

FURNACE

GROUP 0

0 1235°F
 1 1270°F
 2 1270°F
 3 1287°F
 4 1382°F
 5 1274°F
 6 1291°F
 7 1261°F
 8 1281°F

=====
 1283°F

GROUP 1

9 54°F
 10 55°F
 11 54°F

=====
 54°F

E50A-#8

GROUP 2

12 53°F
 13 55°F
 14 53°F

=====
 54°F

E50A-7/c12

GROUP 3

15 54°F
 16 55°F
 17 53°F

=====
 54°F

GROUP 4

18 52°F
 19 54°F
 20 51°F

=====
 52°F

E50C-#8

GROUP 5

21 54°F
 22 55°F
 23 53°F

=====
 54°F

E50C-7/c12

GROUP 6

24 54°F
 25 55°F
 26 53°F

=====
 54°F

8 MINUTES

FURNACE

GROUP 0

0 1264°F
 1 1293°F
 2 1292°F
 3 1306°F
 4 1389°F
 5 1299°F
 6 1311°F
 7 1285°F
 8 1301°F

=====
 1304°F

GROUP 1

9 54°F
 10 55°F
 11 54°F

=====
 54°F

E50A-#8

GROUP 2

12 53°F
 13 55°F
 14 52°F

=====
 53°F

E50A-7/c12

GROUP 3

15 54°F
 16 55°F
 17 52°F

=====
 54°F

GROUP 4

18 52°F
 19 54°F
 20 51°F

=====
 52°F

E50C-#8

GROUP 5

21 53°F
 22 55°F
 23 53°F

=====
 54°F

E50C-7/c12

GROUP 6

24 54°F
 25 55°F
 26 53°F

=====
 54°F

9 MINUTES

FURNACE

GROUP 0

0 1392°F
 1 1315°F
 2 1312°F
 3 1324°F
 4 1403°F
 5 1322°F
 6 1329°F
 7 1306°F
 8 1320°F

=====
 1325°F

GROUP 1

9 54°F
 10 55°F
 11 54°F

=====
 54°F

E50A-#8

GROUP 2

12 53°F
 13 55°F
 14 52°F

=====
 53°F

E50A-7/c12

GROUP 3

15 54°F
 16 55°F
 17 52°F

=====
 54°F

GROUP 4

18 52°F
 19 54°F
 20 52°F

=====
 53°F

E50C-#8

GROUP 5

21 54°F
 22 55°F
 23 53°F

=====
 54°F

E50C-7/c12

GROUP 6

24 54°F
 25 55°F
 26 53°F

=====
 54°F

10 MINUTES

FURNACE

GROUP 0

0 1320°F
 1 1340°F
 2 1336°F
 3 1348°F
 4 1426°F
 5 1349°F
 6 1354°F
 7 1332°F
 8 1346°F

=====
 1350°F

GROUP 1

9 55°F
 10 56°F
 11 54°F

=====
 55°F

E50A-#8

GROUP 2

12 53°F
 13 55°F
 14 52°F

=====
 53°F

E50A-7/c12

GROUP 3

15 54°F
 16 55°F
 17 52°F

=====
 54°F

GROUP 4

18 53°F
 19 55°F
 20 53°F

=====
 54°F

E50C-#8

GROUP 5

21 53°F
 22 55°F
 23 53°F

=====
 54°F

E50C-7/c12

GROUP 6

24 54°F
 25 55°F
 26 53°F

=====
 54°F

11 MINUTES

FURNACE

GROUP 0

0 1354°F
 1 1372°F
 2 1367°F
 3 1380°F
 4 1456°F
 5 1380°F
 6 1383°F
 7 1365°F
 8 1377°F

=====
 1382°F

GROUP 1

9 56°F
 10 57°F
 11 55°F

=====
 56°F

E50A-#8

GROUP 2

12 53°F
 13 55°F
 14 53°F

=====
 54°F

E50A-7/c12

GROUP 3

15 54°F
 16 53°F
 17 52°F

=====
 54°F

GROUP 4

18 54°F
 19 56°F
 20 54°F

=====
 55°F

E50C-#8

GROUP 5

21 54°F
 22 55°F
 23 53°F

=====
 54°F

E50C-7/c12

GROUP 6

24 54°F
 25 56°F
 26 53°F

=====
 54°F

12 MINUTES

FURNACE

GROUP 0

0 1382°F
 1 1399°F
 2 1395°F
 3 1407°F
 4 1480°F
 5 1408°F
 6 1409°F
 7 1394°F
 8 1403°F

=====
 1409°F

GROUP 1

9 57°F
 10 59°F
 11 56°F

=====
 57°F

E50A-#8

GROUP 2

12 53°F
 13 55°F
 14 53°F

=====
 54°F

E50A-7/c12

GROUP 3

15 55°F
 16 56°F
 17 52°F

=====
 54°F

GROUP 4

18 55°F
 19 58°F
 20 56°F

=====
 56°F

E50C-#8

GROUP 5

21 54°F
 22 55°F
 23 53°F

=====
 54°F

E50C-7/c12

GROUP 6

24 55°F
 25 56°F
 26 53°F

=====
 55°F

13 MINUTES

FURNACE

GROUP 0

0 1398°F
 1 1414°F
 2 1410°F
 3 1420°F
 4 1488°F
 5 1422°F
 6 1423°F
 7 1409°F
 8 1417°F

=====
 1422°F

GROUP 1

9 59°F
 10 62°F
 11 58°F

=====
 60°F

E50A-#8

GROUP 2

12 53°F
 13 55°F
 14 53°F

=====
 54°F

E50A-7/c12

GROUP 3

15 55°F
 16 56°F
 17 52°F

=====
 54°F

GROUP 4

18 57°F
 19 60°F
 20 58°F

=====
 58°F

E50C-#8

GROUP 5

21 54°F
 22 56°F
 23 53°F

=====
 54°F

E50C-7/c12

GROUP 6

24 55°F
 25 57°F
 26 53°F

=====
 55°F

14 MINUTES

FURNACE

GROUP 0

0 1408°F
 1 1422°F
 2 1418°F
 3 1427°F
 4 1492°F
 5 1430°F
 6 1431°F
 7 1418°F
 8 1424°F

=====
 1430°F

GROUP 1

9 62°F
 10 66°F
 11 60°F

=====
 63°F

E50A-#8

GROUP 2

12 53°F
 13 56°F
 14 54°F

=====
 54°F

E50A-7/c12

GROUP 3

15 56°F
 16 57°F
 17 53°F

=====
 55°F

GROUP 4

18 59°F
 19 63°F
 20 60°F

=====
 61°F

E50C-#8

GROUP 5

21 54°F
 22 57°F
 23 53°F

=====
 55°F

E50C-7/c12

GROUP 6

24 55°F
 25 58°F
 26 53°F

=====
 55°F

15 MINUTES

FURNACE

GROUP 0

0 1420°F
 1 1434°F
 2 1429°F
 3 1438°F
 4 1500°F
 5 1441°F
 6 1441°F
 7 1429°F
 8 1436°F

=====
 1441°F

GROUP 1

9 65°F
 10 71°F
 11 63°F

=====
 66°F

E50A-#8

GROUP 2

12 54°F
 13 57°F
 14 55°F

=====
 55°F

E50A-7/c12

GROUP 3

15 58°F
 16 58°F
 17 53°F

=====
 56°F

GROUP 4

18 62°F
 19 66°F
 20 63°F

=====
 64°F

E50C-#8

GROUP 5

21 56°F
 22 59°F
 23 54°F

=====
 56°F

E50C-7/c12

GROUP 6

24 56°F
 25 61°F
 26 53°F

=====
 57°F

16 MINUTES

FURNACE

GROUP 0

0 1442°F
 1 1455°F
 2 1451°F
 3 1460°F
 4 1522°F
 5 1463°F
 6 1462°F
 7 1452°F
 8 1457°F

=====
 1463°F

GROUP 1

9 69°F
 10 76°F
 11 66°F

=====
 70°F

E50A-#8

GROUP 2

12 55°F
 13 58°F
 14 57°F

=====
 57°F

E50A-7/c12

GROUP 3

15 59°F
 16 59°F
 17 54°F

=====
 57°F

GROUP 4

18 65°F
 19 68°F
 20 66°F

=====
 66°F

E50C-#8

GROUP 5

21 57°F
 22 61°F
 23 55°F

=====
 58°F

E50C-7/c12

GROUP 6

24 57°F
 25 62°F
 26 54°F

=====
 58°F

17 MINUTES

FURNACE

GROUP 0

0 1467°F
 1 1479°F
 2 1475°F
 3 1483°F
 4 1541°F
 5 1487°F
 6 1484°F
 7 1476°F
 8 1479°F

=====
 1486°F

GROUP 1

9 74°F
 10 85°F
 11 70°F

=====
 76°F

E50A-#8

GROUP 2

12 57°F
 13 60°F
 14 59°F

=====
 59°F

E50A-7/c12

GROUP 3

15 62°F
 16 62°F
 17 56°F

=====
 60°F

GROUP 4

18 69°F
 19 72°F
 20 71°F

=====
 71°F

E50C-#8

GROUP 5

21 60°F
 22 64°F
 23 57°F

=====
 60°F

E50C-7/c12

GROUP 6

24 60°F
 25 66°F
 26 55°F

=====
 60°F

18 MINUTES

FURNACE

GROUP 0

0 1480°F
 1 1490°F
 2 1487°F
 3 1493°F
 4 1548°F
 5 1498°F
 6 1495°F
 7 1488°F
 8 1490°F

=====
 1497°F

GROUP 1

9 80°F
 10 94°F
 11 75°F

=====
 83°F

E50A-#8

GROUP 2

12 58°F
 13 62°F
 14 61°F

=====
 60°F

E50A-7/c12

GROUP 3

15 64°F
 16 64°F
 17 57°F

=====
 62°F

GROUP 4

18 72°F
 19 77°F
 20 75°F

=====
 75°F

E50C-#8

GROUP 5

21 63°F
 22 67°F
 23 59°F

=====
 63°F

E50C-7/c12

GROUP 6

24 62°F
 25 69°F
 26 56°F

=====
 62°F

19 MINUTES

FURNACE

GROUP 0

0 1485°F
 1 1494°F
 2 1491°F
 3 1496°F
 4 1548°F
 5 1502°F
 6 1499°F
 7 1492°F
 8 1494°F

=====
 1500°F

GROUP 1

9 89°F
 10 104°F
 11 80°F

=====
 91°F

E50A-#8

GROUP 2

12 59°F
 13 63°F
 14 63°F

=====
 62°F

E50A-7/c12

GROUP 3

15 65°F
 16 65°F
 17 58°F

=====
 63°F

GROUP 4

18 76°F
 19 81°F
 20 78°F

=====
 78°F

E50C-#8

GROUP 5

21 65°F
 22 71°F
 23 61°F

=====
 66°F

E50C-7/c12

GROUP 6

24 63°F
 25 72°F
 26 57°F

=====
 64°F

20 MINUTES

FURNACE

GROUP 0

0 1490°F
 1 1498°F
 2 1497°F
 3 1502°F
 4 1553°F
 5 1507°F
 6 1504°F
 7 1498°F
 8 1500°F

=====
 1505°F

GROUP 1

9 99°F
 10 116°F
 11 87°F

=====
 101°F

E50A-#8

GROUP 2

12 61°F
 13 65°F
 14 65°F

=====
 64°F

E50A-7/c12

GROUP 3

15 67°F
 16 67°F
 17 59°F

=====
 64°F

GROUP 4

18 80°F
 19 86°F
 20 83°F

=====
 83°F

E50C-#8

GROUP 5

21 68°F
 22 76°F
 23 63°F

=====
 69°F

E50C-7/c12

GROUP 6

24 65°F
 25 77°F
 26 58°F

=====
 67°F

21 MINUTES
FURNACE

GROUP 0
0 1496°F
1 1504°F
2 1502°F
3 1507°F
4 1557°F
5 1512°F
6 1510°F
7 1503°F
8 1505°F
=====
1511°F

GROUP 1
9 106°F
10 127°F
11 95°F
=====
109°F

E50A-#8
GROUP 2
12 63°F
13 67°F
14 67°F
=====
66°F

E50A-7/c12
GROUP 3
15 69°F
16 69°F
17 61°F
=====
66°F

GROUP 4
18 85°F
19 90°F
20 87°F
=====
87°F

E50C-#8
GROUP 5
21 72°F
22 81°F
23 66°F
=====
73°F

E50C-7/c12
GROUP 6
24 67°F
25 81°F
26 60°F
=====
69°F

22 MINUTES
FURNACE

GROUP 0
0 1495°F
1 1502°F
2 1500°F
3 1505°F
4 1552°F
5 1510°F
6 1508°F
7 1500°F
8 1503°F
=====
1508°F

GROUP 1
9 114°F
10 137°F
11 103°F
=====
118°F

E50A-#8
GROUP 2
12 66°F
13 71°F
14 71°F
=====
69°F

E50A-7/c12
GROUP 3
15 73°F
16 72°F
17 63°F
=====
69°F

GROUP 4
18 90°F
19 96°F
20 93°F
=====
93°F

E50C-#8
GROUP 5
21 78°F
22 88°F
23 70°F
=====
79°F

E50C-7/c12
GROUP 6
24 72°F
25 87°F
26 63°F
=====
74°F

23 MINUTES

FURNACE

GROUP 0

0 1492°F
 1 1499°F
 2 1497°F
 3 1502°F
 4 1548°F
 5 1506°F
 6 1505°F
 7 1497°F
 8 1500°F

=====
 1505°F

GROUP 1

9 123°F
 10 144°F
 11 110°F

=====
 126°F

E50A-#8

GROUP 2

12 68°F
 13 74°F
 14 74°F

=====
 72°F

E50A-7/c12

GROUP 3

15 76°F
 16 75°F
 17 66°F

=====
 72°F

GROUP 4

18 95°F
 19 101°F
 20 98°F

=====
 98°F

E50C-#8

GROUP 5

21 83°F
 22 94°F
 23 74°F

=====
 84°F

E50C-7/c12

GROUP 6

24 75°F
 25 92°F
 26 66°F

=====
 78°F

24 MINUTES

FURNACE

GROUP 0

0 1492°F
 1 1499°F
 2 1496°F
 3 1501°F
 4 1548°F
 5 1505°F
 6 1505°F
 7 1496°F
 8 1500°F

=====
 1505°F

GROUP 1

9 133°F
 10 151°F
 11 117°F

=====
 134°F

E50A-#8

GROUP 2

12 71°F
 13 77°F
 14 78°F

=====
 75°F

E50A-7/c12

GROUP 3

15 79°F
 16 78°F
 17 68°F

=====
 75°F

GROUP 4

18 101°F
 19 107°F
 20 104°F

=====
 104°F

E50C-#8

GROUP 5

21 89°F
 22 100°F
 23 79°F

=====
 89°F

E50C-7/c12

GROUP 6

24 80°F
 25 97°F
 26 69°F

=====
 82°F

25 MINUTES

FURNACE

GROUP 0

0 1494°F
 1 1501°F
 2 1498°F
 3 1504°F
 4 1550°F
 5 1507°F
 6 1508°F
 7 1499°F
 8 1503°F

=====
 1507°F

GROUP 1

9 142°F
 10 157°F
 11 124°F

=====
 141°F

E50A-#8

GROUP 2

12 74°F
 13 81°F
 14 82°F

=====
 79°F

E50A-7/c12

GROUP 3

15 83°F
 16 82°F
 17 71°F

=====
 79°F

GROUP 4

18 107°F
 19 113°F
 20 110°F

=====
 110°F

E50C-#8

GROUP 5

21 95°F
 22 107°F
 23 85°F

=====
 96°F

E50C-7/c12

GROUP 6

24 85°F
 25 103°F
 26 74°F

=====
 87°F

26 MINUTES

FURNACE

GROUP 0

0 1497°F
 1 1505°F
 2 1502°F
 3 1507°F
 4 1553°F
 5 1510°F
 6 1511°F
 7 1502°F
 8 1507°F

=====
 1510°F

GROUP 1

9 149°F
 10 161°F
 11 131°F

=====
 147°F

E50A-#8

GROUP 2

12 77°F
 13 85°F
 14 86°F

=====
 83°F

E50A-7/c12

GROUP 3

15 87°F
 16 85°F
 17 74°F

=====
 82°F

GROUP 4

18 113°F
 19 120°F
 20 116°F

=====
 116°F

E50C-#8

GROUP 5

21 101°F
 22 112°F
 23 91°F

=====
 101°F

E50C-7/c12

GROUP 6

24 89°F
 25 107°F
 26 78°F

=====
 91°F

27 MINUTES

FURNACE

GROUP 0

0 1501°F
 1 1508°F
 2 1506°F
 3 1511°F
 4 1556°F
 5 1514°F
 6 1514°F
 7 1506°F
 8 1510°F

=====
 1514°F

GROUP 1

9 155°F
 10 166°F
 11 138°F

=====
 153°F

E50A-#8

GROUP 2

12 82°F
 13 90°F
 14 90°F

=====
 87°F

E50A-7/c12

GROUP 3

15 92°F
 16 89°F
 17 77°F

=====
 86°F

GROUP 4

18 119°F
 19 127°F
 20 123°F

=====
 123°F

E50C-#8

GROUP 5

21 108°F
 22 119°F
 23 97°F

=====
 108°F

E50C-7/c12

GROUP 6

24 94°F
 25 113°F
 26 83°F

=====
 97°F

28 MINUTES

FURNACE

GROUP 0

0 1506°F
 1 1514°F
 2 1512°F
 3 1517°F
 4 1561°F
 5 1519°F
 6 1520°F
 7 1512°F
 8 1516°F

=====
 1520°F

GROUP 1

9 160°F
 10 171°F
 11 145°F

=====
 159°F

E50A-#8

GROUP 2

12 86°F
 13 96°F
 14 95°F

=====
 92°F

E50A-7/c12

GROUP 3

15 97°F
 16 94°F
 17 81°F

=====
 91°F

GROUP 4

18 126°F
 19 134°F
 20 129°F

=====
 130°F

E50C-#8

GROUP 5

21 114°F
 22 125°F
 23 103°F

=====
 114°F

E50C-7/c12

GROUP 6

24 100°F
 25 119°F
 26 89°F

=====
 103°F

29 MINUTES

FURNACE

GROUP 0

0 1516°F
 1 1523°F
 2 1522°F
 3 1527°F
 4 1571°F
 5 1529°F
 6 1530°F
 7 1522°F
 8 1526°F

=====
 1530°F

GROUP 1

9 165°F
 10 176°F
 11 153°F

=====
 165°F

E50A-#8

GROUP 2

12 91°F
 13 102°F
 14 101°F

=====
 98°F

E50A-7/c12

GROUP 3

15 103°F
 16 99°F
 17 85°F

=====
 96°F

GROUP 4

18 132°F
 19 141°F
 20 137°F

=====
 137°F

E50C-#8

GROUP 5

21 121°F
 22 132°F
 23 110°F

=====
 121°F

E50C-7/c12

GROUP 6

24 105°F
 25 125°F
 26 94°F

=====
 108°F

30 MINUTES

FURNACE

GROUP 0

0 1527°F
 1 1534°F
 2 1532°F
 3 1537°F
 4 1581°F
 5 1540°F
 6 1541°F
 7 1533°F
 8 1537°F

=====
 1540°F

GROUP 1

9 171°F
 10 182°F
 11 161°F

=====
 171°F

E50A-#8

GROUP 2

12 97°F
 13 109°F
 14 107°F

=====
 104°F

E50A-7/c12

GROUP 3

15 110°F
 16 106°F
 17 91°F

=====
 102°F

GROUP 4

18 140°F
 19 150°F
 20 146°F

=====
 145°F

E50C-#8

GROUP 5

21 130°F
 22 140°F
 23 117°F

=====
 129°F

E50C-7/c12

GROUP 6

24 112°F
 25 133°F
 26 101°F

=====
 115°F

31 MINUTES
FURNACE

GROUP 0

0 1536°F
1 1542°F
2 1540°F
3 1546°F
4 1589°F
5 1548°F
6 1549°F
7 1541°F
8 1545°F

=====
1548°F

GROUP 1

9 175°F
10 186°F
11 168°F

=====
176°F

E50A-#8

GROUP 2

12 102°F
13 115°F
14 113°F

=====
110°F

E50A-7/c12

GROUP 3

15 118°F
16 112°F
17 95°F

=====
107°F

GROUP 4

18 148°F
19 157°F
20 152°F

=====
152°F

E50C-#8

GROUP 5

21 137°F
22 145°F
23 123°F

=====
135°F

E50C-7/c12

GROUP 6

24 118°F
25 138°F
26 106°F

=====
121°F

32 MINUTES
FURNACE

GROUP 0

0 1543°F
1 1550°F
2 1548°F
3 1553°F
4 1596°F
5 1556°F
6 1557°F
7 1549°F
8 1553°F

=====
1556°F

GROUP 1

9 180°F
10 189°F
11 174°F

=====
181°F

E50A-#8

GROUP 2

12 107°F
13 121°F
14 118°F

=====
115°F

E50A-7/c12

GROUP 3

15 119°F
16 118°F
17 99°F

=====
112°F

GROUP 4

18 156°F
19 164°F
20 159°F

=====
160°F

E50C-#8

GROUP 5

21 144°F
22 151°F
23 128°F

=====
141°F

E50C-7/c12

GROUP 6

24 124°F
25 144°F
26 112°F

=====
127°F

33 MINUTES

FURNACE

GROUP 0

0 1550°F
 1 1556°F
 2 1555°F
 3 1560°F
 4 1603°F
 5 1562°F
 6 1563°F
 7 1556°F
 8 1559°F

=====
 1563°F

GROUP 1

9 185°F
 10 194°F
 11 180°F

=====
 186°F

E50A-#8

GROUP 2

12 113°F
 13 129°F
 14 124°F

=====
 122°F

E50A-7/c12

GROUP 3

15 124°F
 16 125°F
 17 104°F

=====
 118°F

GROUP 4

18 166°F
 19 174°F
 20 165°F

=====
 168°F

E50C-#8

GROUP 5

21 151°F
 22 157°F
 23 134°F

=====
 147°F

E50C-7/c12

GROUP 6

24 130°F
 25 150°F
 26 117°F

=====
 132°F

34 MINUTES

FURNACE

GROUP 0

0 1557°F
 1 1562°F
 2 1561°F
 3 1566°F
 4 1608°F
 5 1569°F
 6 1569°F
 7 1562°F
 8 1565°F

=====
 1569°F

GROUP 1

9 190°F
 10 199°F
 11 186°F

=====
 192°F

E50A-#8

GROUP 2

12 119°F
 13 138°F
 14 130°F

=====
 129°F

E50A-7/c12

GROUP 3

15 129°F
 16 133°F
 17 109°F

=====
 124°F

GROUP 4

18 173°F
 19 180°F
 20 171°F

=====
 175°F

E50C-#8

GROUP 5

21 159°F
 22 164°F
 23 140°F

=====
 154°F

E50C-7/c12

GROUP 6

24 136°F
 25 157°F
 26 123°F

=====
 139°F

05 MINUTES

FURNACE

GROUP 0

0 1565°F
 1 1569°F
 2 1568°F
 3 1573°F
 4 1614°F
 5 1576°F
 6 1576°F
 7 1569°F
 8 1572°F

=====
 1576°F

GROUP 1

9 194°F
 10 206°F
 11 195°F

=====
 198°F

E50A-#8

GROUP 2

12 125°F
 13 147°F
 14 136°F

=====
 136°F

E50A-7/c12

GROUP 3

15 134°F
 16 143°F
 17 115°F

=====
 131°F

GROUP 4

18 177°F
 19 189°F
 20 177°F

=====
 181°F

E50C-#8

GROUP 5

21 166°F
 22 171°F
 23 147°F

=====
 161°F

E50C-7/c12

GROUP 6

24 144°F
 25 166°F
 26 131°F

=====
 147°F

36 MINUTES

FURNACE

GROUP 0

0 1569°F
 1 1575°F
 2 1574°F
 3 1579°F
 4 1619°F
 5 1581°F
 6 1582°F
 7 1575°F
 8 1578°F

=====
 1581°F

GROUP 1

9 199°F
 10 213°F
 11 203°F

=====
 205°F

E50A-#8

GROUP 2

12 131°F
 13 155°F
 14 142°F

=====
 143°F

E50A-7/c12

GROUP 3

15 139°F
 16 151°F
 17 120°F

=====
 137°F

GROUP 4

18 180°F
 19 214°F
 20 182°F

=====
 192°F

E50C-#8

GROUP 5

21 173°F
 22 176°F
 23 153°F

=====
 167°F

E50C-7/c12

GROUP 6

24 150°F
 25 171°F
 26 136°F

=====
 152°F

37 MINUTES

FURNACE

GROUP 0

0 1575°F
 1 1580°F
 2 1580°F
 3 1585°F
 4 1624°F
 5 1587°F
 6 1587°F
 7 1581°F
 8 1583°F

=====
 1587°F

GROUP 1

9 204°F
 10 219°F
 11 211°F

=====
 211°F

E50A-#8

GROUP 2

12 138°F
 13 163°F
 14 150°F

=====
 150°F

E50A-7/c12

GROUP 3

15 143°F
 16 158°F
 17 125°F

=====
 142°F

GROUP 4

18 184°F
 19 213°F
 20 189°F

=====
 195°F

E50C-#8

GROUP 5

21 179°F
 22 182°F
 23 160°F

=====
 174°F

E50C-7/c12

GROUP 6

24 156°F
 25 175°F
 26 143°F

=====
 158°F

38 MINUTES

FURNACE

GROUP 0

0 1583°F
 1 1588°F
 2 1587°F
 3 1593°F
 4 1633°F
 5 1595°F
 6 1596°F
 7 1589°F
 8 1592°F

=====
 1595°F

GROUP 1

9 210°F
 10 224°F
 11 217°F

=====
 217°F

E50A-#8

GROUP 2

12 142°F
 13 171°F
 14 157°F

=====
 157°F

E50A-7/c12

GROUP 3

15 148°F
 16 164°F
 17 131°F

=====
 148°F

GROUP 4

18 187°F
 19 213°F
 20 198°F

=====
 199°F

E50C-#8

GROUP 5

21 184°F
 22 185°F
 23 167°F

=====
 179°F

E50C-7/c12

GROUP 6

24 161°F
 25 179°F
 26 149°F

=====
 163°F

32 MINUTES

FURNACE

GROUP 0

0 1598°F
 1 1600°F
 2 1603°F
 3 1608°F
 4 1649°F
 5 1610°F
 6 1611°F
 7 1604°F
 8 1607°F

=====
 1610°F

GROUP 1

9 216°F
 10 228°F
 11 222°F

=====
 222°F

E50A-#8

GROUP 2

12 148°F
 13 179°F
 14 165°F

=====
 164°F

E50A-7/c12

GROUP 3

15 154°F
 16 169°F
 17 138°F

=====
 154°F

GROUP 4

18 193°F
 19 214°F
 20 207°F

=====
 205°F

E50C-#8

GROUP 5

21 189°F
 22 190°F
 23 175°F

=====
 185°F

E50C-7/c12

GROUP 6

24 166°F
 25 182°F
 26 156°F

=====
 168°F

40 MINUTES

FURNACE

GROUP 0

0 1610°F
 1 1615°F
 2 1615°F
 3 1620°F
 4 1660°F
 5 1621°F
 6 1622°F
 7 1616°F
 8 1619°F

=====
 1622°F

GROUP 1

9 219°F
 10 234°F
 11 227°F

=====
 227°F

E50A-#8

GROUP 2

12 155°F
 13 185°F
 14 173°F

=====
 171°F

E50A-7/c12

GROUP 3

15 161°F
 16 174°F
 17 144°F

=====
 160°F

GROUP 4

18 200°F
 19 214°F
 20 217°F

=====
 210°F

E50C-#8

GROUP 5

21 193°F
 22 193°F
 23 182°F

=====
 189°F

E50C-7/c12

GROUP 6

24 171°F
 25 185°F
 26 162°F

=====
 173°F

41 MINUTES

FURNACE

GROUP 0

0 1619°F
 1 1624°F
 2 1623°F
 3 1628°F
 4 1668°F
 5 1630°F
 6 1631°F
 7 1624°F
 8 1627°F

=====
 1630°F

GROUP 1

9 222°F
 10 238°F
 11 233°F

=====
 231°F

E50A-#8

GROUP 2

12 161°F
 13 190°F
 14 180°F

=====
 177°F

E50A-7/c12

GROUP 3

15 167°F
 16 177°F
 17 151°F

=====
 165°F

GROUP 4

18 209°F
 19 217°F
 20 216°F

=====
 214°F

E50C-#8

GROUP 5

21 196°F
 22 196°F
 23 186°F

=====
 193°F

E50C-7/c12

GROUP 6

24 174°F
 25 189°F
 26 166°F

=====
 176°F

42 MINUTES

FURNACE

GROUP 0

0 1626°F
 1 1631°F
 2 1631°F
 3 1636°F
 4 1675°F
 5 1638°F
 6 1638°F
 7 1632°F
 8 1634°F

=====
 1638°F

GROUP 1

9 226°F
 10 243°F
 11 237°F

=====
 235°F

E50A-#8

GROUP 2

12 168°F
 13 194°F
 14 187°F

=====
 183°F

E50A-7/c12

GROUP 3

15 175°F
 16 181°F
 17 157°F

=====
 171°F

GROUP 4

18 216°F
 19 224°F
 20 225°F

=====
 222°F

E50C-#8

GROUP 5

21 199°F
 22 199°F
 23 190°F

=====
 196°F

E50C-7/c12

GROUP 6

24 177°F
 25 191°F
 26 170°F

=====
 179°F

43 MINUTES

FURNACE

GROUP 0

0 1634°F
 1 1638°F
 2 1638°F
 3 1640°F
 4 1681°F
 5 1645°F
 6 1646°F
 7 1639°F
 8 1642°F

=====
 1645°F

GROUP 1

9 231°F
 10 249°F
 11 240°F

=====
 240°F

E50A-#8

GROUP 2

12 175°F
 13 197°F
 14 192°F

=====
 188°F

E50A-7/c12

GROUP 3

15 180°F
 16 185°F
 17 163°F

=====
 176°F

GROUP 4

18 220°F
 19 229°F
 20 230°F

=====
 226°F

E50C-#8

GROUP 5

21 202°F
 22 202°F
 23 193°F

=====
 199°F

E50C-7/c12

GROUP 6

24 181°F
 25 195°F
 26 173°F

=====
 183°F

44 MINUTES

FURNACE

GROUP 0

0 1640°F
 1 1644°F
 2 1644°F
 3 1649°F
 4 1687°F
 5 1650°F
 6 1652°F
 7 1645°F
 8 1647°F

=====
 1651°F

GROUP 1

9 237°F
 10 255°F
 11 243°F

=====
 245°F

E50A-#8

GROUP 2

12 180°F
 13 201°F
 14 196°F

=====
 192°F

E50A-7/c12

GROUP 3

15 183°F
 16 189°F
 17 168°F

=====
 180°F

GROUP 4

18 227°F
 19 235°F
 20 235°F

=====
 232°F

E50C-#8

GROUP 5

21 204°F
 22 206°F
 23 195°F

=====
 202°F

E50C-7/c12

GROUP 6

24 185°F
 25 200°F
 26 176°F

=====
 187°F

45 MINUTES

FURNACE

GROUP 0

0 1646 F
 1 1650 F
 2 1650 F
 3 1654 F
 4 1692 F
 5 1656 F
 6 1658 F
 7 1651 F
 8 1653 F

=====
 1657 F

GROUP 1

9 246 F
 10 262 F
 11 249 F

=====
 252 F

E50A-#8

GROUP 2

12 184 F
 13 205 F
 14 202 F

=====
 197 F

E50A-7/c12

GROUP 3

15 188 F
 16 194 F
 17 174 F

=====
 185 F

GROUP 4

18 233 F
 19 242 F
 20 243 F

=====
 239 F

E50C-#8

GROUP 5

21 209 F
 22 211 F
 23 198 F

=====
 206 F

E50C-7/c12

GROUP 6

24 190 F
 25 206 F
 26 181 F

=====
 192 F

46 MINUTES

FURNACE

GROUP 0

0 1651 F
 1 1655 F
 2 1655 F
 3 1660 F
 4 1697 F
 5 1662 F
 6 1663 F
 7 1656 F
 8 1659 F

=====
 1662 F

GROUP 1

9 253 F
 10 269 F
 11 255 F

=====
 259 F

E50A-#8

GROUP 2

12 189 F
 13 210 F
 14 207 F

=====
 202 F

E50A-7/c12

GROUP 3

15 193 F
 16 199 F
 17 180 F

=====
 191 F

GROUP 4

18 239 F
 19 248 F
 20 250 F

=====
 246 F

E50C-#8

GROUP 5

21 213 F
 22 216 F
 23 201 F

=====
 210 F

E50C-7/c12

GROUP 6

24 194 F
 25 211 F
 26 185 F

=====
 197 F

47 MINUTES

FURNACE

GROUP 0

0 1659°F
 1 1660°F
 2 1660°F
 3 1665°F
 4 1701°F
 5 1666°F
 6 1668°F
 7 1661°F
 8 1663°F

=====
 1667°F

GROUP 1

9 261°F
 10 276°F
 11 261°F

=====
 266°F

E50A-#8

GROUP 2

12 194°F
 13 215°F
 14 212°F

=====
 207°F

E50A-7/c12

GROUP 3

15 198°F
 16 203°F
 17 185°F

=====
 195°F

GROUP 4

18 246°F
 19 254°F
 20 25 F

=====
 252°F

E50C-#8

GROUP 5

21 218°F
 22 221°F
 23 205°F

=====
 215°F

E50C-7/c12

GROUP 6

24 199°F
 25 217°F
 26 189°F

=====
 202°F

48 MINUTES

FURNACE

GROUP 0

0 1661°F
 1 1664°F
 2 1664°F
 3 1669°F
 4 1706°F
 5 1671°F
 6 1672°F
 7 1665°F
 8 1668°F

=====
 1671°F

GROUP 1

9 268°F
 10 284°F
 11 268°F

=====
 273°F

E50A-#8

GROUP 2

12 200°F
 13 220°F
 14 218°F

=====
 213°F

E50A-7/c12

GROUP 3

15 203°F
 16 208°F
 17 191°F

=====
 201°F

GROUP 4

18 251°F
 19 260°F
 20 261°F

=====
 257°F

E50C-#8

GROUP 5

21 223°F
 22 226°F
 23 210°F

=====
 220°F

E50C-7/c12

GROUP 6

24 204°F
 25 222°F
 26 193°F

=====
 206°F

49 MINUTES

FURNACE

GROUP 0

0 1668°F
 1 1669°F
 2 1669°F
 3 1674°F
 4 1710°F
 5 1675°F
 6 1677°F
 7 1670°F
 8 1673°F

=====
 1676°F

GROUP 1

9 275°F
 10 291°F
 11 274°F

=====
 280°F

E50A-#8

GROUP 2

12 206°F
 13 226°F
 14 224°F

=====
 219°F

E50A-7/c12

GROUP 3

15 209°F
 16 214°F
 17 197°F

=====
 207°F

GROUP 4

18 253°F
 19 266°F
 20 267°F

=====
 264°F

E50C-#8

GROUP 5

21 229°F
 22 232°F
 23 215°F

=====
 225°F

E50C-7/c12

GROUP 6

24 209°F
 25 228°F
 26 198°F

=====
 212°F

50 MINUTES

FURNACE

GROUP 0

0 1670°F
 1 1674°F
 2 1674°F
 3 1679°F
 4 1714°F
 5 1681°F
 6 1682°F
 7 1676°F
 8 1678°F

=====
 1681°F

GROUP 1

9 282°F
 10 299°F
 11 282°F

=====
 288°F

E50A-#8

GROUP 2

12 212°F
 13 232°F
 14 231°F

=====
 225°F

E50A-7/c12

GROUP 3

15 216°F
 16 220°F
 17 204°F

=====
 213°F

GROUP 4

18 265°F
 19 273°F
 20 274°F

=====
 271°F

E50C-#8

GROUP 5

21 235°F
 22 239°F
 23 220°F

=====
 231°F

E50C-7/c12

GROUP 6

24 214°F
 25 234°F
 26 203°F

=====
 217°F

51 MINUTES

FURNACE

GROUP 0

0 1675°F
 1 1679°F
 2 1679°F
 3 1684°F
 4 1719°F
 5 1688°F
 6 1686°F
 7 1680°F
 8 1682°F

=====
 1685°F

GROUP 1

9 290°F
 10 306°F
 11 288°F

=====
 295°F

E50A-#8

GROUP 2

12 217°F
 13 238°F
 14 237°F

=====
 231°F

E50A-7/c12

GROUP 3

15 221°F
 16 225°F
 17 209°F

=====
 218°F

GROUP 4

18 270°F
 19 278°F
 20 261°F

=====
 276°F

E50C-#8

GROUP 5

21 241°F
 22 245°F
 23 225°F

=====
 237°F

E50C-7/c12

GROUP 6

24 219°F
 25 239°F
 26 206°F

=====
 221°F

52 MINUTES

FURNACE

GROUP 0

0 1680°F
 1 1683°F
 2 1684°F
 3 1689°F
 4 1723°F
 5 1690°F
 6 1691°F
 7 1685°F
 8 1687°F

=====
 1690°F

GROUP 1

9 296°F
 10 313°F
 11 295°F

=====
 301°F

E50A-#8

GROUP 2

12 223°F
 13 245°F
 14 244°F

=====
 237°F

E50A-7/c12

GROUP 3

15 227°F
 16 231°F
 17 215°F

=====
 224°F

GROUP 4

18 276°F
 19 285°F
 20 287°F

=====
 283°F

E50C-#8

GROUP 5

21 247°F
 22 252°F
 23 231°F

=====
 243°F

E50C-7/c12

GROUP 6

24 225°F
 25 245°F
 26 210°F

=====
 227°F

53 MINUTES

FURNACE

GROUP 0

0 1684°F
 1 1688°F
 2 1688°F
 3 1693°F
 4 1727°F
 5 1694°F
 6 1695°F
 7 1690°F
 8 1671°F

=====
 1694°F

GROUP 1

9 303°F
 10 320°F
 11 301°F

=====
 308°F

E50A-#8

GROUP 2

12 230°F
 13 251°F
 14 250°F

=====
 244°F

E50A-7/c12

GROUP 3

15 233°F
 16 237°F
 17 221°F

=====
 230°F

GROUP 4

18 283°F
 19 291°F
 20 294°F

=====
 289°F

E50C-#8

GROUP 5

21 254°F
 22 258°F
 23 236°F

=====
 249°F

E50C-7/c12

GROUP 6

24 230°F
 25 252°F
 26 214°F

=====
 232°F

54 MINUTES

FURNACE

GROUP 0

0 1686°F
 1 1689°F
 2 1689°F
 3 1693°F
 4 1727°F
 5 1695°F
 6 1696°F
 7 1690°F
 8 1692°F

=====
 1695°F

GROUP 1

9 310°F
 10 327°F
 11 308°F

=====
 315°F

E50A-#8

GROUP 2

12 236°F
 13 258°F
 14 257°F

=====
 250°F

E50A-7/c12

GROUP 3

15 239°F
 16 242°F
 17 227°F

=====
 236°F

GROUP 4

18 290°F
 19 298°F
 20 301°F

=====
 296°F

E50C-#8

GROUP 5

21 261°F
 22 264°F
 23 241°F

=====
 255°F

E50C-7/c12

GROUP 6

24 235°F
 25 259°F
 26 217°F

=====
 237°F

55 MINUTES
FURNACE

GROUP 0

0 1687°F
1 1691°F
2 1691°F
3 1695°F
4 1728°F
5 1697°F
6 1698°F
7 1692°F
8 1694°F

=====
1697°F

GROUP 1

9 317°F
10 334°F
11 316°F

=====
322°F

E50A-#6

GROUP 2

12 242°F
13 265°F
14 265°F

=====
257°F

E50A-7/c12

GROUP 3

15 245°F
16 248°F
17 233°F

=====
242°F

GROUP 4

18 296°F
19 305°F
20 308°F

=====
303°F

E50C-#8

GROUP 5

21 268°F
22 272°F
23 248°F

=====
263°F

E50C-7/c12

GROUP 6

24 241°F
25 268°F
26 222°F

=====
244°F

56 MINUTES
FURNACE

GROUP 0

0 1691°F
1 1694°F
2 1694°F
3 1699°F
4 1731°F
5 1699°F
6 1701°F
7 1695°F
8 1697°F

=====
1700°F

GROUP 1

9 323°F
10 341°F
11 322°F

=====
329°F

E50A-#8

GROUP 2

12 248°F
13 271°F
14 271°F

=====
263°F

E50A-7/c12

GROUP 3

15 250°F
16 254°F
17 238°F

=====
247°F

GROUP 4

18 302°F
19 311°F
20 314°F

=====
309°F

E50C-#8

GROUP 5

21 274°F
22 278°F
23 254°F

=====
269°F

E50C-7/c12

GROUP 6

24 246°F
25 275°F
26 227°F

=====
249°F

37 MINUTES

FURNACE

GROUP 0

0 1694°F
 1 1697°F
 2 1697°F
 3 1702°F
 4 1734°F
 5 1703°F
 6 1704°F
 7 1699°F
 8 1700°F

=====
 1703°F

GROUP 1

9 330°F
 10 348°F
 11 329°F

=====
 336°F

E50A-#8

GROUP 2

12 255°F
 13 278°F
 14 278°F

=====
 270°F

E50A-7/c12

GROUP 3

15 255°F
 16 261°F
 17 244°F

=====
 253°F

GROUP 4

18 309°F
 19 316°F
 20 320°F

=====
 315°F

E50C-#8

GROUP 5

21 281°F
 22 285°F
 23 261°F

=====
 276°F

E50C-7/c12

GROUP 6

24 254°F
 25 283°F
 26 233°F

=====
 257°F

58 MINUTES

FURNACE

GROUP 0

0 1700°F
 1 1702°F
 2 1701°F
 3 1706°F
 4 1738°F
 5 1708°F
 6 1709°F
 7 1703°F
 8 1704°F

=====
 1708°F

GROUP 1

9 337°F
 10 356°F
 11 337°F

=====
 343°F

E50A-#8

GROUP 2

12 263°F
 13 285°F
 14 286°F

=====
 278°F

E50A-7/c12

GROUP 3

15 264°F
 16 270°F
 17 252°F

=====
 262°F

GROUP 4

18 316°F
 19 323°F
 20 330°F

=====
 323°F

E50C-#8

GROUP 5

21 290°F
 22 295°F
 23 269°F

=====
 285°F

E50C-7/c12

GROUP 6

24 263°F
 25 293°F
 26 241°F

=====
 266°F

59 MINUTES

FURNACE

GROUP 0

0 1704°F
 1 1707°F
 2 1706°F
 3 1711°F
 4 1742°F
 5 1712°F
 6 1712°F
 7 1708°F
 8 1708°F
 =====
 1712°F

GROUP 1

9 344°F
 10 363°F
 11 343°F
 =====
 350°F

E50A-#8

GROUP 2

12 270°F
 13 293°F
 14 294°F
 =====
 286°F

E50A-7/c12

GROUP 3

15 273°F
 16 278°F
 17 261°F
 =====
 271°F

GROUP 4

18 323°F
 19 330°F
 20 337°F
 =====
 330°F

E50C-#8

GROUP 5

21 298°F
 22 302°F
 23 277°F
 =====
 292°F

E50C-7/c12

GROUP 6

24 272°F
 25 301°F
 26 249°F
 =====
 274°F

60 MINUTES

FURNACE

GROUP 0

0 1706°F
 1 1709°F
 2 1709°F
 3 1714°F
 4 1746°F
 5 1715°F
 6 1715°F
 7 1710°F
 8 1711°F
 =====
 1715°F

GROUP 1

9 351°F
 10 370°F
 11 350°F
 =====
 357°F

E50A-#8

GROUP 2

12 276°F
 13 300°F
 14 301°F
 =====
 292°F

E50A-7/c12

GROUP 3

15 280°F
 16 286°F
 17 269°F
 =====
 278°F

GROUP 4

18 330°F
 19 337°F
 20 342°F
 =====
 336°F

E50C-#8

GROUP 5

21 305°F
 22 310°F
 23 284°F
 =====
 300°F

E50C-7/c12

GROUP 6

24 280°F
 25 309°F
 26 258°F
 =====
 282°F

61 MINUTES

FURNACE

GROUP 0

0 1708°F
 1 1711°F
 2 1711°F
 3 1716°F
 4 1748°F
 5 1717°F
 6 1717°F
 7 1713°F
 8 1713°F

=====
 1717°F

GROUP 1

9 357°F
 10 375°F
 11 356°F

=====
 363°F

E50A-#8

GROUP 2

12 282°F
 13 306°F
 14 307°F

=====
 298°F

E50A-7/c12

GROUP 3

15 286°F
 16 293°F
 17 276°F

=====
 285°F

GROUP 4

18 335°F
 19 342°F
 20 346°F

=====
 341°F

E50C-#8

GROUP 5

21 311°F
 22 316°F
 23 291°F

=====
 306°F

E50C-7/c12

GROUP 6

24 287°F
 25 315°F
 26 265°F

=====
 289°F

62 MINUTES

FURNACE

GROUP 0

0 1711°F
 1 1714°F
 2 1714°F
 3 1719°F
 4 1751°F
 5 1720°F
 6 1721°F
 7 1715°F
 8 1716°F

=====
 1720°F

GROUP 1

9 364°F
 10 381°F
 11 363°F

=====
 369°F

E50A-#8

GROUP 2

12 289°F
 13 313°F
 14 315°F

=====
 306°F

E50A-7/c12

GROUP 3

15 293°F
 16 300°F
 17 283°F

=====
 292°F

GROUP 4

18 341°F
 19 348°F
 20 352°F

=====
 347°F

E50C-#8

GROUP 5

21 318°F
 22 322°F
 23 298°F

=====
 313°F

E50C-7/c12

GROUP 6

24 294°F
 25 321°F
 26 273°F

=====
 296°F

63 MINUTES

FURNACE

GROUP 0

0 1714°F
 1 1717°F
 2 1717°F
 3 1722°F
 4 1754°F
 5 1723°F
 6 1724°F
 7 1719°F
 8 1720°F

=====
 1723°F

GROUP 1

9 371°F
 10 388°F
 11 370°F

=====
 376°F

E50A-#8

GROUP 2

12 296°F
 13 320°F
 14 321°F

=====
 312°F

E50A-7/c12

GROUP 3

15 300°F
 16 307°F
 17 290°F

=====
 299°F

GROUP 4

18 347°F
 19 354°F
 20 357°F

=====
 353°F

E50C-#8

GROUP 5

21 325°F
 22 329°F
 23 305°F

=====
 320°F

E50C-7/c12

GROUP 6

24 302°F
 25 328°F
 26 282°F

=====
 304°F

64 MINUTES

FURNACE

GROUP 0

0 1718°F
 1 1720°F
 2 1721°F
 3 1725°F
 4 1756°F
 5 1726°F
 6 1727°F
 7 1722°F
 8 1723°F

=====
 1726°F

GROUP 1

9 379°F
 10 394°F
 11 377°F

=====
 383°F

E50A-#8

GROUP 2

12 302°F
 13 327°F
 14 328°F

=====
 319°F

E50A-7/c12

GROUP 3

15 306°F
 16 314°F
 17 298°F

=====
 306°F

GROUP 4

18 353°F
 19 360°F
 20 363°F

=====
 359°F

E50C-#8

GROUP 5

21 332°F
 22 336°F
 23 313°F

=====
 327°F

E50C-7/c12

GROUP 6

24 309°F
 25 335°F
 26 290°F

=====
 311°F

65 MINUTES
FURNACE

GROUP 0

0 1721°F
1 1723°F
2 1724°F
3 1728°F
4 1758°F
5 1729°F
6 1731°F
7 1725°F
8 1726°F

=====
1729°F

GROUP 1

9 387°F
10 400°F
11 384°F

=====
390°F

E50A-#8

GROUP 2

12 310°F
13 334°F
14 335°F

=====
326°F

E50A-7/c12

GROUP 3

15 313°F
16 322°F
17 305°F

=====
313°F

GROUP 4

18 359°F
19 367°F
20 370°F

=====
365°F

E50C-#8

GROUP 5

21 340°F
22 343°F
23 321°F

=====
335°F

E50C-7/c12

GROUP 6

24 317°F
25 342°F
26 299°F

=====
319°F

66 MINUTES
FURNACE

GROUP 0

0 1724°F
1 1726°F
2 1727°F
3 1731°F
4 1761°F
5 1732°F
6 1734°F
7 1728°F
8 1730°F

=====
1733°F

GROUP 1

9 394°F
10 406°F
11 390°F

=====
397°F

E50A-#8

GROUP 2

12 316°F
13 340°F
14 341°F

=====
332°F

E50A-7/c12

GROUP 3

15 320°F
16 328°F
17 312°F

=====
320°F

GROUP 4

18 365°F
19 372°F
20 375°F

=====
371°F

E50C-#8

GROUP 5

21 347°F
22 350°F
23 327°F

=====
341°F

E50C-7/c12

GROUP 6

24 324°F
25 348°F
26 306°F

=====
326°F

67 MINUTES

FURNACE

GROUP 0

0 1728°F
 1 1730°F
 2 1731°F
 3 1733°F
 4 1764°F
 5 1736°F
 6 1738°F
 7 1732°F
 8 1733°F

=====
 1736°F

GROUP 1

9 400°F
 10 412°F
 11 396°F

=====
 403°F

E50A-#8

GROUP 2

12 323°F
 13 347°F
 14 348°F

=====
 339°F

E50A-7/c12

GROUP 3

15 326°F
 16 335°F
 17 319°F

=====
 327°F

GROUP 4

18 370°F
 19 378°F
 20 381°F

=====
 376°F

E50C-#8

GROUP 5

21 354°F
 22 356°F
 23 335°F

=====
 348°F

E50C-7/c12

GROUP 6

24 332°F
 25 355°F
 26 314°F

=====
 334°F

68 MINUTES

FURNACE

GROUP 0

0 1731°F
 1 1733°F
 2 1734°F
 3 1738°F
 4 1768°F
 5 1739°F
 6 1741°F
 7 1735°F
 8 1737°F

=====
 1740°F

GROUP 1

9 406°F
 10 418°F
 11 403°F

=====
 409°F

E50A-#8

GROUP 2

12 330°F
 13 353°F
 14 355°F

=====
 346°F

E50A-7/c12

GROUP 3

15 332°F
 16 342°F
 17 326°F

=====
 333°F

GROUP 4

18 376°F
 19 384°F
 20 386°F

=====
 382°F

E50C-#8

GROUP 5

21 361°F
 22 363°F
 23 342°F

=====
 355°F

E50C-7/c12

GROUP 6

24 339°F
 25 361°F
 26 322°F

=====
 341°F

60 MINUTES

FURNACE

GROUP 0

0 1735°F
 1 1737°F
 2 1737°F
 3 1742°F
 4 1771°F
 5 1742°F
 6 1744°F
 7 1739°F
 8 1740°F

=====
 1743°F

GROUP 1

9 413°F
 10 425°F
 11 409°F

=====
 416°F

E50A-#8

GROUP 2

12 337°F
 13 360°F
 14 362°F

=====
 353°F

E50A-7/c12

GROUP 3

15 339°F
 16 348°F
 17 333°F

=====
 340°F

GROUP 4

18 382°F
 19 389°F
 20 392°F

=====
 388°F

E50C-#8

GROUP 5

21 368°F
 22 371°F
 23 350°F

=====
 363°F

E50C-7/c12

GROUP 6

24 345°F
 25 369°F
 26 330°F

=====
 348°F

70 MINUTES

FURNACE

GROUP 0

0 1737°F
 1 1740°F
 2 1740°F
 3 1745°F
 4 1774°F
 5 1746°F
 6 1747°F
 7 1742°F
 8 1743°F

=====
 1746°F

GROUP 1

9 420°F
 10 432°F
 11 416°F

=====
 423°F

E50A-#8

GROUP 2

12 344°F
 13 366°F
 14 368°F

=====
 359°F

E50A-7/c12

GROUP 3

15 345°F
 16 355°F
 17 340°F

=====
 347°F

GROUP 4

18 388°F
 19 395°F
 20 397°F

=====
 393°F

E50C-#8

GROUP 5

21 376°F
 22 378°F
 23 357°F

=====
 370°F

E50C-7/c12

GROUP 6

24 352°F
 25 376°F
 26 338°F

=====
 355°F

71 MINUTES

FURNACE

GROUP 0

0 1741°F
 1 1742°F
 2 1743°F
 3 1748°F
 4 1776°F
 5 1749°F
 6 1749°F
 7 1745°F
 8 1746°F

=====
 1749°F

GROUP 1

9 426°F
 10 438°F
 11 422°F

=====
 429°F

E30A-#8

GROUP 2

12 350°F
 13 373°F
 14 374°F

=====
 366°F

E30A-7/c12

GROUP 3

15 350°F
 16 360°F
 17 346°F

=====
 352°F

GROUP 4

18 393°F
 19 399°F
 20 402°F

=====
 398°F

E50C-#8

GROUP 5

21 382°F
 22 384°F
 23 364°F

=====
 377°F

E50C-7/c12

GROUP 6

24 359°F
 25 383°F
 26 343°F

=====
 362°F

72 MINUTES

FURNACE

GROUP 0

0 1743°F
 1 1745°F
 2 1746°F
 3 1750°F
 4 1778°F
 5 1751°F
 6 1752°F
 7 1748°F
 8 1748°F

=====
 1751°F

GROUP 1

9 432°F
 10 445°F
 11 429°F

=====
 435°F

E50A-#8

GROUP 2

12 357°F
 13 379°F
 14 380°F

=====
 372°F

E50A-7/c12

GROUP 3

15 356°F
 16 366°F
 17 352°F

=====
 358°F

GROUP 4

18 398°F
 19 404°F
 20 407°F

=====
 403°F

E50C-#8

GROUP 5

21 389°F
 22 390°F
 23 371°F

=====
 383°F

E50C-7/c12

GROUP 6

24 366°F
 25 390°F
 26 349°F

=====
 368°F

73 MINUTES

FURNACE

GROUP 0

0 1745°F
 1 1748°F
 2 1748°F
 3 1753°F
 4 1781°F
 5 1754°F
 6 1754°F
 7 1750°F
 8 1751°F

=====
 1754°F

GROUP 1

9 439°F
 10 451°F
 11 435°F

=====
 442°F

E50A-#8

GROUP 2

12 363°F
 13 385°F
 14 386°F

=====
 378°F

E50A-7/c12

GROUP 3

15 362°F
 16 372°F
 17 359°F

=====
 364°F

GROUP 4

18 403°F
 19 409°F
 20 412°F

=====
 408°F

E50C-#8

GROUP 5

21 396°F
 22 397°F
 23 378°F

=====
 390°F

E50C-7/c12

GROUP 6

24 374°F
 25 397°F
 26 356°F

=====
 376°F

74 MINUTES

FURNACE

GROUP 0

0 1749°F
 1 1751°F
 2 1751°F
 3 1755°F
 4 1784°F
 5 1756°F
 6 1758°F
 7 1753°F
 8 1754°F

=====
 1757°F

GROUP 1

9 445°F
 10 458°F
 11 442°F

=====
 448°F

E50A-#8

GROUP 2

12 369°F
 13 391°F
 14 392°F

=====
 384°F

E50A-7/c12

GROUP 3

15 368°F
 16 378°F
 17 364°F

=====
 370°F

GROUP 4

18 407°F
 19 414°F
 20 417°F

=====
 413°F

E50C-#8

GROUP 5

21 403°F
 22 404°F
 23 385°F

=====
 397°F

E50C-7/c12

GROUP 6

24 381°F
 25 404°F
 26 364°F

=====
 383°F

75 MINUTES
FURNACE

GROUP 0
0 1751°F
1 1753°F
2 1754°F
3 1758°F
4 1788°F
5 1759°F
6 1760°F
7 1756°F
8 1756°F
=====

GROUP 1
9 452°F
10 464°F
11 449°F
=====

E50A-#8
GROUP 2
12 378°F
13 397°F
14 398°F
=====

E50A-7/c12
GROUP 3
15 374°F
16 384°F
17 371°F
=====

GROUP 4
18 412°F
19 420°F
20 423°F
=====

E50C-#8
GROUP 5
21 411°F
22 411°F
23 393°F
=====

E50C-7/c12
GROUP 6
24 389°F
25 412°F
26 372°F
=====

76 MINUTES
FURNACE

GROUP 0
0 1754°F
1 1756°F
2 1757°F
3 1761°F
4 1789°F
5 1761°F
6 1763°F
7 1758°F
8 1759°F
=====

GROUP 1
9 458°F
10 470°F
11 456°F
=====

E50A-#8
GROUP 2
12 381°F
13 403°F
14 404°F
=====

E50A-7/c12
GROUP 3
15 380°F
16 389°F
17 377°F
=====

GROUP 4
18 418°F
19 425°F
20 429°F
=====

E50C-#8
GROUP 5
21 418°F
22 418°F
23 399°F
=====

E50C-7/c12
GROUP 6
24 396°F
25 419°F
26 379°F
=====

77 MINUTES

FURNACE

GROUP 0

0 1756°F
 1 1758°F
 2 1759°F
 3 1763°F
 4 1791°F
 5 1764°F
 6 1765°F
 7 1761°F
 8 1762°F

=====
 1764°F

GROUP 1

9 465°F
 10 475°F
 11 462°F

=====
 468°F

E50A-#8

GROUP 2

12 387°F
 13 409°F
 14 409°F

=====
 402°F

E50A-7/c12

GROUP 3

15 386°F
 16 394°F
 17 383°F

=====
 388°F

GROUP 4

18 423°F
 19 430°F
 20 434°F

=====
 429°F

E50C-#8

GROUP 5

21 425°F
 22 425°F
 23 406°F

=====
 419°F

E50C-7/c12

GROUP 6

24 404°F
 25 427°F
 26 387°F

=====
 406°F

78 MINUTES

FURNACE

GROUP 0

0 1761°F
 1 1763°F
 2 1762°F
 3 1767°F
 4 1794°F
 5 1768°F
 6 1768°F
 7 1764°F
 8 1764°F

=====
 1768°F

GROUP 1

9 473°F
 10 484°F
 11 470°F

=====
 476°F

E50A-#8

GROUP 2

12 395°F
 13 414°F
 14 416°F

=====
 408°F

E50A-7/c12

GROUP 3

15 394°F
 16 401°F
 17 390°F

=====
 395°F

GROUP 4

18 429°F
 19 436°F
 20 443°F

=====
 436°F

E50C-#8

GROUP 5

21 434°F
 22 434°F
 23 414°F

=====
 427°F

E50C-7/c12

GROUP 6

24 413°F
 25 436°F
 26 397°F

=====
 415°F

79 MINUTES

FURNACE

GROUP 0

0 1764°F
 1 1763°F
 2 1765°F
 3 1770°F
 4 1797°F
 5 1770°F
 6 1771°F
 7 1767°F
 8 1767°F

=====
 1771°F

GROUP 1

9 479°F
 10 491°F
 11 477°F

=====
 482°F

E50A-#8

GROUP 2

12 400°F
 13 420°F
 14 422°F

=====
 414°F

E50A-7/c12

GROUP 3

15 400°F
 16 408°F
 17 397°F

=====
 402°F

GROUP 4

18 433°F
 19 442°F
 20 448°F

=====
 442°F

E50C-#8

GROUP 5

21 441°F
 22 440°F
 23 420°F

=====
 434°F

E50C-7/c12

GROUP 6

24 420°F
 25 443°F
 26 405°F

=====
 423°F

80 MINUTES

FURNACE

GROUP 0

0 1765°F
 1 1767°F
 2 1768°F
 3 1772°F
 4 1799°F
 5 1773°F
 6 1773°F
 7 1770°F
 8 1770°F

=====
 1773°F

GROUP 1

9 486°F
 10 497°F
 11 484°F

=====
 489°F

E50A-#8

GROUP 2

12 405°F
 13 425°F
 14 428°F

=====
 419°F

E50A-7/c12

GROUP 3

15 406°F
 16 414°F
 17 403°F

=====
 408°F

GROUP 4

18 440°F
 19 448°F
 20 453°F

=====
 447°F

E50C-#8

GROUP 5

21 448°F
 22 447°F
 23 427°F

=====
 441°F

E50C-7/c12

GROUP 6

24 427°F
 25 450°F
 26 415°F

=====
 431°F

81 MINUTES

FURNACE

GROUP 0

0 1768°F
 1 1769°F
 2 1770°F
 3 1774°F
 4 1801°F
 5 1775°F
 6 1776°F
 7 1772°F
 8 1772°F

=====
 1775°F

GROUP 1

9 492°F
 10 503°F
 11 492°F

=====
 496°F

E50A-#8

GROUP 2

12 410°F
 13 430°F
 14 431°F

=====
 424°F

E50A-7/c12

GROUP 3

15 411°F
 16 419°F
 17 409°F

=====
 413°F

GROUP 4

18 445°F
 19 453°F
 20 458°F

=====
 452°F

E50C-#8

GROUP 5

21 454°F
 22 452°F
 23 433°F

=====
 446°F

E50C-7/c12

GROUP 6

24 433°F
 25 456°F
 26 422°F

=====
 437°F

82 MINUTES

FURNACE

GROUP 0

0 1770°F
 1 1771°F
 2 1772°F
 3 1777°F
 4 1803°F
 5 1777°F
 6 1778°F
 7 1774°F
 8 1775°F

=====
 1777°F

GROUP 1

9 500°F
 10 509°F
 11 500°F

=====
 503°F

E50A-#8

GROUP 2

12 416°F
 13 436°F
 14 437°F

=====
 430°F

E50A-7/c12

GROUP 3

15 416°F
 16 425°F
 17 415°F

=====
 419°F

GROUP 4

18 450°F
 19 458°F
 20 463°F

=====
 457°F

E50C-#8

GROUP 5

21 461°F
 22 459°F
 23 439°F

=====
 453°F

E50C-7/c12

GROUP 6

24 440°F
 25 462°F
 26 431°F

=====
 444°F

30 MINUTES

FURNACE

GROUP 0

0 1773°F
 1 1773°F
 2 1775°F
 3 1779°F
 4 1805°F
 5 1779°F
 6 1780°F
 7 1777°F
 8 1777°F

=====
 1780°F

GROUP 1

9 507°F
 10 515°F
 11 507°F

=====
 510°F

E50A-#8

GROUP 2

12 421°F
 13 441°F
 14 442°F

=====
 435°F

E50A-7/c12

GROUP 3

15 422°F
 16 431°F
 17 421°F

=====
 425°F

GROUP 4

18 456°F
 19 464°F
 20 468°F

=====
 463°F

E50C-#8

GROUP 5

21 468°F
 22 466°F
 23 446°F

=====
 460°F

E50C-7/c12

GROUP 6

24 446°F
 25 468°F
 26 439°F

=====
 451°F

84 MINUTES

FURNACE

GROUP 0

0 1774°F
 1 1776°F
 2 1777°F
 3 1781°F
 4 1807°F
 5 1781°F
 6 1783°F
 7 1779°F
 8 1779°F

=====
 1782°F

GROUP 1

9 515°F
 10 522°F
 11 514°F

=====
 517°F

E50A-#8

GROUP 2

12 427°F
 13 447°F
 14 448°F

=====
 441°F

E50A-7/c12

GROUP 3

15 428°F
 16 437°F
 17 428°F

=====
 431°F

GROUP 4

18 462°F
 19 470°F
 20 474°F

=====
 469°F

E50C-#8

GROUP 5

21 476°F
 22 474°F
 23 454°F

=====
 468°F

E50C-7/c12

GROUP 6

24 453°F
 25 475°F
 26 447°F

=====
 458°F

85 MINUTES

FURNACE

GROUP 0

0 1777°F
 1 1778°F
 2 1779°F
 3 1783°F
 4 1809°F
 5 1784°F
 6 1785°F
 7 1781°F
 8 1781°F

=====
 1784°F

GROUP 1

9 522°F
 10 529°F
 11 521°F

=====
 524°F

E50A-#8

GROUP 2

12 433°F
 13 453°F
 14 454°F

=====
 447°F

E50A-7/c12

GROUP 3

15 434°F
 16 442°F
 17 434°F

=====
 437°F

GROUP 4

18 468°F
 19 476°F
 20 480°F

=====
 475°F

E50C-#8

GROUP 5

21 484°F
 22 482°F
 23 461°F

=====
 476°F

E50C-7/c12

GROUP 6

24 460°F
 25 482°F
 26 455°F

=====
 466°F

86 MINUTES

FURNACE

GROUP 0

0 1779°F
 1 1780°F
 2 1781°F
 3 1785°F
 4 1811°F
 5 1785°F
 6 1787°F
 7 1783°F
 8 1783°F

=====
 1786°F

GROUP 1

9 528°F
 10 534°F
 11 527°F

=====
 530°F

E50A-#8

GROUP 2

12 439°F
 13 459°F
 14 460°F

=====
 453°F

E50A-7/c12

GROUP 3

15 439°F
 16 447°F
 17 439°F

=====
 442°F

GROUP 4

18 473°F
 19 481°F
 20 485°F

=====
 480°F

E50C-#8

GROUP 5

21 492°F
 22 489°F
 23 469°F

=====
 483°F

E50C-7/c12

GROUP 6

24 467°F
 25 488°F
 26 462°F

=====
 472°F

87 MINUTES
FURNACE

GROUP 0

0 1781°F
1 1782°F
2 1784°F
3 1788°F
4 1814°F
5 1789°F
6 1789°F
7 1785°F
8 1786°F

=====
1789°F

GROUP 1

9 534°F
10 539°F
11 533°F

=====
535°F

E50A-48

GROUP 2

12 445°F
13 465°F
14 467°F

=====
459°F

E50A-7/c12

GROUP 3

15 445°F
16 453°F
17 445°F

=====
448°F

GROUP 4

18 478°F
19 485°F
20 490°F

=====
485°F

E50C-#8

GROUP 5

21 500°F
22 497°F
23 477°F

=====
491°F

E50C-7/c12

GROUP 6

24 474°F
25 494°F
26 470°F

=====
479°F

88 MINUTES
FURNACE

GROUP 0

0 1784°F
1 1785°F
2 1786°F
3 1790°F
4 1816°F
5 1789°F
6 1792°F
7 1788°F
8 1788°F

=====
1791°F

GROUP 1

9 540°F
10 544°F
11 539°F

=====
541°F

E50A-#8

GROUP 2

12 451°F
13 472°F
14 473°F

=====
465°F

E50A-7/c12

GROUP 3

15 451°F
16 460°F
17 451°F

=====
454°F

GROUP 4

18 484°F
19 492°F
20 496°F

=====
491°F

E50C-#8

GROUP 5

21 509°F
22 504°F
23 485°F

=====
499°F

E50C-7/c12

GROUP 6

24 481°F
25 501°F
26 478°F

=====
487°F

87 MINUTES

FURNACE

GROUP 0

0 1788°F
 1 1787°F
 2 1788°F
 3 1792°F
 4 1817°F
 5 1792°F
 6 1793°F
 7 1790°F
 8 1790°F

=====
 1793°F

GROUP 1

9 545°F
 10 549°F
 11 546°F

=====
 547°F

E50A-#8

GROUP 2

12 457°F
 13 478°F
 14 480°F

=====
 472°F

E50A-7/c12

GROUP 3

15 457°F
 16 466°F
 17 457°F

=====
 460°F

GROUP 4

18 489°F
 19 497°F
 20 501°F

=====
 496°F

E50C-#8

GROUP 5

21 518°F
 22 512°F
 23 494°F

=====
 508°F

E50C-7/c12

GROUP 6

24 488°F
 25 508°F
 26 486°F

=====
 494°F

90 MINUTES

FURNACE

GROUP 0

0 1788°F
 1 1789°F
 2 1790°F
 3 1794°F
 4 1819°F
 5 1794°F
 6 1795°F
 7 1792°F
 8 1792°F

=====
 1795°F

GROUP 1

9 551°F
 10 554°F
 11 552°F

=====
 552°F

E50A-#8

GROUP 2

12 464°F
 13 485°F
 14 487°F

=====
 479°F

E50A-7/c12

GROUP 3

15 464°F
 16 473°F
 17 464°F

=====
 467°F

GROUP 4

18 495°F
 19 503°F
 20 507°F

=====
 502°F

E50C-#8

GROUP 5

21 528°F
 22 519°F
 23 503°F

=====
 517°F

E50C-7/c12

GROUP 6

24 494°F
 25 514°F
 26 495°F

=====
 501°F

91 MINUTES

FURNACE

GROUP 0

0 1790°F
1 1791°F
2 1792°F
3 1796°F
4 1822°F
5 1798°F
6 1798°F
7 1794°F
8 1794°F

=====
1797°F

GROUP 1

9 556°F
10 559°F
11 558°F

=====
558°F

E50A-#8

GROUP 2

12 471°F
13 492°F
14 493°F

=====
485°F

E50A-7/c12

GROUP 3

15 470°F
16 478°F
17 469°F

=====
472°F

GROUP 4

18 501°F
19 508°F
20 511°F

=====
507°F

E50C-#8

GROUP 5

21 536°F
22 526°F
23 511°F

=====
524°F

E50C-7/c12

GROUP 6

24 499°F
25 520°F
26 501°F

=====
507°F

- Copy entire original to test requestor
- Copy cover page only to the following:

to the following:

RRL DAL KAJ DMH
AJM TES JCP

3M FIRE TEST REQUEST/REPORT

FIRE TEST NO. 86-30 FIRE TEST DATE 2/21/86

FIRE TEST OBJECTIVE: TO COMPARE THE FIRE PROTECTION PERFORMANCE OF E-50A WITH ALUMINUM FOIL TO E-50C WITH STAINLESS STEEL FOIL

TEST ORIGINATOR RANDY KOZA

ASSIGNED TEST COORDINATOR TL THORESON

DATE OF REQUEST 2-14-86 (PLEASE RUN AS SOON AS POSS CUSTOMER IS WAITING!)

CONFIGURATIONS TO BE TESTED:

	Item	Fire Protection Materials
<u>CONDUIT #1</u>	<u>2" CONDUIT X 10' LONG SCH 40</u>	<u>5 LAYERS E-50A</u>
<u>CONDUIT #2</u>	<u>2" CONDUIT X 10' LONG SCH 40</u>	<u>5 LAYERS E-50C</u>

FURNACE TO BE USED:

- Bldg. 63 large scale side load
- Bldg. 66 large scale top load
- Bldg. 66 small scale top load
- Other _____

TYPE OF FIRE TEST:

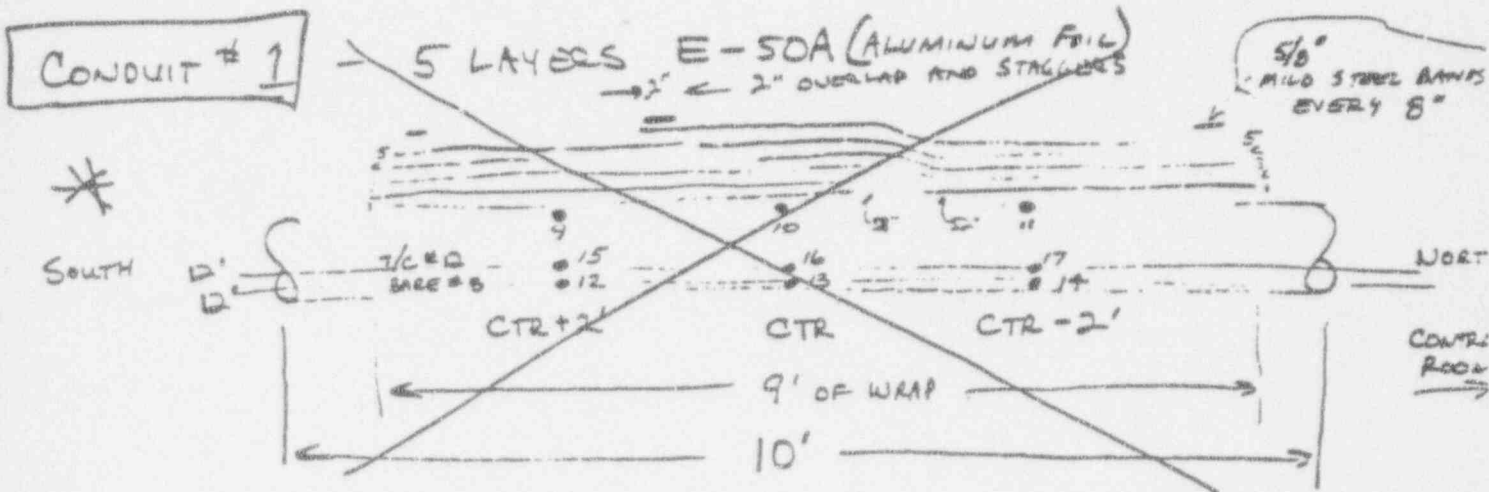
- E-119
- Full open to 2000°F
- Open pit
- Other _____

LENGTH OF FIRE TEST:

- Time only 90 MINUTES
- Temperature only _____
- Time or temperature _____
- Time and temperature _____

SKETCH OR DESCRIPTION OF TEST CONFIGURATION AND THERMOCOUPLE LOCATIONS

4" ALUMINUM FOIL ON ALL SEAMS



NOMINAL LENGTHS OF MAT TO BE USED:

LAYER #	SOUTH	NORTH
1	58"	52"
2	56"	54"
3	54"	56"
4	52"	58"
5	50"	60"

* 3M DRAWING 5300-S12 WAS USED INSTEAD
 FOIL TAPE WAS APPLIED TO ALL SEAMS

CONDUIT # 2 - 5 LAYERS E-50C (STAINLESS STEEL FOIL)

SAME AS ABOVE EXCEPT:

4" STAINLESS STEEL FOIL ON ALL SEAMS
 5/8" STAINLESS STEEL BANDS EVERY 8"

ALL MAT PIECES SHOULD BE IDENTICAL
 TO THOSE USED FOR CONDUIT #1 - BOTH
 LENGTH AND WIDTH!

(STAINLESS STEEL FOIL MUST BE HAND LAMINATED TO
 BASE ESD MAT - SEE D.A. LANWOLMER.)

INFORMATION FOR COMPUTER DATA ACQUISITION

TITLE? (up to 40 characters)

S.L. E.S.O.A. .V.S. .5L. .E.S.O.C. .CN .2 in. .CONDUIT.

FOOTNOTE ON PLOT? (up to 30 characters)

3.M. .C.H.E.M. .6.3. .F.T. #8.6. .3.0. .2.1.2.1.1.8.6. . .

Example of Preferred Footnote Format:

3.M. .C.H.E.M. .6.3. .F.T. #8.5. -.1.0.1. .1.2. -.1.6. -.8.5.

<u>Group #</u>	<u>Thermocouple #</u>	<u>Description (For general info, No computer input)</u>	<u>Graph line #</u>	<u>Name (up to 10 characters)</u>
<u>0</u>	<u>0-8</u>	<u>FURNACE</u>	<u>1</u>	<u>FURNACE . . .</u>
<u>1</u>	<u>9-11</u>	<u>CONDUIT #1 (ESDA) O.D.</u>	<u>2</u>	<u>E.S.O.A. - C.N.D.T. .</u>
<u>2</u>	<u>12-14</u>	<u>CONDUIT #1 - BARE #8</u>	<u>3</u>	<u>E.S.O.A. - #B . . .</u>
<u>3</u>	<u>15-17</u>	<u>CONDUIT #1 - 7/c #12</u>		<u>.</u>
<u>4</u>	<u>18-20</u>	<u>CONDUIT #2 (ESOC) O.D.</u>	<u>4</u>	<u>E.S.O.C. - C.N.D.T. .</u>
<u>5</u>	<u>21-23</u>	<u>CONDUIT #2 - BARE #8</u>	<u>5</u>	<u>E.S.O.C. - #B</u>
<u>6</u>	<u>24-26</u>	<u>CONDUIT #2 - 7/c #12</u>		<u>.</u>
				<u>.</u>
				<u>.</u>
				<u>.</u>
				<u>.</u>
				<u>.</u>
				<u>.</u>

CIRCUIT CONTINUITY TESTER (CCT) ASSIGNMENTS

Do NOT USE

LEAD NO.	BOX NO. 1	BOX NO. 2
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

DESCRIPTION AND LOT NUMBER OF THERMOCOUPLE WIRE Type K MW 57790

TABLE INFORMATION:

No. of Conductors - Size	Measured O.D. of Cable	Insulation Type	Jacketing Type	Imprinted Identification on Cable
<u>BARE #8</u>				
<u>7/C #12</u>				

CONCRETE SLAB INFORMATION: - NO SCAB USED

~~Identification _____
Size _____
Date Cast _____
History of Forced Drying _____~~

INSTALLER'S NAME	SIGNATURE	DATE
<u>TIM THORSON</u>	<u>Tim Thorson</u>	<u>2-21-86</u>
<u>PAUL CHARLTON</u>	<u>Paul Charlton</u>	<u>2-21-86</u>

FIRE PROTECTION MATERIALS USED

Acceptable Weight Range for 4" x 6" Sample:

Material	Acceptable Weight Range

NOTE: INSTALLATION PER 3M DRAWING # 5300-S12
(NOT AS DIAGRAMED ON P. 2)

ITEM PROTECTED	FIRE PROTECTION MATERIAL	LOT # OF FIRE PROTECTION MATERIAL	SIZE	WEIGHT	CALCULATED WEIGHT FOR 4" X 6" SAMPLE
		8029006012 0052553012			
1	E50A		49x11 49x11 10x11	3.6 3.6 2.7	
2	"		49x12 3/4 49x12 3/4 10x12 3/4	4.2 4.1 2.3	
3	"		49x14 1/2 49x14 1/2 10x14 1/2	4.8 4.8 1.0	
4	"		49x15 3/4 49x15 3/4 10x15 3/4	4.9 5.0 1.1	
5	"		49x17 1/2 49x17 1/2 10x17 1/2	5.5 5.4 1.2	
1	E-50C	8029006018 0052553012	49x11 49x11 11x11	3.7 3.7 2.8	
2	"	"	49x12 3/4 49x12 3/4 10x12 3/4	4.4 4.3 2.3	
3	"	"	49x14 1/2 49x14 1/2 10x14 1/2	4.9 4.9 1.1	
4	"	"	49x15 3/4 49x15 3/4 10x15 3/4	5.4 5.3 1.1	
5	"	"	49x17 1/2 49x17 1/2 10x17 1/2	5.9 5.9 1.2	

LIBERATION DATE OF MONITOR LABS CATALOGGER

12-20-84

~~CIRCUIT CONTINUITY TESTER INDICATIONS:~~

~~_____

_____~~

GAS METER READINGS (standard cubic feet):

minutes 39198
39212
39243
39275
39304

90 minutes 39453
120 _____
150 _____
180 _____

OF FIRE TEST BEFORE FURNACE TURNED OFF _____

~~ROSE STREAM TEST:~~

~~ation _____
ssure _____
tance _____~~

OBSERVATIONS DURING AND AFTER FIRE TEST:

TEST OBSERVATIONS (by DML) - BOTH CONDUITS REMAINED IN THE FURNACE
BEFORE THE WEEKEND - OBS WERE MADE ON 2/24/86 THE MATING ON THE ESDA
IS ALL USED UP - LITTLE TO NO INTEGRITY - THE 5TH LAYER WAS WHITE W/ NO FOIL,
4TH LAYER WAS GRAY W/ NO FOIL, AND THE 3RD LAYER WAS BROWN W/ SOME FOIL LEFT,
IT VERY FRAGILE - THE INNER TWO LAYERS WERE SLIGHTLY DISCOLORED (BROWNISH) AND
THE AL FOIL WAS STILL INTACT.
THE MATING ON THE ESDC WAS VERY SIMILAR TO THE ESDA EXCEPT THE MAT
3 LAYERS 3,4,5 WERE ALL BLACK - THIS HAS NOT BEEN OBSERVED BEFORE. THE STAINLESS
STEEL ON THE 5TH LAYER WAS STILL INTACT BUT WAS MORE BRITTLE
IN LAYERS 1-4. LAYER 2 WAS BROWN AND LAYER 1 WAS BROWN
TO YELLOW IN APPEARANCE. THE SS SEEMED TO HOLD UP VERY WELL.

SUMMARY OF KEY TIMES AND ENDING TEMPERATURES

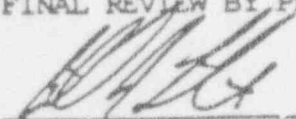
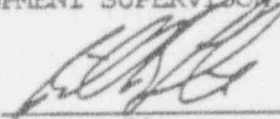
<u>Item</u>	<u>Time</u>	<u>Avg. Temp °F</u>	<u>Max. Temp °F</u>
ESDA - BARE # 8	53 MINUTES	244°F	251°F
ESDA - 7c/12	53 MINUTES	230°F	237°F
ESDA - CONDUIT	53 MINUTES	308°F	320°F
ESDC - BARE # 8	53 MINUTES	249°F	258°F
ESDC - 7c/12	53 MINUTES	232°F	252°F
ESDC - CONDUIT	53 MINUTES	289°F	294°F

FIRE TEST WITNESSES:

<u>Name</u>	<u>Signature</u>	<u>Date</u>
Tom Thoresen	<i>Tom Thoresen</i>	2-21-86
Paul Charlano	<i>Paul Charlano</i>	2-21-86

TECHNICAL NOTEBOOK REFERENCE _____

FINAL REVIEW BY PRODUCT DEVELOPMENT SUPERVISOR

		3-10-86
Name	Signature	Date

FIRE TEST OBJECTIVE:

To evaluate the thickness, weight and layer effect of Interam™ Endothermic E-50 Series Mats on 2" ϕ Sch. 40 pipe.

3M FIRE TEST NUMBER: 87-11, 12, 13

FIRE TEST DATE: 87-11, 12, 13
2-11-87
2-6-87
1-26-87

FIRE TEST STANDARD: ASTM E-119

FIRE TEST CONFIGURATIONS:

Three separate fire tests were conducted with five ten foot 2" ϕ conduits in each fire test. The 2" ϕ conduits were fire protected for nine feet following Drawing No. 5500CI. Each conduit was tared before wrapping and weighed after total installation of the fire protection material. In addition, the total square feet of wrap used was recorded. Two methods of temperature recording were employed; one - a bare #8 copper conductor with three thermocouples embedded in the strands of copper, two - a 7/c #12 awg cable with three thermocouples attached to the jacket.

FIRE TEST FURNACE:

The furnace used in this series of fire tests was the building 63 fire test furnace.

TEST RESULTS:

Table #1 lists the factors for each conduit and the time in minutes required to reach 250°F plus ambient and the final temperature at 90 minutes.

Table #2 lists the material type, lot number and weight of a 4" X 6" sample.

Conduit #9, wrapped with three layers of E-53A was fire tested in three fire tests. The time to reach 250°F plus ambient was within one minute of each other, and the temperature at 90 minutes had a maximum range of 14°F. The weight of fire protection for these three samples ranged by 1.6 lbs.

Table #3 lists all the fire tests on 2" ϕ conduit that were conducted using the same conditions listed above. Group I shows fire performance vs. weight at an end point of 250°F.

cc: D. M. Harshbarger
K. A. Jensen
~~P. G. K...~~
D. A. Lanwermeyer
A. J. Schommer
R. J. Tollefson

TABLE #1
 CONDUIT FIRE TEST RESULTS
 2" Sch 40 Conduit
 Fire Test Numbers 87-11, 12, 13

Conduit Number	Test No.	Thickness in.	Layers	Fire Protected Diameter	Total Wt. Pounds	Time to 250 + Ambient (Min)	Temperature at 90 minutes
1	2	1.2	4	5.5"	73.4	76	380°F
2	1	1.2	3	5.33"	66.8	68	416
3	2	1.0	5	4.38"	55.4	65	450
4	1	1.0	4	5.1"	55.2	60	481
4	3	1.0	4	5.1"	54.4	60	474
5	1	1.0	4	4.85"	55.2	61	475
6	2	1.0	3	4.89	49.4	55	543
7	3	1.0	3	4.85	53.8	57	503
8	1	.9	4	3.98	49.3	52	543
9	1	.9	3	4.53	46.8	50	585
9	2	.9	3	4.53	48.4	51	573
9	3	.9	3	4.53	47.2	50	571
10	3	.8	4	4.38	41.3	50	593
11	2	.8	3	4.46	41.2	45	736
12	3	.8	2	4.30	40.0	46	756

RRL:1.57
 2-12-87

TABLE #2

MATERIALF.T. 87-11, 12, 13

<u>MATERIAL</u>	<u>LOT #</u>	<u>4" X 6" SAMPLE WEIGHT</u> *1
E-50A	2390001031 0061623013	80.57 gm
E-50A	2390001031 0061623013	79.83
E-50A	23900010301 0061623013	73.73
E-53A	23900010302 0061623011	74.82
E-53A	8220008004 0363233011	104.08
E-53A	8220008004 0363233011	103.85
E-53A	8220008004 0363233011	103.85
E-53A	8220004023 0062133013	103.97
E-53A	8220005020 0062713013	? Not Weighed
E053A	8220005020 0062713013	111.25
E-53A	8222005009 0062713013	113.7
E-54A	8230005022 0463283013	145.60
E-54A	8230003022 0462335072	133.26
E-54A	8230005022 0463283013	
E-54A	823043022 046333012	122.6
E-54A	8230003022 0462333012	138.67

*1 Weight with foil and scrim coating, taken at Chemolite

TABLE #3

CONDUIT FIRE TESTS

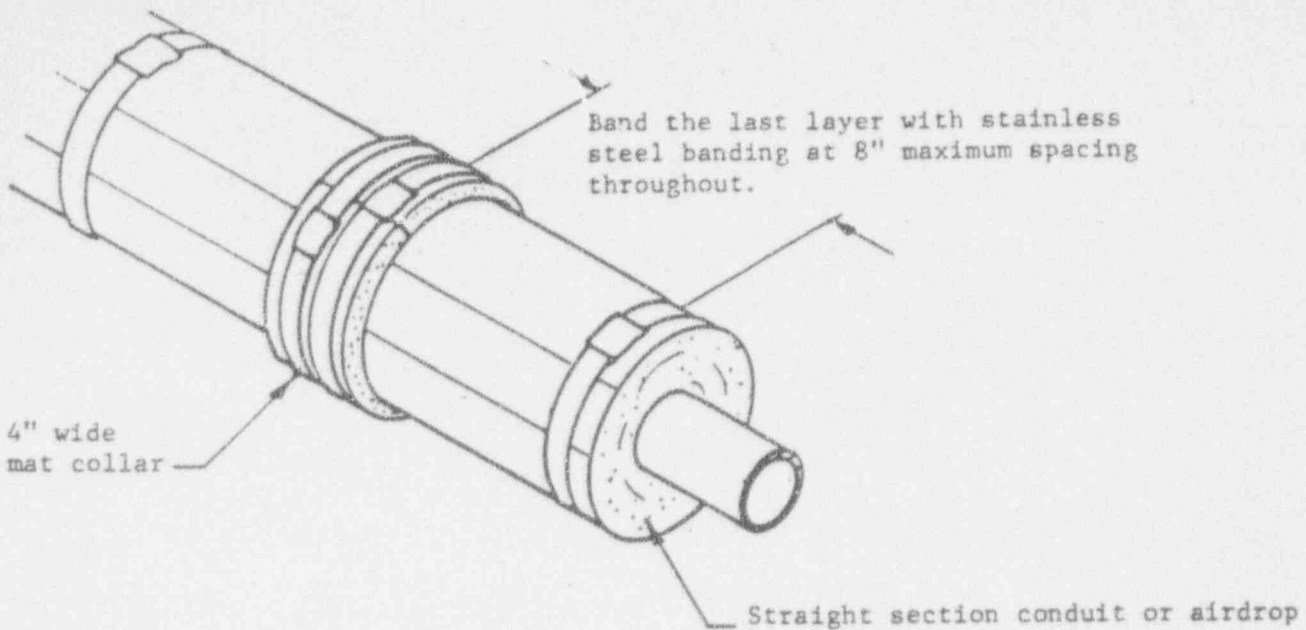
2" ϕ Sch. 40 - 9 ft. Wrapped

Thickness Inches	Number Layers	Weight Lbs/9 in.ft.	Fire Protection***			
			250°F	Time (min.) to Temp.*		
				350°F	450°F	650°F
1.8	6	115.7	114	NR	NR	NR
1.6	4	90.45	95	119	NR	NR
1.6C**	4	91.55	92	115	NR	NR
1.5	5	88.5	93	115	NR	NR
1.2	4	73.4	66	84	NR	NR
1.2	3	66.8	61	78	NR	NR
1.0	5	55.4	57	73	90	NR
1.0	4	55.2	54	69	86	NR
1.0	4	54.4	51	65	81	NR
1.0	4	55.2	55	69	85	NR
1.0	3	49.4	47	61	76	NR
1.0	3	53.8	53	68	86	NR
.9	4	49.3	47	60	75	NR
.9	3	46.8	44	57	70	NR
.9	3	48.4	45	57	69	NR
.9	3	47.2	45	57	72	NR
.8	4	41.3	45	57	70	NR
.8	3	41.2	39	50	62	84
.8	2	40.0	40	52	63	83
.7	3	34.2	34	44	54	NR
.7	2	32.8	29	39	49	NR
.6	2	29.6	27	36	45	57
.6	2	30.6	29	40	48	61
.5	2	21.9	23	30	37	50
.4	2	23.6	24	32	39	NR
.4	2	21.5	21	28	34	NR
.4	1	18.5	16	22	27	35
.4	1	18.1	15	22	26	34
.3	1	14.2	13	18	22	29

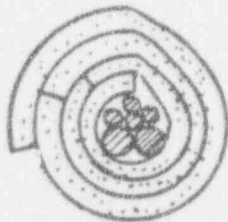
* Temperature measured on bare #8 copper conductor

** C = Caulk System (FireDam™ 150)

*** Weight as installed on a nine foot section of 2" sch. 40 pipe, includes all aspects of fire protection



LAYER REQUIREMENTS



Airdrop - 3 layers E-54A

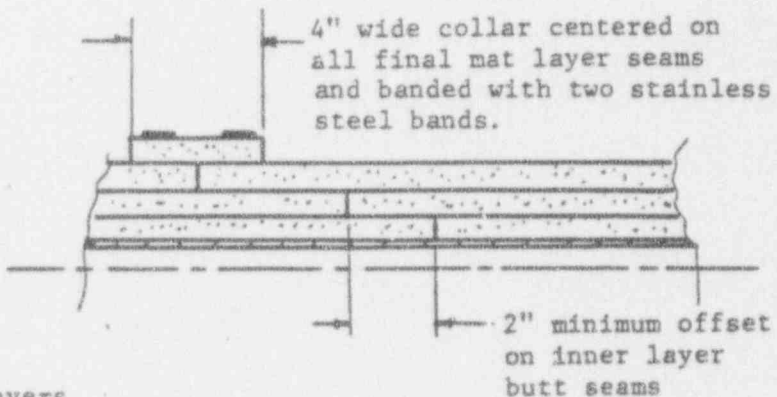


Steel conduit - 3 layers E-53A

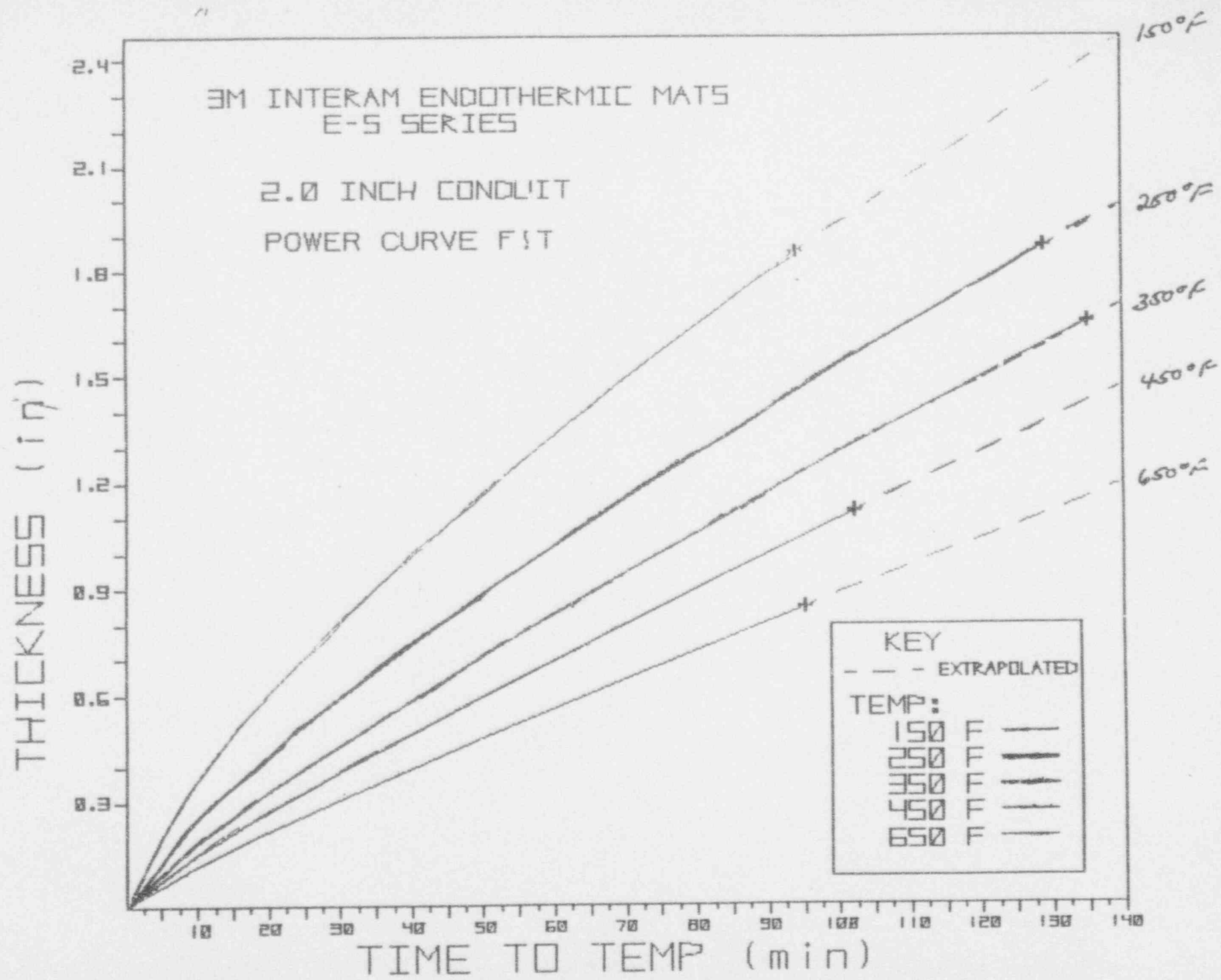
Aluminum conduit $\geq 5"$ - Use 3 layers E-53A

Aluminum conduit $< 5"$ - Use 1 layer E-54A and 2 layers E-53A

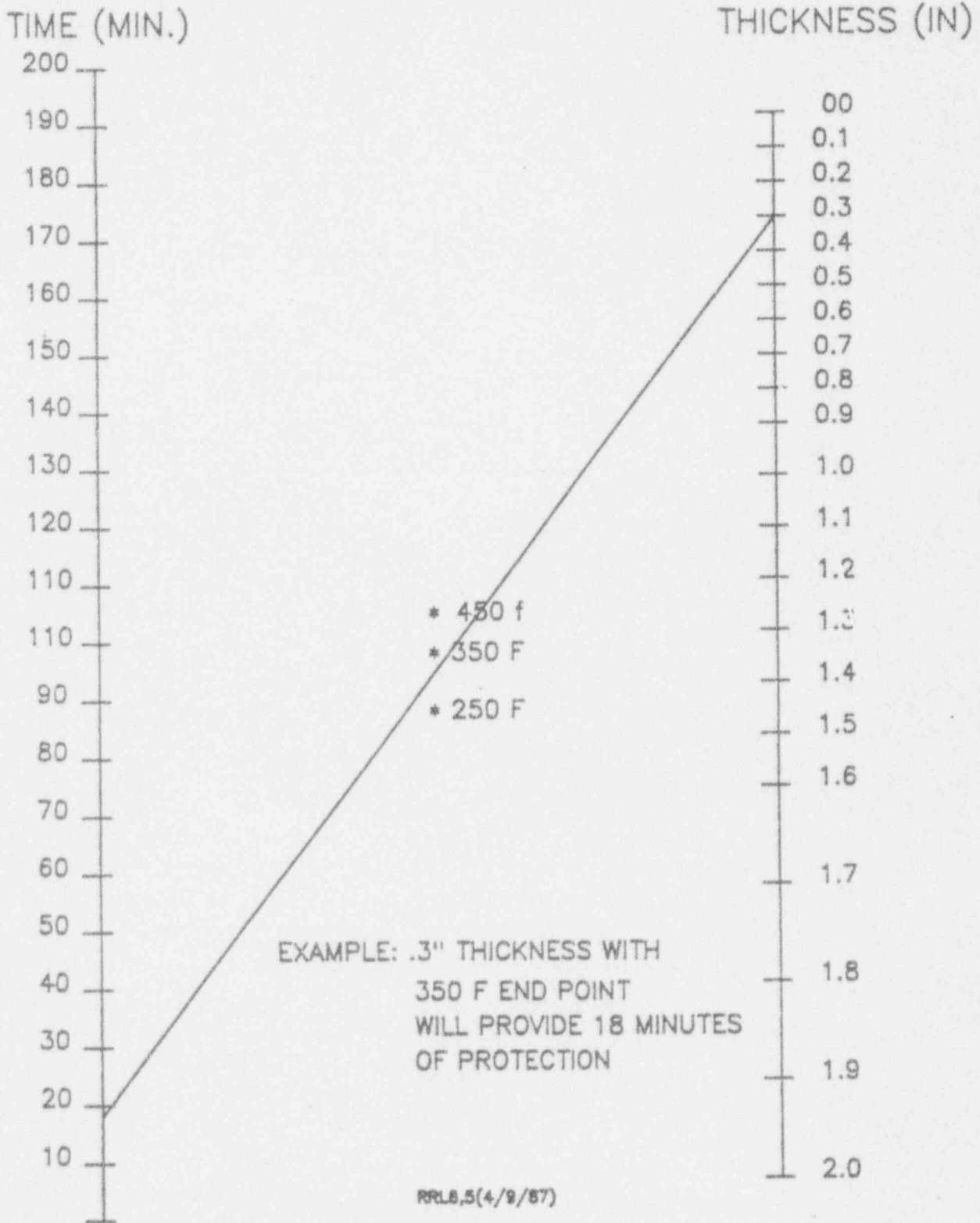
BANDING



<p>KJ:9</p> <p><small>All statements, technical information and recommendations contained herein are based on data we believe to be reliable. However, under the conditions of use and application are beyond our control. We shall not be liable for any damage, direct or consequential, resulting from the use of this material or design. 3M's only warranty shall be to replace any of our products found to be defective.</small></p>	ISSUE	DATE	REV.	CH.	<p>INTERAMSM</p> <p>CONDUIT OR AIRDROP</p> <p>STRAIGHT RUN</p>
	1	7-02-86			
	NOT TO SCALE				
	DR K.A. Jensen				
Ceramic Materials Department/3M	3M	5500-C1			E-50 Series



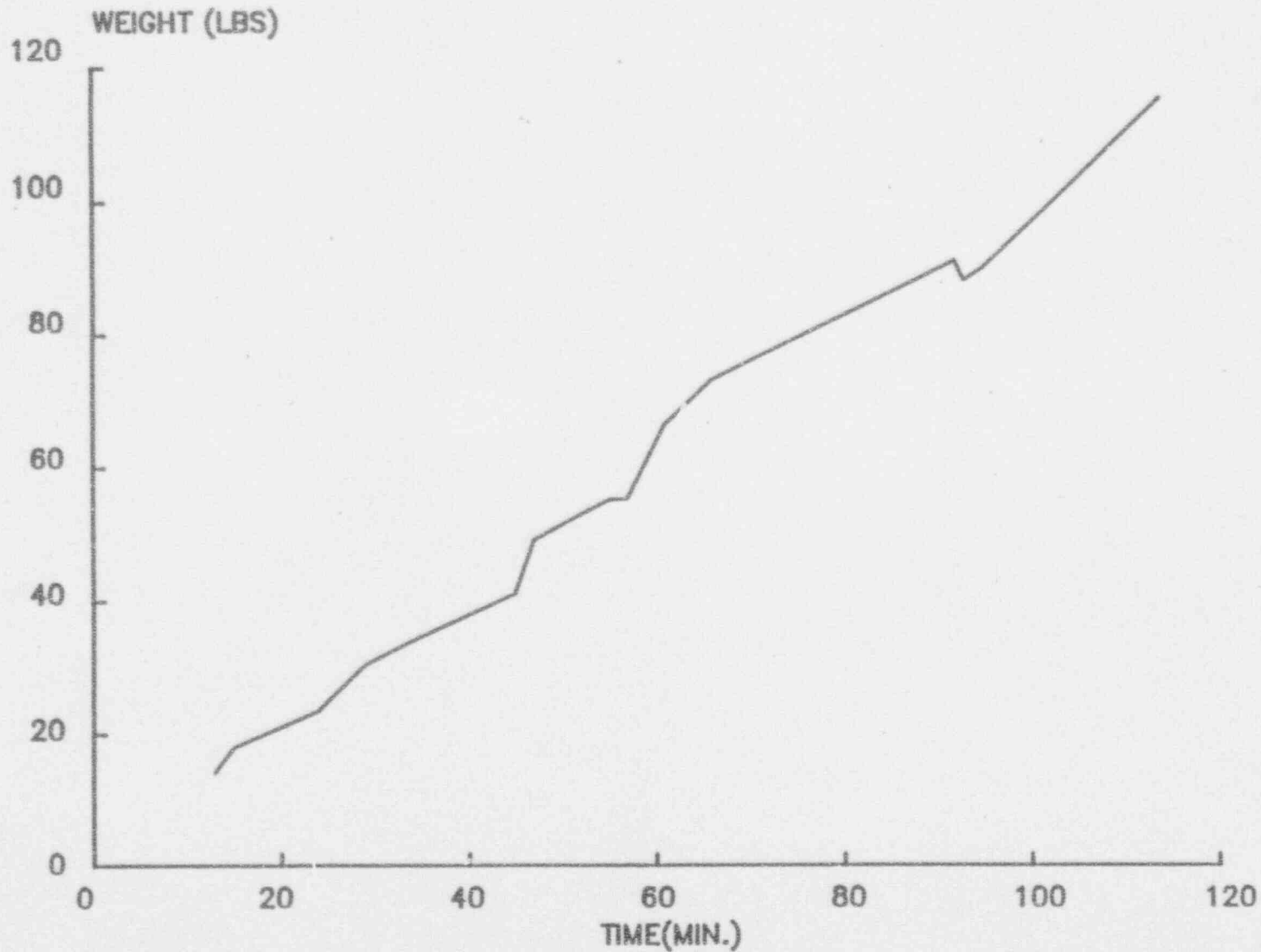
INTERAM MAT THICKNESS SELECTION CHART BASED ON 2"Ø CONDUIT DATA



FIRE PROTECTION OF RIGID CONDUIT TO ASTM E-119
FIRE PROTECTED WITH INTERAM™ E-50 SERIES MAT

Conduit Size In. Ø	Layers #	Mat Thickness Inches	Time in Minutes to Temperature			
			150°F(66°C)	250°F(121°C)	350°F(177°F)	450°F(232°C)
1"	6	1.2	50	81	134	192
1"	5	1.0	41	61	81	113
1"	4	.8	27	42	55	79
1"	3	.6	18	27	40	51
<hr/>						
2"	6	1.8	94	129	---	---
2"	4	1.6	76	107	135	---
2"	5	1.5	73	105	130	---
2"	4	1.2	49	75	95	---
2"	4	1.0	40	58	74	92
2"	3	.9	36	51	65	82
2"	3	.7	24	38	50	61
2"	2	.6	19	33	45	54
2"	2	.5	17	26	34	42
2"	2	.4	16	27	36	44
2"	1	.3	8	13	18	22
<hr/>						
3"	6	1.2	44	64	---	---
3"	5	1.0	36	52	68	---
3"	4	.8	26	41	53	66
3"	2	.4	6	14	21	29
<hr/>						
4"	10	2.0	119	170	208	---
4"	9	1.8	111	158	198	---
4"	6	1.2	66	95	120	147
4"	5	1.0	45	68	85	102
4"	4	.8	29	49	62	78
4"	2	.7	27	44	58	70
4"	3	.6	30	46	58	70
4"	2	.4	19	31	37	44
<hr/>						
5"	5	2.0	92	183	---	---
5"	3	.9	55	96	---	---
5"	4	.8	42	62	80	97

CONDUIT FIRE TEST 2" SCH.40
PERFORMANCE VS WEIGHT AT 250(F)



IRRL, 1,735-19-88

#87-11

Minutes	TC-0	TC-1	TC-2	TC-3	TC-4	TC-5	TC-6	TC-7	TC-8	FURNACE AVE.	TC-9	TC-10	TC-11	CNDT #2 AVE.	TC-12	TC-13	TC-14	CNDT #4 AVE.
1	114	85	115	122	121	111	99	80	111	106	43	46	44	44	41	41	40	41
2	338	281	354	361	347	312	307	263	302	318	43	46	44	44	41	41	40	41
3	574	526	616	614	591	546	555	516	505	560	43	42	40	42	37	37	36	37
4	770	737	831	823	798	756	758	755	715	771	43	46	44	44	41	41	39	40
5	915	888	982	979	949	912	905	936	883	928	43	46	44	44	40	41	39	40
6	1020	995	1081	1086	1054	1026	1008	1055	1006	1037	43	46	44	44	40	41	39	40
7	1092	1069	1150	1159	1126	1103	1078	1138	1089	1112	43	46	44	44	41	41	39	40
8	1147	1125	1203	1212	1182	1161	1133	1198	1150	1168	43	45	44	44	41	42	39	41
9	1193	1172	1244	1254	1227	1207	1178	1245	1196	1213	43	46	43	44	41	42	40	41
10	1233	1213	1281	1294	1267	1248	1218	1285	1235	1253	44	46	44	45	42	44	40	42
11	1271	1252	1314	1329	1303	1285	1254	1320	1270	1289	45	47	44	45	43	45	41	43
12	1305	1288	1342	1358	1336	1319	1286	1349	1303	1321	46	48	45	46	44	47	43	45
13	1335	1318	1367	1384	1364	1347	1315	1375	1333	1349	48	49	46	48	47	50	44	47
14	1362	1344	1390	1407	1386	1371	1339	1397	1357	1373	50	51	48	50	49	52	47	49
15	1385	1367	1411	1428	1408	1393	1363	1418	1380	1395	52	53	50	52	52	56	49	52
16	1406	1390	1430	1448	1429	1415	1386	1438	1402	1416	56	56	52	55	55	59	53	56
17	1428	1412	1451	1468	1449	1436	1408	1459	1423	1437	59	58	56	58	60	63	57	60
18	1450	1433	1471	1487	1471	1459	1431	1479	1445	1458	62	61	59	61	65	68	61	65
19	1472	1456	1491	1506	1493	1482	1454	1499	1468	1480	66	64	63	64	70	72	66	69
20	1492	1478	1510	1525	1512	1504	1476	1519	1490	1501	69	67	67	68	76	77	72	75
21	1512	1499	1530	1544	1529	1522	1496	1538	1511	1520	74	71	71	72	82	82	77	80
22	1531	1518	1549	1562	1550	1544	1517	1557	1531	1540	78	74	75	76	88	87	82	86
23	1547	1536	1565	1579	1567	1561	1535	1573	1550	1557	83	78	81	81	95	92	88	92
24	1562	1553	1579	1592	1583	1575	1552	1588	1568	1572	88	82	86	85	102	97	93	97
25	1577	1568	1592	1605	1597	1589	1568	1602	1585	1587	93	86	91	90	110	103	99	104
26	1592	1583	1606	1619	1611	1604	1585	1616	1601	1602	98	90	96	95	118	109	104	110
27	1587	1580	1595	1610	1603	1596	1579	1608	1592	1594	103	94	101	99	127	116	109	117
28	1565	1556	1569	1584	1579	1573	1557	1584	1570	1571	108	98	106	104	137	123	115	125
29	1554	1546	1559	1572	1568	1563	1548	1572	1560	1560	113	102	111	109	147	129	120	132
30	1551	1543	1558	1569	1566	1561	1546	1569	1557	1558	119	108	116	114	157	136	126	140
31	1552	1544	1559	1569	1566	1562	1549	1569	1558	1559	125	113	122	120	167	143	131	147
32	1555	1548	1562	1572	1569	1565	1554	1572	1562	1562	131	119	129	126	176	150	137	154
33	1560	1553	1568	1577	1574	1570	1559	1577	1567	1567	137	124	136	132	183	158	142	161
34	1566	1559	1573	1582	1578	1575	1566	1582	1572	1573	145	130	143	139	190	165	148	168
35	1572	1565	1580	1588	1584	1580	1573	1588	1579	1579	156	137	151	148	196	174	153	174
36	1579	1572	1586	1594	1590	1586	1581	1595	1586	1585	170	143	159	157	203	184	160	182
37	1586	1579	1592	1601	1596	1593	1588	1601	1592	1592	184	149	168	167	211	193	167	190
38	1592	1584	1599	1607	1602	1598	1595	1607	1599	1598	196	156	177	176	215	201	174	197
39	1598	1591	1605	1612	1608	1604	1602	1613	1605	1604	205	165	186	185	217	206	181	202
40	1604	1597	1611	1619	1614	1611	1609	1620	1611	1611	213	173	193	193	220	214	188	207
41	1610	1605	1617	1625	1620	1616	1617	1626	1618	1617	218	180	197	198	222	220	195	212
42	1617	1612	1623	1631	1626	1623	1624	1633	1625	1624	221	185	201	202	224	224	203	217
43	1624	1619	1630	1638	1633	1629	1631	1639	1631	1630	226	183	203	204	227	229	209	222
44	1630	1626	1637	1644	1639	1636	1639	1646	1638	1637	226	191	205	207	231	233	214	226
45	1637	1632	1643	1651	1645	1642	1646	1652	1644	1644	224	205	206	212	235	238	216	230
46	1643	1639	1650	1657	1651	1648	1652	1658	1651	1650	226	210	208	215	240	242	219	234
47	1650	1646	1656	1663	1658	1655	1660	1664	1658	1657	231	216	209	219	244	248	222	238

Minutes	TC-0	TC-1	TC-2	TC-3	TC-4	TC-5	TC-6	TC-7	TC-8	FURNACE	TC-9	TC-10	TC-11	CNDT #2	TC-12	TC-13	TC-14	CNDT #4
48	1656	1652	1663	1665	1665	1662	1666	1671	1664	1663	234	217	210	220	248	253	226	242
49	1662	1658	1669	1676	1671	1668	1673	1677	1670	1669	237	217	211	222	252	258	230	247
50	1668	1664	1674	1681	1676	1673	1679	1682	1676	1675	240	218	212	223	256	264	235	252
51	1673	1670	1679	1686	1682	1679	1685	1688	1682	1680	244	220	213	226	260	270	241	257
52	1679	1675	1685	1691	1687	1685	1691	1693	1688	1686	248	222	214	228	266	276	247	263
53	1684	1680	1690	1697	1692	1690	1697	1698	1693	1691	252	225	216	231	271	283	254	269
54	1689	1686	1695	1702	1698	1695	1703	1704	1699	1697	256	230	219	235	278	289	260	276
55	1694	1691	1701	1707	1702	1700	1708	1708	1704	1702	261	234	222	239	284	295	266	282
56	1699	1696	1705	1711	1707	1705	1713	1713	1709	1706	265	239	225	243	290	301	273	288
57	1703	1700	1710	1716	1712	1710	1718	1717	1714	1711	270	244	229	248	297	307	279	294
58	1704	1701	1710	1716	1712	1710	1719	1718	1714	1712	275	249	233	252	304	314	286	301
59	1704	1701	1708	1714	1711	1710	1718	1716	1713	1711	280	254	237	257	311	320	293	308
60	1699	1696	1703	1709	1706	1705	1714	1712	1709	1706	285	260	242	262	318	327	299	315
61	1698	1695	1701	1707	1705	1704	1713	1710	1708	1705	290	266	247	268	324	333	305	321
62	1698	1696	1701	1707	1705	1704	1714	1710	1708	1705	296	272	252	273	331	339	311	327
63	1699	1697	1703	1708	1706	1705	1715	1712	1709	1706	301	278	257	279	337	345	317	333
64	1702	1699	1704	1710	1708	1707	1717	1714	1711	1708	307	285	263	285	344	352	324	340
65	1704	1701	1707	1712	1710	1709	1719	1715	1713	1710	312	291	268	290	350	358	329	346
66	1705	1703	1709	1713	1711	1711	1721	1717	1715	1712	318	296	273	296	357	365	336	353
67	1706	1704	1710	1715	1713	1713	1724	1719	1716	1713	323	301	278	301	362	370	341	358
68	1708	1706	1712	1717	1715	1715	1726	1721	1719	1715	329	307	284	307	369	376	347	364
69	1710	1709	1715	1720	1717	1717	1729	1723	1721	1718	333	313	289	312	374	381	352	369
70	1713	1711	1717	1721	1719	1719	1731	1726	1723	1720	339	318	295	317	380	387	358	375
71	1720	1719	1725	1730	1727	1727	1739	1733	1731	1728	345	323	301	323	386	392	363	380
72	1726	1725	1732	1737	1734	1734	1746	1740	1738	1735	350	329	306	328	391	397	369	386
73	1731	1730	1737	1742	1739	1739	1751	1745	1743	1740	355	334	312	334	396	402	374	391
74	1735	1734	1741	1746	1743	1743	1755	1749	1747	1744	361	340	317	339	401	407	379	396
75	1739	1738	1745	1749	1747	1746	1759	1753	1751	1747	366	345	323	345	406	412	384	401
76	1743	1742	1749	1753	1751	1750	1763	1756	1755	1751	371	350	329	350	411	417	389	406
77	1746	1746	1752	1757	1754	1754	1766	1760	1758	1755	376	356	334	355	416	422	394	411
78	1750	1749	1756	1760	1757	1757	1770	1763	1762	1758	381	361	339	360	422	428	399	416
79	1753	1753	1760	1764	1761	1761	1774	1766	1765	1762	386	366	344	365	427	434	403	421
80	1757	1757	1764	1768	1764	1765	1777	1770	1769	1766	391	371	350	371	433	440	408	427
81	1760	1760	1767	1771	1768	1768	1780	1773	1772	1769	395	376	355	375	438	445	412	432
82	1763	1763	1770	1774	1771	1771	1784	1776	1775	1772	399	381	360	380	444	451	418	438
83	1767	1766	1774	1778	1774	1775	1787	1779	1779	1775	403	385	365	384	450	457	423	443
84	1770	1770	1777	1781	1778	1778	1791	1783	1783	1779	407	390	370	389	456	463	428	449
85	1773	1773	1780	1784	1780	1781	1794	1786	1786	1782	411	394	374	393	461	469	434	455
86	1776	1776	1783	1787	1783	1784	1797	1788	1789	1785	416	398	379	398	467	475	439	460
87	1779	1779	1786	1789	1786	1787	1799	1791	1791	1787	420	402	383	402	472	480	445	466
88	1782	1782	1789	1792	1789	1790	1803	1794	1795	1791	424	406	388	406	478	486	450	471
89	1785	1785	1792	1795	1792	1792	1806	1797	1797	1793	429	410	392	410	483	492	456	477
90	1788	1788	1794	1799	1794	1795	1808	1800	1800	1796	434	414	396	415	489	498	462	483

Minutes	TC-15	TC-16	TC-17	CNDT #5 AVE.	TC-18	TC-19	TC-20	CNDT #8 AVE.	TC-21	TC-22	TC-23	CNDT #9 AVE.	TC-24	TC-25	TC-26	CNDT #2 88 AVE.
1	42	44	43	43	41	41	39	40	39	38	38	38	44	46	43	44
2	42	44	43	43	41	41	38	40	38	38	38	38	43	45	43	44
3	39	41	39	40	37	38	38	38	38	38	37	38	43	45	43	44
4	42	44	42	43	40	41	38	40	38	38	38	38	43	45	43	44
5	42	44	42	43	41	41	38	40	38	38	37	38	43	45	42	43
6	43	44	42	43	41	42	38	40	38	38	38	38	43	45	43	44
7	43	44	42	43	41	43	39	41	38	39	38	38	43	45	42	43
8	42	44	43	43	42	44	39	42	38	40	39	39	42	44	42	43
9	43	45	43	44	43	46	40	43	39	43	41	41	43	44	42	43
10	44	47	44	45	45	49	42	45	41	46	43	43	43	44	42	43
11	46	48	46	47	48	52	45	48	43	50	46	46	43	45	43	44
12	48	51	49	49	51	56	48	52	48	55	50	51	44	45	43	44
13	51	53	52	52	54	60	52	55	53	61	53	56	45	46	44	45
14	54	56	56	55	58	64	57	60	59	66	58	61	46	47	45	46
15	57	59	60	59	63	69	62	65	65	72	63	67	48	48	46	47
16	60	62	64	62	68	74	67	70	71	78	68	72	50	50	46	49
17	64	66	68	66	73	79	73	75	77	84	74	78	52	52	49	51
18	67	70	72	70	79	85	78	81	84	90	79	84	54	53	52	53
19	72	73	77	74	86	91	84	87	90	97	86	91	57	56	55	56
20	76	77	81	78	93	97	90	93	96	103	94	98	60	58	58	59
21	81	81	86	83	101	103	97	100	103	110	102	105	64	61	61	62
22	85	85	91	87	110	110	103	108	109	117	113	113	67	64	64	65
23	90	90	96	92	118	116	111	115	115	125	126	122	71	68	68	69
24	95	94	101	97	126	123	118	122	122	132	143	132	75	71	72	73
25	102	99	106	102	133	130	125	129	128	139	151	143	79	74	76	76
26	106	104	111	107	141	138	132	137	134	147	172	153	83	78	80	80
27	112	109	116	112	149	146	138	144	140	154	190	161	87	81	84	84
28	119	115	122	119	156	153	144	151	149	161	200	170	92	85	89	89
29	125	120	128	124	166	159	151	159	160	169	208	179	96	89	94	93
30	131	126	134	130	176	166	158	167	174	189	214	192	101	93	100	98
31	137	131	140	136	185	172	168	175	190	203	219	204	106	98	106	103
32	143	137	146	142	194	179	177	183	204	211	223	213	112	103	113	109
33	149	141	151	147	201	186	183	190	207	218	226	217	117	107	120	115
34	156	147	156	153	209	196	190	198	208	223	229	220	123	112	129	121
35	162	155	161	159	214	204	199	206	208	226	231	222	130	116	137	128
36	168	162	168	166	216	214	207	212	210	231	230	224	139	122	146	136
37	175	168	175	173	223	223	211	219	213	236	235	228	147	128	154	143
38	181	173	183	179	227	227	213	222	215	241	240	232	157	135	161	151
39	186	177	189	184	229	232	214	225	219	247	245	237	164	141	167	157
40	192	181	195	189	232	238	216	229	223	254	252	243	172	150	174	165
41	198	186	200	195	236	244	218	233	228	260	258	249	179	157	179	172
42	204	191	205	200	241	251	221	238	234	266	265	256	185	165	184	173
43	211	198	210	206	246	258	225	243	240	276	272	263	189	171	188	183
44	217	205	214	212	252	265	230	249	246	284	279	270	193	179	192	188
45	223	211	218	217	258	273	236	256	253	291	285	276	197	184	195	192
46	229	219	221	223	266	280	242	263	260	299	292	284	200	190	198	196
47	235	225	225	228	273	288	249	270	267	307	298	291	204	195	200	200

Minutes	TC-15	TC-16	TC-17	CNDT #5	TC-18	TC-19	TC-20	CNDT #8	TC-21	TC-22	TC-23	CNDT #9	TC-24	TC-25	TC-26	CNDT #2
48	241	232	229	234	280	296	256	277	274	315	305	298	208	199	202	203
49	248	238	233	240	287	303	263	284	281	322	312	305	212	201	203	205
50	256	244	239	246	296	311	270	292	289	330	319	313	216	204	205	208
51	261	250	244	252	303	318	277	299	296	338	326	320	220	206	206	211
52	269	257	250	259	311	326	285	307	304	346	334	328	225	208	208	214
53	274	264	256	265	319	333	292	315	311	353	341	335	230	211	209	217
54	282	271	263	272	327	341	300	323	319	361	349	343	235	215	211	220
55	288	277	269	278	334	348	307	330	325	369	357	350	239	218	213	223
56	295	284	276	285	342	355	315	337	333	376	364	358	244	223	216	228
57	302	291	282	292	349	362	322	344	340	383	371	365	249	227	219	232
58	310	299	289	299	357	369	330	352	347	390	379	372	255	233	222	237
59	316	305	295	305	363	376	337	359	354	397	386	379	260	238	226	241
60	324	312	302	313	371	383	344	366	361	403	393	386	266	243	230	246
61	330	319	309	319	378	389	351	373	367	409	400	392	271	249	234	251
62	337	325	315	326	385	395	358	379	374	416	406	399	277	255	240	257
63	343	332	322	332	391	401	364	385	380	423	413	405	283	260	245	263
64	351	339	329	340	398	407	374	393	388	431	420	413	291	268	251	270
65	357	345	335	346	404	413	379	399	394	437	427	419	297	273	256	275
66	363	351	342	352	410	419	385	405	399	444	434	426	303	278	262	281
67	369	357	348	358	416	425	390	410	404	451	440	432	309	283	268	287
68	375	364	354	364	422	432	396	417	409	457	447	438	315	290	274	293
69	381	369	359	370	428	438	401	422	415	464	453	444	321	295	280	299
70	387	375	366	376	434	445	406	428	420	471	460	450	327	301	287	305
71	393	380	371	381	440	451	411	434	426	477	467	457	333	306	293	311
72	399	386	376	387	447	458	415	440	432	483	473	463	339	312	299	317
73	404	391	382	392	453	464	421	446	438	490	480	469	346	317	305	323
74	409	397	387	398	459	471	426	452	444	496	486	475	353	324	311	329
75	414	402	392	403	466	477	432	458	450	502	492	481	360	329	317	335
76	420	407	397	408	473	484	438	465	457	509	499	488	367	335	323	342
77	425	411	401	412	479	490	444	471	463	515	505	494	373	340	329	347
78	431	416	406	418	485	497	450	477	469	522	510	500	377	346	335	353
79	437	422	409	423	491	503	456	483	475	527	516	506	382	351	340	358
80	443	428	414	428	498	509	463	490	481	534	522	512	388	357	346	364
81	449	433	418	433	504	515	469	496	487	540	528	518	394	362	351	369
82	455	439	424	439	511	521	475	502	493	546	533	524	398	367	356	374
83	461	444	427	444	516	526	481	508	498	552	538	529	403	373	361	379
84	467	450	434	450	522	532	487	514	505	558	544	536	408	380	367	385
85	472	456	438	455	527	537	493	519	510	563	549	541	412	385	372	390
86	478	461	443	461	533	542	499	525	516	568	554	546	417	391	377	395
87	484	467	448	466	538	546	505	530	521	572	560	551	422	396	382	400
88	490	472	453	472	543	551	511	535	526	578	565	556	427	403	387	406
89	495	478	459	477	547	555	517	540	531	583	570	561	431	409	391	410
90	501	483	464	483	552	560	522	545	537	590	576	568	437	414	396	416

Minutes	TC-27	TC-28	TC-29	CNDT #4	TC-30	TC-31	TC-32	CNDT #5	TC-33	TC-34	TC-35	CNDT #8	TC-36	TC-37	TC-38	CNDT #9
				B8 AVE.				B8 AVE.				B8 AVE.				B8 AVE.
1	40	41	40	40	42	46	43	44	41	42	40	41	37	39	39	38
2	40	40	39	40	42	45	43	43	41	42	40	41	37	39	39	38
3	40	40	39	40	42	45	43	43	41	42	39	41	37	39	39	38
4	40	40	39	40	42	45	43	43	41	42	39	41	37	39	39	38
5	40	40	39	40	42	45	42	43	41	41	39	40	37	39	39	38
6	40	40	39	40	42	45	42	43	41	41	39	40	37	39	39	38
7	40	40	39	40	42	45	43	43	41	42	39	41	37	39	39	38
8	39	40	39	39	42	45	42	43	41	42	39	41	38	40	39	39
9	39	40	39	39	42	45	42	43	41	42	39	41	38	40	39	39
10	40	40	39	40	42	45	43	43	42	43	40	42	39	41	39	40
11	40	41	39	40	42	45	43	43	43	44	41	43	40	43	40	41
12	41	41	40	41	43	46	44	44	44	46	42	44	42	45	42	43
13	43	42	40	42	44	46	45	45	46	47	44	46	44	47	44	45
14	45	43	41	43	45	47	46	46	49	50	46	48	47	50	46	48
15	49	45	43	46	47	48	48	48	52	53	49	51	50	53	49	51
16	54	47	44	48	49	50	50	50	55	56	52	54	54	57	53	55
17	59	49	46	51	51	52	52	52	60	60	57	59	58	62	57	59
18	65	52	48	55	54	54	55	54	64	64	61	63	63	66	62	64
19	70	55	51	59	57	57	58	57	69	69	66	68	68	72	67	69
20	76	58	54	63	60	59	61	60	75	74	72	74	74	77	73	75
21	81	62	58	67	64	62	65	64	81	79	77	79	80	83	79	81
22	87	66	62	72	68	66	69	68	88	85	83	85	88	90	85	88
23	93	70	66	76	72	69	73	71	95	91	89	92	97	97	92	95
24	99	74	71	81	76	73	77	75	102	98	96	99	106	104	100	103
25	106	79	76	87	81	77	82	80	110	105	102	106	117	111	107	112
26	113	84	81	93	86	80	86	84	118	112	109	113	129	119	115	121
27	120	90	86	99	91	85	91	89	125	119	116	120	143	126	124	131
28	127	96	92	105	96	89	97	94	133	126	123	127	155	134	133	141
29	135	102	98	112	101	94	102	99	142	133	130	135	166	144	143	151
30	143	108	104	118	107	99	108	105	151	140	137	143	176	158	154	163
31	151	114	110	125	113	103	113	110	159	147	145	150	184	174	164	174
32	158	121	116	132	119	109	119	116	168	155	153	159	191	185	174	183
33	165	127	121	138	125	114	124	121	175	162	160	166	196	192	181	190
34	172	135	128	145	131	119	131	127	183	170	169	174	200	198	188	195
35	178	142	132	151	137	124	135	132	189	178	176	181	204	202	193	200
36	185	152	139	159	144	131	142	139	196	188	184	189	207	207	198	204
37	190	160	146	165	150	136	149	145	200	195	190	195	211	210	201	207
38	194	168	153	172	156	142	156	151	205	202	196	201	216	213	204	211
39	198	175	160	178	161	147	161	156	208	207	200	205	221	216	207	215
40	200	183	168	184	167	153	169	163	213	213	203	210	227	222	211	220
41	202	189	175	189	173	158	174	168	217	218	206	214	233	227	215	225
42	204	195	183	194	180	164	181	175	222	225	209	219	240	235	219	231
43	206	199	189	198	185	170	186	180	228	230	212	223	246	242	224	237
44	208	204	195	202	192	176	192	187	234	237	216	229	254	250	231	245
45	211	208	199	206	198	182	195	192	240	244	220	235	261	257	236	251
46	214	212	203	210	204	189	199	197	247	252	227	242	269	266	244	260
47	217	217	206	213	210	194	203	202	254	259	232	248	276	274	250	267

Minutes	TC-27	TC-28	TC-29	CNDT #4	TC-30	TC-31	TC-32	CNDT #5	TC-33	TC-34	TC-35	CNDT #8	TC-36	TC-37	TC-38	CNDT #9
48	221	222	211	218	217	200	207	208	262	267	240	256	285	283	258	275
49	225	226	215	222	223	206	211	213	268	274	247	263	292	291	265	283
50	229	232	220	227	229	212	216	219	277	282	255	271	301	299	274	291
51	234	237	225	232	235	217	221	224	284	290	262	279	308	307	281	299
52	240	244	231	238	242	223	228	231	293	299	271	288	317	316	290	308
53	245	250	237	244	249	228	233	237	300	306	278	295	324	324	297	315
54	252	257	243	251	256	235	240	244	308	314	286	303	333	332	306	324
55	258	263	249	257	262	240	246	249	315	321	293	310	340	340	313	331
56	266	270	256	264	269	247	253	256	323	330	302	318	349	349	322	340
57	272	276	262	270	275	254	259	263	330	337	309	325	357	358	329	348
58	280	283	270	278	283	261	267	270	339	346	318	334	366	367	339	357
59	286	290	276	284	289	267	273	276	346	353	325	341	374	375	346	365
60	294	298	283	292	297	275	280	284	354	361	333	349	383	385	355	374
61	300	305	290	298	303	281	287	290	361	368	340	356	392	393	363	383
62	308	312	297	306	311	288	294	298	369	375	348	364	401	402	373	392
63	314	318	303	312	317	295	301	304	375	382	355	371	408	411	384	401
64	324	326	311	320	326	303	309	313	384	390	364	379	418	421	394	411
65	331	332	317	327	332	310	316	319	390	397	370	386	425	430	401	419
66	340	339	323	334	339	318	323	327	397	405	377	393	433	439	409	427
67	345	345	329	340	345	326	329	333	403	411	383	399	440	445	414	433
68	352	351	335	346	353	333	337	341	410	418	391	406	448	453	421	441
69	358	357	341	352	359	340	343	347	415	424	397	412	455	461	426	447
70	364	364	348	359	367	347	350	355	422	431	404	419	462	467	434	454
71	370	370	353	364	373	353	355	360	428	437	409	425	467	474	439	460
72	377	376	360	371	380	360	362	367	435	444	415	431	474	480	447	467
73	383	382	365	377	386	366	368	373	441	451	420	437	480	486	452	473
74	390	388	371	383	393	374	375	381	448	458	426	444	487	492	459	479
75	396	394	378	389	400	379	381	387	454	465	431	450	492	498	465	485
76	402	401	385	396	407	386	388	394	461	472	438	457	499	505	472	492
77	407	406	390	401	413	391	393	399	467	479	443	463	505	512	477	498
78	414	412	397	408	420	398	400	406	475	486	449	470	512	518	484	505
79	419	421	403	414	426	403	406	412	481	492	455	476	517	525	490	511
80	426	433	410	423	433	409	412	418	489	500	461	483	524	533	496	518
81	432	439	416	429	439	414	416	423	495	506	467	489	529	540	501	523
82	438	445	422	435	446	420	422	429	502	513	474	496	536	548	508	531
83	444	450	427	440	452	425	427	435	507	518	479	501	541	555	513	536
84	450	456	433	446	459	431	433	441	514	525	486	508	548	563	519	543
85	456	462	439	452	465	436	438	446	519	530	492	514	554	569	524	549
86	462	468	445	458	472	442	444	453	526	536	499	520	561	577	530	556
87	467	473	450	463	477	447	450	458	531	541	504	525	568	583	535	562
88	474	480	456	470	483	453	456	464	537	548	511	532	576	591	542	570
89	479	485	461	475	489	458	460	469	541	553	516	537	582	598	547	576
90	485	491	468	481	495	464	466	475	548	559	522	543	591	608	556	585

1.2
4.25A

1.0
5-5.500H

1.0
3-(84)²(20)

.9
3(23)³

12 MINUTES

GROUP 0
FURNACE

0 1323°F
1 1303°F
2 1351°F
3 1365°F
4 1356°F
5 1342°F
6 1304°F
7 1365°F
8 1324°F

GROUP 1
COND #1

9 55°F
10 58°F
11 56°F

GROUP 2
COND #3

12 56°F
13 57°F
14 55°F

GROUP 3
COND #6

15 60°F
16 62°F
17 57°F

GROUP 4
COND #9

18 65°F
19 66°F
20 63°F

=====

1337°F
1.8 (53)²(50)

=====

56°F

=====

56°F

=====

60°F

=====

65°F

GROUP 5
COND #11

21 66°F
22 70°F
23 71°F

=====

69°F

GROUP 6
COND#1 #8

24 56°F
25 56°F
26 53°F

=====

55°F

GROUP 7
COND#3 #8

27 53°F
28 54°F
29 51°F

=====

53°F

GROUP 8
COND#6 #8

30 56°F
31 57°F
32 54°F

=====

56°F

GROUP 9
COND#9 #8

33 57°F
34 60°F
35 58°F

=====

58°F

GROUP 10
COND#11 #8

36 61°F
37 60°F
38 59°F

=====

60°F

13 MINUTES

GROUP 0
FURNACE

0 1349°F
1 1330°F
2 1376°F
3 1390°F
4 1382°F
5 1370°F
6 1330°F
7 1389°F
8 1351°F

=====

1363°F

GROUP 1
COND #1

9 56°F
10 59°F
11 57°F

=====

57°F

GROUP 2
COND #3

12 57°F
13 58°F
14 57°F

=====

57°F

GROUP 3
COND #6

15 63°F
16 65°F
17 59°F

=====

62°F

GROUP 4
COND #9

18 69°F
19 69°F
20 68°F

=====

69°F

GROUP 5
COND #11

21 71°F
22 75°F
23 79°F

=====

75°F

GROUP 6
COND#1 #8

24 56°F
25 56°F
26 54°F

=====

55°F

GROUP 7
COND#3 #8

27 54°F
28 54°F
29 51°F

=====

53°F

GROUP 8
COND#6 #8

30 58°F
31 59°F
32 55°F

=====

57°F

GROUP 9
COND#9 #8

33 61°F
34 63°F
35 61°F

=====

62°F

GROUP 10
COND#11 #8

36 65°F
37 63°F
38 63°F

14 MINUTES

GROUP 0
FURNACE
0 1372°F
1 1353°F
2 1398°F
3 1413°F
4 1404°F
5 1392°F
6 1354°F
7 1411°F
8 1374°F
=====
1386°F

GROUP 1
COND #1
9 57°F
10 60°F
11 58°F
=====
58°F

GROUP 2
COND #3
12 59°F
13 59°F
14 58°F
=====
59°F

GROUP 3
COND #6
15 66°F
16 68°F
17 61°F
=====
65°F

GROUP 4
COND #9
18 73°F
19 73°F
20 73°F
=====
73°F

GROUP 5
COND #11
21 77°F
22 81°F
23 88°F
=====
82°F

GROUP 6
COND#1 #8
24 57°F
25 57°F
26 54°F
=====
56°F

GROUP 7
COND#3 #8
27 55°F
28 55°F
29 52°F
=====
54°F

GROUP 8
COND#6 #8
30 60°F
31 61°F
32 57°F
=====
59°F

GROUP 9
COND#9 #8
33 65°F
34 66°F
35 64°F
=====
65°F

GROUP 10
COND#11 #8
36 71°F
37 67°F
38 67°F
=====
68°F

15 MINUTES

GROUP 0
FURNACE
0 1393°F
1 1375°F
2 1419°F
3 1434°F
4 1424°F
5 1413°F
6 1377°F
7 1431°F
8 1396°F
=====
1407°F

GROUP 1
COND #1
9 57°F
10 61°F
11 59°F
=====
59°F

GROUP 2
COND #3
12 61°F
13 61°F
14 60°F
=====
61°F

GROUP 3
COND #6
15 69°F
16 72°F
17 64°F
=====
68°F

GROUP 4
COND #9
18 78°F
19 78°F
20 79°F
=====
78°F

GROUP 5
COND #11
21 85°F
22 89°F
23 96°F
=====
90°F

GROUP 6
COND#1 #8
24 57°F
25 57°F
26 54°F
=====
56°F

GROUP 7
COND#3 #8
27 56°F
28 55°F
29 53°F
=====
55°F

GROUP 8
COND#6 #8
30 63°F
31 63°F
32 60°F
=====
62°F

GROUP 9
COND#9 #8
33 70°F
34 69°F
35 67°F
=====
69°F

GROUP 10
COND#11 #8
36 78°F
37 71°F
38 72°F
=====
74°F

16 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1413°F	9 58°F	12 63°F	15 73°F	18 82°F
1 1396°F	10 62°F	13 62°F	16 76°F	19 83°F
2 1439°F	11 60°F	14 63°F	17 68°F	20 86°F
3 1454°F				
4 1444°F				
5 1431°F				
6 1399°F				
7 1451°F				
8 1417°F				
=====	=====	=====	=====	=====
1427°F	60°F	63°F	72°F	84°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 95°F	24 58°F	27 57°F	30 66°F	33 77°F
22 97°F	25 58°F	28 56°F	31 65°F	34 73°F
23 104°F	26 55°F	29 54°F	32 62°F	35 71°F
=====	=====	=====	=====	=====
99°F	57°F	56°F	64°F	74°F

GROUP 10 COND#11 #8
36 85°F
37 76°F
38 78°F
=====
80°F

17 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1435°F	9 59°F	12 65°F	15 78°F	18 88°F
1 1418°F	10 63°F	13 64°F	16 80°F	19 89°F
2 1461°F	11 62°F	14 65°F	17 73°F	20 93°F
3 1474°F				
4 1464°F				
5 1452°F				
6 1423°F				
7 1471°F				
8 1439°F				
=====	=====	=====	=====	=====
1449°F	61°F	65°F	77°F	90°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 106°F	24 58°F	27 58°F	30 70°F	33 85°F
22 105°F	25 58°F	28 57°F	31 68°F	34 77°F
23 113°F	26 56°F	29 55°F	32 66°F	35 75°F
=====	=====	=====	=====	=====
108°F	57°F	57°F	68°F	79°F

GROUP 10 COND#11 #8
36 94°F
37 82°F
38 85°F
=====
87°F

18 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1457°F	9 60°F	12 68°F	15 83°F	18 93°F
1 1441°F	10 64°F	13 67°F	16 85°F	19 95°F
2 1482°F	11 64°F	14 68°F	17 80°F	20 100°F
3 1495°F				
4 1486°F				
5 1475°F				
6 1445°F				
7 1491°F				
8 1461°F				
=====	=====	=====	=====	=====
1470°F	63°F	68°F	83°F	96°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 119°F	24 59°F	27 60°F	30 74°F	33 94°F
22 113°F	25 59°F	28 58°F	31 71°F	34 83°F
23 121°F	26 56°F	29 56°F	32 70°F	35 79°F
=====	=====	=====	=====	=====
118°F	58°F	58°F	72°F	85°F

GROUP 10
COND#11 #8

36 103°F
37 88°F
38 94°F
=====
95°F

19 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1480°F	9 62°F	12 70°F	15 89°F	18 99°F
1 1465°F	10 66°F	13 69°F	16 91°F	19 100°F
2 1503°F	11 66°F	14 70°F	17 90°F	20 107°F
3 1517°F				
4 1508°F				
5 1499°F				
6 1467°F				
7 1510°F				
8 1482°F				
=====	=====	=====	=====	=====
1492°F	65°F	70°F	90°F	102°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 135°F	24 60°F	27 61°F	30 78°F	33 102°F
22 118°F	25 59°F	28 60°F	31 75°F	34 87°F
23 131°F	26 58°F	29 57°F	32 76°F	35 84°F
=====	=====	=====	=====	=====
128°F	59°F	59°F	76°F	91°F

GROUP 10
COND#11 #8

36 111°F
37 94°F
38 104°F
=====
103°F

20 MINUTES

GROUP 0 FURNACE		GROUP 1 COND #1		GROUP 2 COND #3		GROUP 3 COND #6		GROUP 4 COND #9	
0	1503°F	9	64°F	12	74°F	15	96°F	18	105°F
1	1489°F	10	68°F	13	72°F	16	98°F	19	107°F
2	1524°F	11	68°F	14	73°F	17	104°F	20	116°F
3	1537°F								
4	1529°F								
5	1522°F								
6	1490°F								
7	1531°F								
8	1505°F								
	=====		=====		=====		=====		=====
	1514°F		67°F		73°F		99°F		109°F

GROUP 5 COND #11		GROUP 6 COND#1 #8		GROUP 7 COND#3 #8		GROUP 8 COND#6 #8		GROUP 9 COND#9 #8	
21	157°F	24	61°F	27	63°F	30	85°F	33	111°F
22	126°F	25	61°F	28	62°F	31	80°F	34	94°F
23	147°F	26	59°F	29	59°F	32	84°F	35	89°F
	=====		=====		=====		=====		=====
	143°F		60°F		61°F		83°F		98°F

GROUP 10 COND#11 #8	
36	122°F
37	102°F
38	118°F
	=====
	114°F

21 MINUTES

GROUP 0 FURNACE		GROUP 1 COND #1		GROUP 2 COND #3		GROUP 3 COND #6		GROUP 4 COND #9	
0	1526°F	9	66°F	12	77°F	15	103°F	18	111°F
1	1513°F	10	70°F	13	74°F	16	104°F	19	112°F
2	1545°F	11	71°F	14	77°F	17	122°F	20	123°F
3	1557°F								
4	1549°F								
5	1542°F								
6	1513°F								
7	1551°F								
8	1527°F								
	=====		=====		=====		=====		=====
	1536°F		69°F		76°F		110°F		115°F

GROUP 5 COND #11		GROUP 6 COND#1 #8		GROUP 7 COND#3 #8		GROUP 8 COND#6 #8		GROUP 9 COND#9 #8	
21	195°F	24	62°F	27	66°F	30	90°F	33	119°F
22	134°F	25	62°F	28	64°F	31	84°F	34	99°F
23	165°F	26	61°F	29	61°F	32	91°F	35	94°F
	=====		=====		=====		=====		=====
	165°F		62°F		64°F		68°F		104°F

GROUP 10 COND#11 #8	
36	132°F
37	110°F
38	132°F
	=====
	125°F

22 MINUTES

GROUP 0
FURNACE

0 1547°F
1 1534°F
2 1566°F
3 1577°F
4 1568°F
5 1562°F
6 1535°F
7 1571°F
8 1549°F

=====
1557°F

GROUP 1
COND #1

9 68°F
10 73°F
11 74°F

=====
72°F

GROUP 2
COND #3

12 81°F
13 78°F
14 81°F

=====
80°F

GROUP 3
COND #6

15 111°F
16 111°F
17 146°F

=====
123°F

GROUP 4
COND #9

18 119°F
19 120°F
20 132°F

=====
124°F

GROUP 5
COND #11

21 204°F
22 143°F
23 181°F

=====
176°F

GROUP 6
COND#1 #8

24 65°F
25 64°F
26 63°F

=====
64°F

GROUP 7
COND#3 #8

27 69°F
28 66°F
29 64°F

=====
66°F

GROUP 8
COND#6 #8

30 98°F
31 91°F
32 102°F

=====
97°F

GROUP 9
COND#9 #8

33 128°F
34 106°F
35 101°F

=====
112°F

GROUP 10

COND#11 #8

36 146°F
37 120°F
38 155°F

=====
140°F

23 MINUTES

GROUP 0
FURNACE

0 1564°F
1 1552°F
2 1583°F
3 1595°F
4 1585°F
5 1580°F
6 1554°F
7 1588°F
8 1568°F

=====
1574°F

GROUP 1
COND #1

9 71°F
10 75°F
11 78°F

=====
75°F

GROUP 2
COND #3

12 84°F
13 82°F
14 84°F

=====
83°F

GROUP 3
COND #6

15 118°F
16 117°F
17 166°F

=====
134°F

GROUP 4
COND #9

18 126°F
19 127°F
20 139°F

=====
131°F

GROUP 5
COND #11

21 204°F
22 177°F
23 197°F

=====
180°F

GROUP 6
COND#1 #8

24 67°F
25 66°F
26 65°F

=====
66°F

GROUP 7
COND#3 #8

27 71°F
28 69°F
29 67°F

=====
69°F

GROUP 8
COND#6 #8

30 104°F
31 97°F
32 111°F

=====
104°F

GROUP 9
COND#9 #8

33 136°F
34 112°F
35 106°F

=====
118°F

GROUP 10

COND#11 #8

36 158°F
37 131°F
38 168°F

=====
152°F

24 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1580°F	9 73°F	12 88°F	15 127°F	18 134°F
1 1579°F	10 78°F	13 85°F	16 125°F	19 134°F
2 1598°F	11 82°F	14 89°F	17 182°F	20 149°F
3 1610°F				
4 1599°F				
5 1594°F				
6 1572°F				
7 1603°F				
8 1585°F				
=====	=====	=====	=====	=====
1590°F	78°F	87°F	145°F	139°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 203°F	24 69°F	27 74°F	30 112°F	33 144°F
22 180°F	25 68°F	28 71°F	31 105°F	34 119°F
23 207°F	26 68°F	29 70°F	32 123°F	35 113°F
=====	=====	=====	=====	=====
197°F	68°F	72°F	113°F	125°F

GROUP 10
COND#11 #8

36 172°F
37 148°F
38 179°F
=====
166°F

25 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1593°F	9 76°F	12 92°F	15 138°F	18 143°F
1 1584°F	10 81°F	13 89°F	16 141°F	19 141°F
2 1611°F	11 86°F	14 93°F	17 190°F	20 164°F
3 1622°F				
4 1612°F				
5 1608°F				
6 1586°F				
7 1616°F				
8 1600°F				
=====	=====	=====	=====	=====
1604°F	81°F	91°F	156°F	149°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 208°F	24 71°F	27 78°F	30 119°F	33 151°F
22 204°F	25 70°F	28 74°F	31 114°F	34 125°F
23 208°F	26 71°F	29 72°F	32 133°F	35 119°F
=====	=====	=====	=====	=====
207°F	71°F	75°F	122°F	132°F

GROUP 10
COND#11 #8

36 182°F
37 166°F
38 185°F
=====
178°F

25 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1611°F	9 80°F	12 96°F	15 151°F	18 153°F
1 1602°F	10 84°F	13 92°F	16 161°F	19 151°F
2 1624°F	11 90°F	14 99°F	17 196°F	20 179°F
3 1635°F				
4 1626°F				
5 1621°F				
6 1602°F				
7 1631°F				
8 1616°F				
=====	=====	=====	=====	=====
1619°F	85°F	96°F	169°F	161°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 212°F	24 74°F	27 81°F	30 129°F	33 159°F
22 210°F	25 72°F	28 77°F	31 128°F	34 133°F
23 208°F	26 74°F	29 77°F	32 146°F	35 126°F
=====	=====	=====	=====	=====
210°F	73°F	78°F	134°F	139°F

GROUP 10
COND#11 #8
36 191°F
37 181°F
38 192°F
=====
188°F

27 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1623°F	9 83°F	12 100°F	15 163°F	18 161°F
1 1613°F	10 88°F	13 97°F	16 174°F	19 171°F
2 1633°F	11 94°F	14 104°F	17 199°F	20 189°F
3 1643°F				
4 1635°F				
5 1630°F				
6 1613°F				
7 1640°F				
8 1625°F				
=====	=====	=====	=====	=====
1628°F	88°F	100°F	179°F	174°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 216°F	24 77°F	27 85°F	30 139°F	33 166°F
22 213°F	25 74°F	28 80°F	31 140°F	34 145°F
23 209°F	26 77°F	29 81°F	32 156°F	35 133°F
=====	=====	=====	=====	=====
213°F	76°F	82°F	145°F	148°F

GROUP 10
COND#11 #8
36 196°F
37 189°F
38 196°F
=====
194°F

28 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1631°F	9 87°F	12 105°F	15 177°F	18 170°F
1 1621°F	10 91°F	13 101°F	16 185°F	19 189°F
2 1640°F	11 99°F	14 111°F	17 203°F	20 198°F
3 1651°F				
4 1642°F				
5 1637°F				
6 1623°F				
7 1647°F				
8 1633°F				
=====	=====	=====	=====	=====
1636°F	92°F	106°F	188°F	186°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 217°F	24 80°F	27 89°F	30 151°F	33 175°F
22 213°F	25 77°F	28 84°F	31 155°F	34 165°F
23 211°F	26 81°F	29 86°F	32 167°F	35 141°F
=====	=====	=====	=====	=====
214°F	79°F	86°F	158°F	160°F

GROUP 10
COND#11 #8
36 200°F
37 195°F
38 200°F
=====
198°F

29 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1634°F	9 91°F	12 110°F	15 190°F	18 178°F
1 1625°F	10 95°F	13 105°F	16 191°F	19 199°F
2 1642°F	11 104°F	14 118°F	17 205°F	20 205°F
3 1653°F				
4 1645°F				
5 1639°F				
6 1627°F				
7 1650°F				
8 1636°F				
=====	=====	=====	=====	=====
1639°F	97°F	111°F	195°F	194°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 218°F	24 83°F	27 93°F	30 162°F	33 181°F
22 215°F	25 80°F	28 98°F	31 166°F	34 177°F
23 214°F	26 85°F	29 92°F	32 175°F	35 148°F
=====	=====	=====	=====	=====
216°F	83°F	91°F	168°F	169°F

GROUP 10
COND#11 #8
36 203°F
37 199°F
38 202°F
=====
201°F

30 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1636°F	9 95°F	12 115°F	15 202°F	18 193°F
1 1626°F	10 99°F	13 110°F	16 196°F	19 209°F
2 1643°F	11 109°F	14 128°F	17 207°F	20 208°F
3 1654°F				
4 1645°F				
5 1640°F				
6 1629°F				
7 1651°F				
8 1638°F				
=====	=====	=====	=====	=====
1640°F	101°F	118°F	202°F	203°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 221°F	24 87°F	27 99°F	30 175°F	33 188°F
22 219°F	25 84°F	28 93°F	31 177°F	34 188°F
23 218°F	26 90°F	29 99°F	32 184°F	35 158°F
=====	=====	=====	=====	=====
219°F	87°F	97°F	179°F	178°F

GROUP 10
COND#11 #8
36 206°F
37 202°F
38 204°F
=====
204°F

31 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1637°F	9 99°F	12 121°F	15 209°F	18 205°F
1 1628°F	10 103°F	13 115°F	16 203°F	19 217°F
2 1643°F	11 114°F	14 141°F	17 208°F	20 208°F
3 1653°F				
4 1645°F				
5 1640°F				
6 1632°F				
7 1651°F				
8 1640°F				
=====	=====	=====	=====	=====
1641°F	105°F	126°F	207°F	210°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 224°F	24 90°F	27 103°F	30 183°F	33 193°F
22 223°F	25 87°F	28 97°F	31 185°F	34 194°F
23 224°F	26 94°F	29 105°F	32 189°F	35 168°F
=====	=====	=====	=====	=====
224°F	90°F	102°F	186°F	185°F

GROUP 10
COND#11 #8
36 209°F
37 204°F
38 206°F
=====
206°F

32 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1638°F	9 103°F	12 126°F	15 213°F	18 213°F
1 1629°F	10 107°F	13 120°F	16 208°F	19 217°F
2 1643°F	11 119°F	14 161°F	17 208°F	20 208°F
3 1654°F				
4 1646°F				
5 1642°F				
6 1634°F				
7 1652°F				
8 1641°F				
=====	=====	=====	=====	=====
1642°F	110°F	136°F	210°F	213°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 229°F	24 94°F	27 108°F	30 191°F	33 197°F
22 229°F	25 91°F	28 103°F	31 192°F	34 200°F
23 230°F	26 99°F	29 114°F	32 195°F	35 180°F
=====	=====	=====	=====	=====
229°F	95°F	108°F	193°F	192°F

GROUP 10
COND#11 #8
36 213°F
37 207°F
38 208°F
=====
209°F

33 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1640°F	9 107°F	12 132°F	15 215°F	18 218°F
1 1631°F	10 111°F	13 126°F	16 211°F	19 218°F
2 1647°F	11 124°F	14 178°F	17 208°F	20 209°F
3 1647°F				
4 1649°F				
5 1645°F				
6 1638°F				
7 1654°F				
8 1644°F				
=====	=====	=====	=====	=====
1645°F	114°F	145°F	211°F	215°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 232°F	24 98°F	27 113°F	30 195°F	33 200°F
22 234°F	25 94°F	28 108°F	31 197°F	34 203°F
23 236°F	26 104°F	29 124°F	32 199°F	35 188°F
=====	=====	=====	=====	=====
234°F	99°F	115°F	197°F	197°F

GROUP 10
COND#11 #8
36 217°F
37 210°F
38 211°F
=====
213°F

34 MINUTES

GROUP 0
FURNACE

0 1636°F
1 1628°F
2 1642°F
3 1652°F
4 1645°F
5 1642°F
6 1635°F
7 1650°F
8 1640°F

=====
1641°F

GROUP 1
COND #1

9 112°F
10 115°F
11 130°F

=====
119°F

GROUP 2
COND #3

12 138°F
13 133°F
14 191°F

=====
154°F

GROUP 3
COND #6

15 215°F
16 215°F
17 208°F

=====
213°F

GROUP 4
COND #9

18 221°F
19 221°F
20 210°F

=====
217°F

GROUP 5
COND #11

21 239°F
22 240°F
23 242°F

=====
240°F

GROUP 6
COND#1 #8

24 102°F
25 98°F
26 109°F

=====
103°F

GROUP 7
COND#3 #8

27 120°F
28 114°F
29 138°F

=====
124°F

GROUP 8
COND#6 #8

30 199°F
31 201°F
32 202°F

=====
201°F

GROUP 9
COND#9 #8

33 203°F
34 206°F
35 196°F

=====
202°F

GROUP 10

COND#11 #8

36 222°F
37 215°F
38 216°F

=====
218°F

35 MINUTES

GROUP 0
FURNACE

0 1638°F
1 1630°F
2 1644°F
3 1654°F
4 1648°F
5 1644°F
6 1639°F
7 1652°F
8 1642°F

=====
1643°F

GROUP 1
COND #1

9 116°F
10 119°F
11 135°F

=====
123°F

GROUP 2
COND #3

12 143°F
13 138°F
14 199°F

=====
160°F

GROUP 3
COND #6

15 215°F
16 218°F
17 208°F

=====
214°F

GROUP 4
COND #9

18 224°F
19 224°F
20 212°F

=====
220°F

GROUP 5
COND #11

21 245°F
22 247°F
23 249°F

=====
247°F

GROUP 6
COND#1 #8

24 106°F
25 102°F
26 115°F

=====
108°F

GROUP 7
COND#3 #8

27 125°F
28 120°F
29 150°F

=====
132°F

GROUP 8
COND#6 #8

30 202°F
31 204°F
32 205°F

=====
204°F

GROUP 9
COND#9 #8

33 204°F
34 209°F
35 200°F

=====
204°F

GROUP 10

COND#11 #8

36 228°F
37 220°F
38 222°F

=====
223°F

36 MINUTES

GROUP 0
FURNACE

0 1642°F
1 1634°F
2 1649°F
3 1638°F
4 1653°F
5 1649°F
6 1644°F
7 1657°F
8 1647°F

=====
1648°F

GROUP 1
COND #1

9 121°F
10 124°F
11 141°F

=====
129°F

GROUP 2
COND #3

12 150°F
13 144°F
14 205°F

=====
166°F

GROUP 3
COND #6

15 206°F
16 221°F
17 209°F

=====
215°F

GROUP 4
COND #9

18 228°F
19 229°F
20 214°F

=====
224°F

GROUP 5
COND #11

21 253°F
22 255°F
23 257°F

=====
255°F

GROUP 6
COND#1 #8

24 111°F
25 106°F
26 120°F

=====
112°F

GROUP 7
COND#3 #8

27 131°F
28 126°F
29 164°F

=====
140°F

GROUP 8
COND#6 #8

30 205°F
31 207°F
32 207°F

=====
206°F

GROUP 9
COND#9 #8

33 207°F
34 212°F
35 205°F

=====
208°F

GROUP 10

COND#11 #8

36 235°F
37 227°F
38 228°F

=====
230°F

37 MINUTES

GROUP 0
FURNACE

0 1639°F
1 1632°F
2 1645°F
3 1655°F
4 1649°F
5 1646°F
6 1642°F
7 1653°F
8 1644°F

=====
1645°F

GROUP 1
COND #1

9 126°F
10 129°F
11 147°F

=====
134°F

GROUP 2
COND #3

12 156°F
13 151°F
14 209°F

=====
172°F

GROUP 3
COND #6

15 218°F
16 225°F
17 212°F

=====
218°F

GROUP 4
COND #9

18 232°F
19 234°F
20 217°F

=====
228°F

GROUP 5
COND #11

21 260°F
22 262°F
23 264°F

=====
262°F

GROUP 6
COND#1 #8

24 116°F
25 111°F
26 126°F

=====
118°F

GROUP 7
COND#3 #8

27 137°F
28 132°F
29 174°F

=====
148°F

GROUP 8
COND#6 #8

30 207°F
31 210°F
32 209°F

=====
209°F

GROUP 9
COND#9 #8

33 208°F
34 216°F
35 209°F

=====
211°F

GROUP 10

COND#11 #8

36 242°F
37 234°F
38 234°F

=====
237°F

38 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1639°F	9 131°F	12 163°F	15 223°F	18 237°F
1 1632°F	10 134°F	13 159°F	16 231°F	19 240°F
2 1646°F	11 155°F	14 212°F	17 215°F	20 222°F
3 1655°F				
4 1650°F				
5 1646°F				
6 1644°F				
7 1654°F				
8 1645°F				
=====	=====	=====	=====	=====
1646°F	140°F	178°F	223°F	233°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 269°F	24 121°F	27 144°F	30 210°F	33 212°F
22 271°F	25 116°F	28 139°F	31 213°F	34 221°F
23 273°F	26 132°F	29 183°F	32 211°F	35 215°F
=====	=====	=====	=====	=====
271°F	123°F	155°F	211°F	216°F

GROUP 10
COND#11 #8

36 251°F
37 241°F
38 242°F
=====
245°F

39 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1643°F	9 136°F	12 171°F	15 228°F	18 244°F
1 1636°F	10 138°F	13 164°F	16 237°F	19 246°F
2 1649°F	11 163°F	14 214°F	17 220°F	20 226°F
3 1658°F				
4 1653°F				
5 1650°F				
6 1648°F				
7 1657°F				
8 1648°F				
=====	=====	=====	=====	=====
1649°F	146°F	183°F	228°F	239°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 277°F	24 125°F	27 150°F	30 213°F	33 215°F
22 279°F	25 120°F	28 145°F	31 216°F	34 226°F
23 280°F	26 138°F	29 189°F	32 213°F	35 220°F
=====	=====	=====	=====	=====
279°F	128°F	161°F	214°F	220°F

GROUP 10
COND#11 #8

36 259°F
37 249°F
38 249°F
=====
252°F

40 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1646°F	9 141°F	12 181°F	15 233°F	18 251°F
1 1640°F	10 144°F	13 170°F	16 243°F	19 253°F
2 1653°F	11 173°F	14 215°F	17 225°F	20 232°F
3 1661°F				
4 1656°F				
5 1653°F				
6 1653°F				
7 1661°F				
8 1652°F				
=====	=====	=====	=====	=====
1653°F	153°F	189°F	234°F	245°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 286°F	24 131°F	27 157°F	30 217°F	33 220°F
22 288°F	25 126°F	28 156°F	31 220°F	34 232°F
23 289°F	26 145°F	29 194°F	32 217°F	35 226°F
=====	=====	=====	=====	=====
288°F	134°F	169°F	218°F	226°F

GROUP 10
COND#11 #8
36 268°F
37 258°F
38 259°F
=====
262°F

41 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1651°F	9 147°F	12 185°F	15 238°F	18 257°F
1 1645°F	10 148°F	13 185°F	16 249°F	19 260°F
2 1658°F	11 182°F	14 217°F	17 231°F	20 238°F
3 1666°F				
4 1660°F				
5 1658°F				
6 1658°F				
7 1665°F				
8 1656°F				
=====	=====	=====	=====	=====
1657°F	159°F	196°F	239°F	252°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 294°F	24 136°F	27 163°F	30 220°F	33 224°F
22 296°F	25 130°F	28 166°F	31 224°F	34 238°F
23 297°F	26 152°F	29 198°F	32 220°F	35 232°F
=====	=====	=====	=====	=====
296°F	139°F	176°F	221°F	231°F

GROUP 10
COND#11 #8
36 276°F
37 265°F
38 266°F
=====
269°F

42 MINUTES

GROUP 0
FURNACE

0 1655°F
1 1649°F
2 1662°F
3 1670°F
4 1665°F
5 1662°F
6 1663°F
7 1670°F
8 1661°F

=====
1662°F

GROUP 1
COND #1

9 153°F
10 154°F
11 191°F

=====
166°F

GROUP 2
COND #3

12 192°F
13 197°F
14 219°F

=====
203°F

GROUP 3
COND #6

15 244°F
16 255°F
17 237°F

=====
245°F

GROUP 4
COND #9

18 266°F
19 268°F
20 245°F

=====
260°F

GROUP 5
COND #11

21 304°F
22 305°F
23 307°F

=====
305°F

GROUP 6
COND#1 #8

24 142°F
25 135°F
26 160°F

=====
146°F

GROUP 7
COND#3 #8

27 171°F
28 178°F
29 201°F

=====
183°F

GROUP 8
COND#6 #8

30 224°F
31 229°F
32 224°F

=====
226°F

GROUP 9
COND#9 #8

33 231°F
34 246°F
35 238°F

=====
238°F

GROUP 10

COND#11 #8

36 286°F
37 275°F
38 276°F

=====
279°F

43 MINUTES

GROUP 0
FURNACE

0 1660°F
1 1654°F
2 1667°F
3 1674°F
4 1669°F
5 1666°F
6 1669°F
7 1674°F
8 1666°F

=====
1667°F

GROUP 1
COND #1

9 160°F
10 158°F
11 197°F

=====
172°F

GROUP 2
COND #3

12 200°F
13 206°F
14 220°F

=====
209°F

GROUP 3
COND #6

15 249°F
16 260°F
17 242°F

=====
250°F

GROUP 4
COND #9

18 273°F
19 274°F
20 251°F

=====
266°F

GROUP 5
COND #11

21 313°F
22 313°F
23 315°F

=====
314°F

GROUP 6
COND#1 #8

24 147°F
25 140°F
26 167°F

=====
151°F

GROUP 7
COND#3 #8

27 179°F
28 186°F
29 203°F

=====
189°F

GROUP 8
COND#6 #8

30 228°F
31 233°F
32 228°F

=====
230°F

GROUP 9
COND#9 #8

33 237°F
34 252°F
35 245°F

=====
245°F

GROUP 10

COND#11 #8

36 295°F
37 282°F
38 284°F

=====
287°F

44 MINUTES

GROUP 0
FURNACE

0 1664°F
1 1659°F
2 1671°F
3 1679°F
4 1673°F
5 1671°F
6 1674°F
7 1679°F
8 1670°F

=====
1671°F

GROUP 1
COND #1

9 167°F
10 164°F
11 204°F

=====
178°F

GROUP 2
COND #3

12 211°F
13 211°F
14 222°F

=====
215°F

GROUP 3
COND #6

15 255°F
16 267°F
17 218°F

=====
257°F

GROUP 4
COND #9

18 281°F
19 281°F
20 258°F

=====
273°F

GROUP 5
COND #11

21 322°F
22 323°F
23 324°F

=====
323°F

GROUP 6
COND#1 #8

24 154°F
25 145°F
26 175°F

=====
158°F

GROUP 7
COND#3 #8

27 189°F
28 193°F
29 204°F

=====
195°F

GROUP 8
COND#6 #8

30 233°F
31 239°F
32 233°F

=====
235°F

GROUP 9
COND#9 #8

33 245°F
34 260°F
35 252°F

=====
252°F

GROUP 10

COND#11 #8

36 305°F
37 292°F
38 294°F

=====
297°F

45 MINUTES

GROUP 0
FURNACE

0 1669°F
1 1664°F
2 1676°F
3 1683°F
4 1677°F
5 1675°F
6 1679°F
7 1683°F
8 1675°F

=====
1676°F

GROUP 1
COND #1

9 173°F
10 170°F
11 206°F

=====
183°F

GROUP 2
COND #3

12 217°F
13 214°F
14 224°F

=====
218°F

GROUP 3
COND #6

15 261°F
16 272°F
17 253°F

=====
262°F

GROUP 4
COND #9

18 287°F
19 238°F
20 265°F

=====
280°F

GROUP 5
COND #11

21 331°F
22 331°F
23 332°F

=====
331°F

GROUP 6
COND#1 #8

24 160°F
25 149°F
26 180°F

=====
163°F

GROUP 7
COND#3 #8

27 195°F
28 197°F
29 206°F

=====
199°F

GROUP 8
COND#6 #8

30 238°F
31 244°F
32 237°F

=====
240°F

GROUP 9
COND#9 #8

33 251°F
34 266°F
35 259°F

=====
259°F

GROUP 10

COND#11 #8

36 313°F
37 301°F
38 302°F

=====
305°F

46 MINUTES

GROUP 0
FURNACE

0 1673°F
1 1668°F
2 1680°F
3 1688°F
4 1682°F
5 1680°F
6 1685°F
7 1689°F
8 1680°F

=====
1681°F

GROUP 1
COND #1

9 184°F
10 175°F
11 207°F

=====
189°F

GROUP 2
COND #3

12 220°F
13 217°F
14 226°F

=====
221°F

GROUP 3
COND #6

15 267°F
16 279°F
17 260°F

=====
269°F

GROUP 4
COND #9

18 296°F
19 296°F
20 273°F

=====
288°F

GROUP 5
COND #11

21 340°F
22 340°F
23 340°F

=====
340°F

GROUP 6
COND#1 #8

24 169°F
25 155°F
26 185°F

=====
170°F

GROUP 7
COND#3 #8

27 200°F
28 201°F
29 207°F

=====
203°F

GROUP 8
COND#6 #8

30 244°F
31 250°F
32 243°F

=====
246°F

GROUP 9
COND#9 #8

33 260°F
34 275°F
35 267°F

=====
267°F

GROUP 10

COND#11 #8

36 323°F
37 310°F
38 312°F

=====
315°F

47 MINUTES

GROUP 0
FURNACE

0 1678°F
1 1673°F
2 1685°F
3 1692°F
4 1686°F
5 1684°F
6 1690°F
7 1693°F
8 1685°F

=====
1685°F

GROUP 1
COND #1

9 199°F
10 181°F
11 208°F

=====
196°F

GROUP 2
COND #3

12 223°F
13 221°F
14 229°F

=====
224°F

GROUP 3
COND #6

15 274°F
16 285°F
17 266°F

=====
275°F

GROUP 4
COND #9

18 303°F
19 303°F
20 280°F

=====
295°F

GROUP 5
COND #11

21 349°F
22 348°F
23 349°F

=====
349°F

GROUP 6
COND#1 #8

24 177°F
25 160°F
26 189°F

=====
175°F

GROUP 7
COND#3 #8

27 203°F
28 203°F
29 208°F

=====
205°F

GROUP 8
COND#6 #8

30 249°F
31 256°F
32 248°F

=====
251°F

GROUP 9
COND#9 #8

33 268°F
34 282°F
35 274°F

=====
275°F

GROUP 10

COND#11 #8

36 331°F
37 319°F
38 320°F

=====
323°F

48 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1683°F	9 204°F	12 227°F	15 280°F	18 310°F
1 1678°F	10 186°F	13 225°F	16 292°F	19 310°F
2 1690°F	11 208°F	14 232°F	17 272°F	20 288°F
3 1697°F				
4 1692°F				
5 1690°F				
6 1696°F				
7 1698°F				
8 1690°F				
=====	=====	=====	=====	=====
1690°F	199°F	228°F	281°F	303°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 359°F	24 184°F	27 206°F	30 257°F	33 277°F
22 357°F	25 166°F	28 206°F	31 262°F	34 290°F
23 357°F	26 193°F	29 209°F	32 255°F	35 282°F
=====	=====	=====	=====	=====
358°F	181°F	207°F	258°F	283°F

GROUP 10
COND#11 #8
36 340°F
37 329°F
38 330°F
=====
333°F

49 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1687°F	9 206°F	12 231°F	15 287°F	18 317°F
1 1693°F	10 192°F	13 239°F	16 299°F	19 317°F
2 1695°F	11 209°F	14 235°F	17 278°F	20 296°F
3 1702°F				
4 1696°F				
5 1694°F				
6 1702°F				
7 1702°F				
8 1695°F				
=====	=====	=====	=====	=====
1695°F	202°F	232°F	288°F	310°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 367°F	24 189°F	27 209°F	30 263°F	33 285°F
22 364°F	25 171°F	28 209°F	31 269°F	34 297°F
23 364°F	26 195°F	29 210°F	32 261°F	35 289°F
=====	=====	=====	=====	=====
365°F	185°F	209°F	264°F	290°F

GROUP 10
COND#11 #8
36 348°F
37 337°F
38 337°F
=====
341°F

50 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1689°F	9 209°F	12 236°F	15 295°F	18 325°F
1 1685°F	10 199°F	13 233°F	16 306°F	19 324°F
2 1696°F	11 210°F	14 238°F	17 284°F	20 304°F
3 1703°F				
4 1697°F				
5 1695°F				
6 1702°F				
7 1703°F				
8 1696°F				
=====	=====	=====	=====	=====
1696°F	206°F	236°F	295°F	318°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 377°F	24 194°F	27 213°F	30 270°F	33 294°F
22 373°F	25 177°F	28 212°F	31 276°F	34 306°F
23 372°F	26 198°F	29 212°F	32 268°F	35 298°F
=====	=====	=====	=====	=====
374°F	190°F	212°F	271°F	299°F

GROUP 10 COND#11 #8
36 358°F
37 347°F
38 347°F
=====
351°F

51 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1690°F	9 213°F	12 241°F	15 301°F	18 331°F
1 1686°F	10 205°F	13 237°F	16 312°F	19 332°F
2 1697°F	11 211°F	14 241°F	17 290°F	20 311°F
3 1704°F				
4 1698°F				
5 1696°F				
6 1704°F				
7 1704°F				
8 1697°F				
=====	=====	=====	=====	=====
1697°F	210°F	240°F	301°F	325°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 385°F	24 198°F	27 218°F	30 276°F	33 302°F
22 380°F	25 184°F	28 215°F	31 282°F	34 313°F
23 379°F	26 200°F	29 215°F	32 274°F	35 305°F
=====	=====	=====	=====	=====
381°F	194°F	216°F	277°F	307°F

GROUP 10 COND#11 #8
36 365°F
37 355°F
38 355°F
=====
358°F

52 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1692°F	9 216°F	12 247°F	15 309°F	18 339°F
1 1688°F	10 215°F	13 242°F	16 319°F	19 340°F
2 1699°F	11 213°F	14 245°F	17 297°F	20 319°F
3 1706°F				
4 1701°F				
5 1699°F				
6 1707°F				
7 1707°F				
8 1700°F				
=====	=====	=====	=====	=====
1700°F	215°F	245°F	308°F	333°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 395°F	24 201°F	27 224°F	30 284°F	33 311°F
22 388°F	25 192°F	28 219°F	31 290°F	34 322°F
23 388°F	26 202°F	29 219°F	32 282°F	35 313°F
=====	=====	=====	=====	=====
390°F	198°F	221°F	285°F	315°F

GROUP 10 COND#11 #8
36 375°F
37 366°F
38 365°F
=====
369°F

53 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1696°F	9 218°F	12 253°F	15 315°F	18 346°F
1 1692°F	10 221°F	13 248°F	16 326°F	19 346°F
2 1703°F	11 215°F	14 249°F	17 303°F	20 326°F
3 1709°F				
4 1704°F				
5 1702°F				
6 1711°F				
7 1710°F				
8 1704°F				
=====	=====	=====	=====	=====
1703°F	218°F	250°F	315°F	339°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 404°F	24 203°F	27 230°F	30 291°F	33 318°F
22 395°F	25 197°F	28 224°F	31 297°F	34 330°F
23 394°F	26 203°F	29 223°F	32 289°F	35 320°F
=====	=====	=====	=====	=====
398°F	201°F	226°F	292°F	323°F

GROUP 10 COND#11 #8
36 382°F
37 375°F
38 372°F
=====
376°F

54 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1699°F	9 219°F	12 259°F	15 323°F	18 354°F
1 1696°F	10 226°F	13 253°F	16 333°F	19 354°F
2 1706°F	11 217°F	14 254°F	17 310°F	20 334°F
3 1712°F				
4 1707°F				
5 1705°F				
6 1715°F				
7 1713°F				
8 1707°F				
=====	=====	=====	=====	=====
1707°F	221°F	255°F	322°F	347°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 413°F	24 205°F	27 236°F	30 299°F	33 327°F
22 403°F	25 202°F	28 229°F	31 304°F	34 338°F
23 401°F	26 205°F	29 228°F	32 297°F	35 328°F
=====	=====	=====	=====	=====
406°F	204°F	231°F	300°F	331°F

GROUP 10
COND#11 #8

36 391°F
37 386°F
38 382°F
=====
386°F

55 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1691°F	9 221°F	12 266°F	15 330°F	18 360°F
1 1687°F	10 231°F	13 259°F	16 340°F	19 361°F
2 1697°F	11 219°F	14 259°F	17 316°F	20 341°F
3 1704°F				
4 1698°F				
5 1696°F				
6 1706°F				
7 1704°F				
8 1698°F				
=====	=====	=====	=====	=====
1698°F	224°F	261°F	329°F	354°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 421°F	24 206°F	27 241°F	30 305°F	33 334°F
22 411°F	25 205°F	28 234°F	31 311°F	34 346°F
23 407°F	26 206°F	29 232°F	32 304°F	35 335°F
=====	=====	=====	=====	=====
413°F	206°F	236°F	307°F	338°F

GROUP 10
COND#11 #8

36 399°F
37 400°F
38 390°F
=====
396°F

56 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1686°F	9 223°F	12 273°F	15 337°F	18 368°F
1 1683°F	10 235°F	13 265°F	16 347°F	19 369°F
2 1691°F	11 221°F	14 264°F	17 323°F	20 349°F
3 1698°F				
4 1693°F				
5 1691°F				
6 1702°F				
7 1699°F				
8 1693°F				
=====	=====	=====	=====	=====
1693°F	226°F	267°F	336°F	362°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 431°F	24 208°F	27 248°F	30 313°F	33 343°F
22 419°F	25 208°F	28 241°F	31 319°F	34 354°F
23 414°F	26 207°F	29 238°F	32 312°F	35 343°F
=====	=====	=====	=====	=====
421°F	208°F	242°F	315°F	347°F

GROUP 10
COND#11 #8
36 409°F
37 413°F
38 399°F
=====
407°F

57 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1684°F	9 226°F	12 279°F	15 344°F	18 375°F
1 1681°F	10 240°F	13 271°F	16 353°F	19 375°F
2 1690°F	11 223°F	14 269°F	17 329°F	20 355°F
3 1696°F				
4 1691°F				
5 1690°F				
6 1701°F				
7 1697°F				
8 1692°F				
=====	=====	=====	=====	=====
1691°F	230°F	273°F	342°F	368°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 438°F	24 209°F	27 254°F	30 320°F	33 349°F
22 427°F	25 211°F	28 246°F	31 326°F	34 361°F
23 421°F	26 209°F	29 242°F	32 318°F	35 350°F
=====	=====	=====	=====	=====
429°F	210°F	247°F	321°F	353°F

GROUP 10
COND#11 #8
36 416°F
37 421°F
38 407°F
=====
415°F

58 MINUTES

GROUP 0
FURNACE

0 1684°F
1 1781°F
2 1690°F
3 1696°F
4 1691°F
5 1690°F
6 1701°F
7 1697°F
8 1692°F

=====
1691°F

GROUP 1
COND #1

9 228°F
10 246°F
11 226°F

=====
233°F

GROUP 2
COND #3

12 286°F
13 278°F
14 275°F

=====
280°F

GROUP 3
COND #6

15 351°F
16 361°F
17 336°F

=====
349°F

GROUP 4
COND #9

18 381°F
19 382°F
20 363°F

=====
375°F

GROUP 5

COND #11

21 446°F
22 435°F
23 428°F

=====
436°F

GROUP 6

COND#1 #8

24 211°F
25 215°F
26 211°F

=====
212°F

GROUP 7

COND#3 #8

27 262°F
28 253°F
29 249°F

=====
255°F

GROUP 8

COND#6 #8

30 327°F
31 335°F
32 326°F

=====
329°F

GROUP 9

COND#9 #8

33 358°F
34 370°F
35 369°F

=====
366°F

GROUP 10

COND#11 #8

36 426°F
37 430°F
38 416°F

=====
424°F

59 MINUTES

GROUP 0
FURNACE

0 1685°F
1 1682°F
2 1690°F
3 1696°F
4 1692°F
5 1691°F
6 1702°F
7 1698°F
8 1693°F

=====
1692°F

GROUP 1
COND #1

9 232°F
10 251°F
11 229°F

=====
237°F

GROUP 2
COND #3

12 292°F
13 284°F
14 280°F

=====
285°F

GROUP 3
COND #6

15 357°F
16 367°F
17 342°F

=====
355°F

GROUP 4
COND #9

18 387°F
19 388°F
20 369°F

=====
381°F

GROUP 5

COND #11

21 450°F
22 443°F
23 435°F

=====
444°F

GROUP 6

COND#1 #8

24 214°F
25 219°F
26 213°F

=====
215°F

GROUP 7

COND#3 #8

27 268°F
28 259°F
29 254°F

=====
260°F

GROUP 8

COND#6 #8

30 334°F
31 342°F
32 333°F

=====
336°F

GROUP 9

COND#9 #8

33 365°F
34 378°F
35 376°F

=====
373°F

GROUP 10

COND#11 #8

36 433°F
37 436°F
38 422°F

=====
430°F

60 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1686°F	9 236°F	12 299°F	15 364°F	18 394°F
1 1683°F	10 257°F	13 291°F	16 373°F	19 395°F
2 1692°F	11 233°F	14 287°F	17 349°F	20 376°F
3 1698°F				
4 1694°F				
5 1692°F				
6 1704°F				
7 1699°F				
8 1694°F				
=====	=====	=====	=====	=====
1694°F	242°F	292°F	362°F	388°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 461°F	24 218°F	27 275°F	30 342°F	33 373°F
22 452°F	25 224°F	28 266°F	31 350°F	34 386°F
23 442°F	26 217°F	29 261°F	32 341°F	35 384°F
=====	=====	=====	=====	=====
452°F	220°F	267°F	344°F	381°F

GROUP 10
COND#11 #8
36 441°F
37 444°F
38 430°F
=====
438°F

61 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1688°F	9 241°F	12 306°F	15 370°F	18 400°F
1 1685°F	10 263°F	13 298°F	16 379°F	19 401°F
2 1693°F	11 237°F	14 293°F	17 355°F	20 383°F
3 1699°F				
4 1695°F				
5 1694°F				
6 1706°F				
7 1701°F				
8 1696°F				
=====	=====	=====	=====	=====
1695°F	247°F	299°F	368°F	395°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 469°F	24 222°F	27 281°F	30 349°F	33 380°F
22 459°F	25 229°F	28 273°F	31 363°F	34 393°F
23 449°F	26 220°F	29 268°F	32 347°F	35 391°F
=====	=====	=====	=====	=====
459°F	224°F	274°F	353°F	388°F

GROUP 10
COND#11 #8
36 448°F
37 450°F
38 437°F
=====
445°F

62 MINUTES

GROUP 0
FURNACE

0 1690°F
1 1687°F
2 1695°F
3 1701°F
4 1697°F
5 1696°F
6 1707°F
7 1703°F
8 1698°F

=====
1697°F

GROUP 1
COND #1

9 246°F
10 269°F
11 241°F

=====
252°F

GROUP 2
COND #3

12 313°F
13 305°F
14 300°F

=====
306°F

GROUP 3
COND #6

15 377°F
16 385°F
17 362°F

=====
375°F

GROUP 4
COND #9

18 406°F
19 408°F
20 390°F

=====
401°F

GROUP 5
COND #11

21 476°F
22 467°F
23 457°F

=====
467°F

GROUP 6
COND#1 #8

24 227°F
25 234°F
26 224°F

=====
228°F

GROUP 7
COND#3 #8

27 288°F
28 280°F
29 275°F

=====
281°F

GROUP 8
COND#6 #8

30 362°F
31 371°F
32 355°F

=====
363°F

GROUP 9
COND#9 #8

33 388°F
34 401°F
35 399°F

=====
396°F

GROUP 10

COND#11 #8

36 456°F
37 458°F
38 444°F

=====
453°F

63 MINUTES

GROUP 0
FURNACE

0 1692°F
1 1689°F
2 1697°F
3 1703°F
4 1699°F
5 1698°F
6 1710°F
7 1704°F
8 1700°F

=====
1699°F

GROUP 1
COND #1

9 251°F
10 275°F
11 245°F

=====
257°F

GROUP 2
COND #3

12 319°F
13 310°F
14 306°F

=====
312°F

GROUP 3
COND #6

15 382°F
16 391°F
17 368°F

=====
380°F

GROUP 4
COND #9

18 412°F
19 414°F
20 395°F

=====
407°F

GROUP 5
COND #11

21 483°F
22 473°F
23 463°F

=====
473°F

GROUP 6
COND#1 #8

24 231°F
25 239°F
26 223°F

=====
233°F

GROUP 7
COND#3 #8

27 295°F
28 286°F
29 281°F

=====
287°F

GROUP 8
COND#6 #8

30 368°F
31 378°F
32 361°F

=====
369°F

GROUP 9
COND#9 #8

33 394°F
34 407°F
35 405°F

=====
402°F

GROUP 10

COND#11 #8

36 463°F
37 464°F
38 450°F

=====
459°F

64 MINUTES

GROUP 0
FURNACE

0 1699°F
1 1696°F
2 1705°F
3 1710°F
4 1706°F
5 1706°F
6 1718°F
7 1712°F
8 1708°F

=====
1707°F

GROUP 1
COND #1

9 257°F
10 280°F
11 250°F

=====
262°F

GROUP 2
COND #3

12 326°F
13 317°F
14 313°F

=====
319°F

GROUP 3
COND #6

15 388°F
16 396°F
17 374°F

=====
386°F

GROUP 4
COND #9

18 417°F
19 421°F
20 402°F

=====
413°F

GROUP 5
COND #11

21 490°F
22 481°F
23 471°F

=====
481°F

GROUP 6
COND#1 #8

24 237°F
25 245°F
26 233°F

=====
238°F

GROUP 7
COND#3 #8

27 302°F
28 293°F
29 288°F

=====
294°F

GROUP 8
COND#6 #8

30 375°F
31 386°F
32 368°F

=====
376°F

GROUP 9
COND#9 #8

33 402°F
34 414°F
35 412°F

=====
409°F

GROUP 10

COND#11 #8

36 471°F
37 472°F
38 457°F

=====
467°F

65 MINUTES

GROUP 0
FURNACE

0 1705°F
1 1702°F
2 1712°F
3 1717°F
4 1713°F
5 1712°F
6 1723°F
7 1718°F
8 1713°F

=====
1713°F

GROUP 1
COND #1

9 262°F
10 286°F
11 254°F

=====
267°F

GROUP 2
COND #3

12 332°F
13 323°F
14 319°F

=====
325°F

GROUP 3
COND #6

15 394°F
16 402°F
17 380°F

=====
392°F

GROUP 4
COND #9

18 423°F
19 427°F
20 407°F

=====
419°F

GROUP 5
COND #11

21 496°F
22 488°F
23 478°F

=====
487°F

GROUP 6
COND#1 #8

24 242°F
25 249°F
26 238°F

=====
243°F

GROUP 7
COND#3 #8

27 308°F
28 299°F
29 294°F

=====
300°F

GROUP 8
COND#6 #8

30 381°F
31 394°F
32 374°F

=====
383°F

GROUP 9
COND#9 #8

33 409°F
34 421°F
35 417°F

=====
416°F

GROUP 10

COND#11 #8

36 477°F
37 479°F
38 464°F

=====
473°F

66 MINUTES

GROUP 0
FURNACE

0 1710°F
1 1707°F
2 1717°F
3 1722°F
4 1718°F
5 1717°F
6 1729°F
7 1723°F
8 1719°F

=====
1718°F

GROUP 1
COND #1

9 268°F
10 292°F
11 259°F

=====
273°F

GROUP 2
COND #3

12 338°F
13 330°F
14 326°F

=====
331°F

GROUP 3
COND #6

15 399°F
16 407°F
17 386°F

=====
397°F

GROUP 4
COND #9

18 430°F
19 434°F
20 412°F

=====
425°F

GROUP 5
COND #11

21 502°F
22 495°F
23 484°F

=====
494°F

GROUP 6
COND#1 #8

24 248°F
25 255°F
26 243°F

=====
249°F

GROUP 7
COND#3 #8

27 315°F
28 307°F
29 302°F

=====
308°F

GROUP 8
COND#6 #8

30 387°F
31 402°F
32 381°F

=====
390°F

GROUP 9
COND#9 #8

33 416°F
34 428°F
35 424°F

=====
423°F

GROUP 10

COND#11 #8

36 485°F
37 486°F
38 471°F

=====
481°F

67 MINUTES

GROUP 0
FURNACE

0 1714°F
1 1711°F
2 1720°F
3 1726°F
4 1721°F
5 1721°F
6 1733°F
7 1727°F
8 1723°F

=====
1722°F

GROUP 1
COND #1

9 274°F
10 297°F
11 264°F

=====
278°F

GROUP 2
COND #3

12 344°F
13 336°F
14 332°F

=====
337°F

GROUP 3
COND #6

15 405°F
16 412°F
17 391°F

=====
403°F

GROUP 4
COND #9

18 436°F
19 440°F
20 417°F

=====
431°F

GROUP 5
COND #11

21 508°F
22 500°F
23 491°F

=====
500°F

GROUP 6
COND#1 #8

24 254°F
25 260°F
26 248°F

=====
254°F

GROUP 7
COND#3 #8

27 322°F
28 313°F
29 308°F

=====
314°F

GROUP 8
COND#6 #8

30 393°F
31 410°F
32 388°F

=====
397°F

GROUP 9
COND#9 #8

33 422°F
34 434°F
35 430°F

=====
429°F

GROUP 10

COND#11 #8

36 491°F
37 492°F
38 477°F

=====
487°F

68 MINUTES

GROUP 0

FURNACE

0 1718°F
 1 1716°F
 2 1725°F
 3 1730°F
 4 1726°F
 5 1725°F
 6 1737°F
 7 1731°F
 8 1727°F

=====
 1726°F

GROUP 1

COND #1

9 280°F
 10 303°F
 11 270°F

=====
 284°F

GROUP 2

COND #3

12 351°F
 13 342°F
 14 339°F

=====
 344°F

GROUP 3

COND #6

15 410°F
 16 418°F
 17 397°F

=====
 408°F

GROUP 4

COND #9

18 442°F
 19 446°F
 20 423°F

=====
 437°F

GROUP 5

COND #11

21 514°F
 22 508°F
 23 498°F

=====
 507°F

GROUP 6

COND#1 #8

24 261°F
 25 267°F
 26 254°F

=====
 261°F

GROUP 7

COND#3 #8

27 329°F
 28 320°F
 29 316°F

=====
 322°F

GROUP 8

COND#6 #8

30 400°F
 31 418°F
 32 395°F

=====
 404°F

GROUP 9

COND#9 #8

33 429°F
 34 441°F
 35 437°F

=====
 436°F

GROUP 10

COND#11 #8

36 499°F
 37 499°F
 38 485°F

=====
 494°F

69 MINUTES

GROUP 0

FURNACE

0 1722°F
 1 1720°F
 2 1729°F
 3 1734°F
 4 1729°F
 5 1729°F
 6 1741°F
 7 1735°F
 8 1731°F

=====
 1730°F

GROUP 1

COND #1

9 285°F
 10 309°F
 11 275°F

=====
 290°F

GROUP 2

COND #3

12 357°F
 13 348°F
 14 344°F

=====
 350°F

GROUP 3

COND #6

15 415°F
 16 423°F
 17 402°F

=====
 413°F

GROUP 4

COND #9

18 448°F
 19 452°F
 20 428°F

=====
 443°F

GROUP 5

COND #11

21 518°F
 22 513°F
 23 504°F

=====
 512°F

GROUP 6

COND#1 #8

24 266°F
 25 272°F
 26 259°F

=====
 266°F

GROUP 7

COND#3 #8

27 335°F
 28 326°F
 29 322°F

=====
 328°F

GROUP 8

COND#6 #8

30 406°F
 31 423°F
 32 402°F

=====
 410°F

GROUP 9

COND#9 #8

33 435°F
 34 447°F
 35 443°F

=====
 442°F

GROUP 10

COND#11 #8

36 505°F
 37 505°F
 38 492°F

=====
 501°F

70 MINUTES

GROUP 0
FURNACE

0 1726°F
1 1723°F
2 1732°F
3 1737°F
4 1733°F
5 1732°F
6 1745°F
7 1738°F
8 1735°F

=====
1733°F

GROUP 1
COND #1

9 291°F
10 315°F
11 280°F

=====
295°F

GROUP 2
COND #3

12 363°F
13 354°F
14 351°F

=====
356°F

GROUP 3
COND #6

15 421°F
16 429°F
17 407°F

=====
419°F

GROUP 4
COND #9

18 454°F
19 459°F
20 435°F

=====
449°F

GROUP 5
COND #11

21 523°F
22 520°F
23 510°F

=====
518°F

GROUP 6
COND#1 #8

24 273°F
25 278°F
26 265°F

=====
272°F

GROUP 7
COND#3 #8

27 342°F
28 334°F
29 329°F

=====
335°F

GROUP 8
COND#6 #8

30 412°F
31 429°F
32 409°F

=====
417°F

GROUP 9
COND#9 #8

33 442°F
34 454°F
35 449°F

=====
448°F

GROUP 10

COND#11 #8

36 513°F
37 513°F
38 500°F

=====
509°F

71 MINUTES

GROUP 0
FURNACE

0 1728°F
1 1727°F
2 1735°F
3 1740°F
4 1736°F
5 1736°F
6 1748°F
7 1741°F
8 1738°F

=====
1737°F

GROUP 1
COND #1

9 297°F
10 319°F
11 285°F

=====
306°F

GROUP 2
COND #3

12 368°F
13 361°F
14 357°F

=====
362°F

GROUP 3
COND #6

15 426°F
16 434°F
17 412°F

=====
424°F

GROUP 4
COND #9

18 459°F
19 464°F
20 440°F

=====
454°F

GROUP 5
COND #11

21 527°F
22 526°F
23 515°F

=====
523°F

GROUP 6
COND#1 #8

24 278°F
25 283°F
26 270°F

=====
277°F

GROUP 7
COND#3 #8

27 348°F
28 340°F
29 334°F

=====
341°F

GROUP 8
COND#6 #8

30 418°F
31 435°F
32 414°F

=====
422°F

GROUP 9
COND#9 #8

33 447°F
34 459°F
35 454°F

=====
453°F

GROUP 10

COND#11 #8

36 519°F
37 519°F
38 506°F

=====
515°F

72 MINUTES

GROUP 0
FURNACE

0 1732°F
1 1730°F
2 1739°F
3 1744°F
4 1740°F
5 1739°F
6 1751°F
7 1745°F
8 1741°F

=====
1740°F

GROUP 1
COND #1

9 303°F
10 325°F
11 291°F

=====
306°F

GROUP 2
COND #3

12 374°F
13 366°F
14 363°F

=====
368°F

GROUP 3
COND #6

15 432°F
16 440°F
17 417°F

=====
430°F

GROUP 4
COND #9

18 465°F
19 471°F
20 446°F

=====
461°F

GROUP 5
COND #11

21 532°F
22 532°F
23 521°F

=====
528°F

GROUP 6
COND#1 #8

24 284°F
25 289°F
26 276°F

=====
283°F

GROUP 7
COND#3 #8

27 354°F
28 347°F
29 341°F

=====
347°F

GROUP 8
COND#6 #8

30 424°F
31 441°F
32 421°F

=====
429°F

GROUP 9
COND#9 #8

33 454°F
34 466°F
35 461°F

=====
460°F

GROUP 10
COND#11 #8

36 526°F
37 528°F
38 515°F

=====
523°F

73 MINUTES

GROUP 0
FURNACE

0 1735°F
1 1733°F
2 1742°F
3 1747°F
4 1743°F
5 1742°F
6 1755°F
7 1748°F
8 1745°F

=====
1743°F

GROUP 1
COND #1

9 308°F
10 329°F
11 296°F

=====
311°F

GROUP 2
COND #3

12 380°F
13 372°F
14 369°F

=====
374°F

GROUP 3
COND #6

15 438°F
16 445°F
17 422°F

=====
435°F

GROUP 4
COND #9

18 470°F
19 476°F
20 451°F

=====
466°F

GROUP 5
COND #11

21 537°F
22 537°F
23 526°F

=====
533°F

GROUP 6
COND#1 #8

24 290°F
25 294°F
26 281°F

=====
288°F

GROUP 7
COND#3 #8

27 359°F
28 353°F
29 347°F

=====
353°F

GROUP 8
COND#6 #8

30 430°F
31 446°F
32 426°F

=====
434°F

GROUP 9
COND#9 #8

33 459°F
34 471°F
35 466°F

=====
465°F

GROUP 10
COND#11 #8

36 532°F
37 535°F
38 523°F

=====
530°F

74 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1738°F	9 314°F	12 385°F	15 444°F	18 476°F
1 1737°F	10 335°F	13 378°F	16 451°F	19 482°F
2 1745°F	11 302°F	14 375°F	17 427°F	20 457°F
3 1750°F				
4 1746°F				
5 1745°F				
6 1758°F				
7 1751°F				
8 1748°F				
=====	=====	=====	=====	=====
1746°F	317°F	379°F	441°F	472°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 542°F	24 296°F	27 366°F	30 436°F	33 466°F
22 544°F	25 300°F	28 359°F	31 452°F	34 478°F
23 532°F	26 287°F	29 353°F	32 433°F	35 472°F
=====	=====	=====	=====	=====
539°F	294°F	359°F	440°F	472°F

GROUP 10
COND#11 #8

36 540°F
37 545°F
38 533°F
=====
539°F

75 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1741°F	9 319°F	12 390°F	15 449°F	18 481°F
1 1740°F	10 339°F	13 383°F	16 457°F	19 488°F
2 1748°F	11 307°F	14 380°F	17 433°F	20 463°F
3 1753°F				
4 1748°F				
5 1748°F				
6 1761°F				
7 1754°F				
8 1751°F				
=====	=====	=====	=====	=====
1749°F	322°F	384°F	446°F	477°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 547°F	24 302°F	27 371°F	30 441°F	33 471°F
22 550°F	25 305°F	28 365°F	31 457°F	34 484°F
23 536°F	26 293°F	29 359°F	32 438°F	35 477°F
=====	=====	=====	=====	=====
544°F	300°F	365°F	445°F	477°F

GROUP 10
COND#11 #8

36 547°F
37 554°F
38 542°F
=====
548°F

76 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1744°F	9 325°F	12 395°F	15 455°F	18 487°F
1 1743°F	10 344°F	13 388°F	16 462°F	19 494°F
2 1751°F	11 312°F	14 385°F	17 439°F	20 469°F
3 1756°F				
4 1751°F				
5 1751°F				
6 1764°F				
7 1757°F				
8 1754°F				
=====	=====	=====	=====	=====
1752°F	327°F	389°F	452°F	483°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 554°F	24 308°F	27 378°F	30 448°F	33 477°F
22 557°F	25 311°F	28 372°F	31 464°F	34 491°F
23 542°F	26 299°F	29 365°F	32 445°F	35 483°F
=====	=====	=====	=====	=====
551°F	306°F	372°F	452°F	484°F

GROUP 10
COND#11 #8
36 556°F
37 565°F
38 553°F
=====
558°F

77 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1748°F	9 330°F	12 400°F	15 461°F	18 492°F
1 1747°F	10 349°F	13 394°F	16 468°F	19 500°F
2 1755°F	11 318°F	14 390°F	17 444°F	20 474°F
3 1759°F				
4 1755°F				
5 1755°F				
6 1768°F				
7 1760°F				
8 1758°F				
=====	=====	=====	=====	=====
1756°F	332°F	395°F	458°F	489°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 560°F	24 313°F	27 384°F	30 453°F	33 482°F
22 563°F	25 316°F	28 377°F	31 469°F	34 496°F
23 547°F	26 304°F	29 370°F	32 450°F	35 488°F
=====	=====	=====	=====	=====
557°F	311°F	377°F	457°F	489°F

GROUP 10
COND#11 #8
36 563°F
37 575°F
38 562°F
=====
567°F

78 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1751°F	9 336°F	12 405°F	15 466°F	18 498°F
1 1750°F	10 353°F	13 398°F	16 473°F	19 507°F
2 1758°F	11 323°F	14 396°F	17 450°F	20 480°F
3 1762°F				
4 1758°F				
5 1758°F				
6 1771°F				
7 1763°F				
8 1761°F				
=====	=====	=====	=====	=====
1759°F	337°F	400°F	463°F	495°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 567°F	24 319°F	27 389°F	30 459°F	33 488°F
22 570°F	25 322°F	28 384°F	31 475°F	34 503°F
23 552°F	26 310°F	29 376°F	32 456°F	35 494°F
=====	=====	=====	=====	=====
563°F	317°F	383°F	463°F	495°F

GROUP 10
COND #11 #9
36 573°F
37 586°F
38 573°F
=====
577°F

79 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1754°F	9 341°F	12 410°F	15 472°F	18 503°F
1 1753°F	10 358°F	13 403°F	16 479°F	19 512°F
2 1761°F	11 328°F	14 400°F	17 456°F	20 485°F
3 1765°F				
4 1761°F				
5 1761°F				
6 1774°F				
7 1766°F				
8 1764°F				
=====	=====	=====	=====	=====
1762°F	342°F	404°F	469°F	500°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 573°F	24 325°F	27 394°F	30 465°F	33 493°F
22 577°F	25 327°F	28 389°F	31 480°F	34 509°F
23 556°F	26 315°F	29 381°F	32 461°F	35 499°F
=====	=====	=====	=====	=====
569°F	322°F	388°F	469°F	500°F

GROUP 10
COND#11 #8
36 581°F
37 596°F
38 582°F
=====
586°F

80 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1756°F	9 346°F	12 415°F	15 478°F	18 508°F
1 1756°F	10 363°F	13 408°F	16 484°F	19 519°F
2 1764°F	11 333°F	14 405°F	17 461°F	20 491°F
3 1768°F				
4 1764°F				
5 1764°F				
6 1777°F				
7 1769°F				
8 1767°F				
=====	=====	=====	=====	=====
1765°F	347°F	409°F	474°F	506°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 582°F	24 331°F	27 403°F	30 471°F	33 500°F
22 586°F	25 333°F	28 395°F	31 487°F	34 517°F
23 562°F	26 321°F	29 388°F	32 467°F	35 506°F
=====	=====	=====	=====	=====
577°F	328°F	395°F	475°F	508°F

GROUP 10
COND#11 #8
36 591°F
37 608°F
38 594°F
=====
598°F

81 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1760°F	9 351°F	12 421°F	15 483°F	18 513°F
1 1759°F	10 367°F	13 414°F	16 490°F	19 524°F
2 1767°F	11 338°F	14 409°F	17 466°F	20 495°F
3 1771°F				
4 1766°F				
5 1767°F				
6 1780°F				
7 1772°F				
8 1770°F				
=====	=====	=====	=====	=====
1768°F	352°F	415°F	480°F	511°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 592°F	24 336°F	27 408°F	30 476°F	33 505°F
22 597°F	25 338°F	28 401°F	31 492°F	34 524°F
23 567°F	26 326°F	29 393°F	32 472°F	35 510°F
=====	=====	=====	=====	=====
585°F	333°F	401°F	480°F	513°F

GROUP 10
COND#11 #8
36 599°F
37 619°F
38 603°F
=====
607°F

82 MINUTES

GROUP 0
FURNACE

0 1763°F
1 1762°F
2 1770°F
3 1774°F
4 1770°F
5 1770°F
6 1783°F
7 1775°F
8 1774°F

=====
1771°F

GROUP 1
COND #1

9 356°F
10 372°F
11 343°F

=====
357°F

GROUP 2
COND #3

12 426°F
13 419°F
14 414°F

=====
420°F

GROUP 3
COND #6

15 489°F
16 496°F
17 472°F

=====
486°F

GROUP 4
COND #9

18 518°F
19 531°F
20 501°F

=====
517°F

GROUP 5
COND #11

21 616°F
22 619°F
23 573°F

=====
603°F

GROUP 6
COND#1 #8

24 342°F
25 343°F
26 332°F

=====
339°F

GROUP 7
COND#3 #8

27 414°F
28 407°F
29 399°F

=====
407°F

GROUP 8
COND#6 #8

30 483°F
31 500°F
32 478°F

=====
487°F

GROUP 9
COND#9 #8

33 510°F
34 532°F
35 517°F

=====
520°F

GROUP 10
COND#11 #8

36 610°F
37 634°F
38 615°F

=====
620°F

83 MINUTES

GROUP 0
FURNACE

0 1766°F
1 1766°F
2 1773°F
3 1777°F
4 1773°F
5 1773°F
6 1786°F
7 1778°F
8 1777°F

=====
1774°F

GROUP 1
COND #1

9 361°F
10 376°F
11 348°F

=====
362°F

GROUP 2
COND #3

12 432°F
13 424°F
14 419°F

=====
425°F

GROUP 3
COND #6

15 495°F
16 502°F
17 478°F

=====
492°F

GROUP 4
COND #9

18 524°F
19 537°F
20 506°F

=====
522°F

GROUP 5
COND #11

21 639°F
22 640°F
23 578°F

=====
619°F

GROUP 6
COND#1 #8

24 347°F
25 348°F
26 337°F

=====
344°F

GROUP 7
COND#3 #8

27 418°F
28 412°F
29 404°F

=====
411°F

GROUP 8
COND#6 #8

30 489°F
31 507°F
32 483°F

=====
493°F

GROUP 9
COND#9 #8

33 515°F
34 539°F
35 522°F

=====
525°F

GROUP 10
COND#11 #8

36 619°F
37 646°F
38 625°F

=====
630°F

84 MINUTES

GROUP 0
FURNACE

0 1769°F
1 1768°F
2 1776°F
3 1780°F
4 1776°F
5 1776°F
6 1789°F
7 1781°F
8 1780°F

=====
1777°F

GROUP 1
COND #1

9 366°F
10 380°F
11 354°F

=====
367°F

GROUP 2
COND #3

12 438°F
13 431°F
14 425°F

=====
431°F

GROUP 3
COND #6

15 502°F
16 509°F
17 483°F

=====
498°F

GROUP 4
COND #9

18 529°F
19 543°F
20 512°F

=====
528°F

GROUP 5

COND #11

21 657°F
22 661°F
23 585°F

=====
634°F

GROUP 6

COND#1 #8

24 353°F
25 354°F
26 342°F

=====
350°F

GROUP 7

COND#3 #8

27 424°F
28 418°F
29 410°F

=====
417°F

GROUP 8

COND#6 #8

30 496°F
31 515°F
32 489°F

=====
500°F

GROUP 9

COND#9 #8

33 521°F
34 549°F
35 528°F

=====
533°F

GROUP 10

COND#11 #8

36 631°F
37 662°F
38 638°F

=====
644°F

85 MINUTES

GROUP 0
FURNACE

0 1772°F
1 1772°F
2 1779°F
3 1782°F
4 1778°F
5 1779°F
6 1793°F
7 1784°F
8 1783°F

=====
1780°F

GROUP 1
COND #1

9 370°F
10 384°F
11 358°F

=====
371°F

GROUP 2
COND #3

12 443°F
13 435°F
14 430°F

=====
436°F

GROUP 3
COND #6

15 508°F
16 515°F
17 488°F

=====
504°F

GROUP 4
COND #9

18 534°F
19 548°F
20 516°F

=====
533°F

GROUP 5

COND #11

21 671°F
22 679°F
23 592°F

=====
647°F

GROUP 6

COND#1 #8

24 358°F
25 358°F
26 347°F

=====
354°F

GROUP 7

COND#3 #8

27 429°F
28 423°F
29 415°F

=====
422°F

GROUP 8

COND#6 #8

30 503°F
31 522°F
32 494°F

=====
506°F

GROUP 9

COND#9 #8

33 525°F
34 557°F
35 533°F

=====
538°F

GROUP 10

COND#11 #8

36 642°F
37 677°F
38 649°F

=====
656°F

86 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1774°F	9 375°F	12 449°F	15 515°F	18 539°F
1 1774°F	10 388°F	13 441°F	16 521°F	19 555°F
2 1781°F	11 363°F	14 435°F	17 494°F	20 522°F
3 1785°F				
4 1781°F				
5 1781°F				
6 1795°F				
7 1786°F				
8 1785°F				
=====	=====	=====	=====	=====
1782°F	375°F	442°F	510°F	539°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 688°F	24 360°F	27 435°F	30 511°F	33 531°F
22 699°F	25 364°F	28 430°F	31 531°F	34 566°F
23 602°F	26 352°F	29 421°F	32 500°F	35 539°F
=====	=====	=====	=====	=====
663°F	360°F	429°F	514°F	545°F

GROUP 10
COND#11 #8
36 656°F
37 695°F
38 665°F
=====
672°F

87 MINUTES

GROUP 0 FURNACE	GROUP 1 COND #1	GROUP 2 COND #3	GROUP 3 COND #6	GROUP 4 COND #9
0 1777°F	9 379°F	12 454°F	15 521°F	18 544°F
1 1777°F	10 392°F	13 447°F	16 527°F	19 560°F
2 1784°F	11 368°F	14 440°F	17 499°F	20 526°F
3 1787°F				
4 1783°F				
5 1784°F				
6 1798°F				
7 1789°F				
8 1788°F				
=====	=====	=====	=====	=====
1785°F	380°F	447°F	516°F	543°F

GROUP 5 COND #11	GROUP 6 COND#1 #8	GROUP 7 COND#3 #8	GROUP 8 COND#6 #8	GROUP 9 COND#9 #8
21 705°F	24 367°F	27 440°F	30 518°F	33 536°F
22 717°F	25 369°F	28 435°F	31 539°F	34 574°F
23 617°F	26 357°F	29 426°F	32 505°F	35 545°F
=====	=====	=====	=====	=====
680°F	364°F	434°F	521°F	552°F

GROUP 10
COND#11 #8
36 668°F
37 710°F
38 678°F
=====
685°F

88 MINUTES

GROUP 0
FURNACE

0 1780°F
1 1780°F
2 1786°F
3 1790°F
4 1786°F
5 1786°F
6 1800°F
7 1791°F
8 1791°F

=====
1788°F

GROUP 1
COND #1

9 384°F
10 396°F
11 372°F

=====
384°F

GROUP 2
COND #3

12 460°F
13 452°F
14 446°F

=====
453°F

GROUP 3
COND #6

15 528°F
16 534°F
17 504°F

=====
522°F

GROUP 4
COND #9

18 549°F
19 565°F
20 531°F

=====
548°F

GROUP 5
COND #11

21 723°F
22 737°F
23 648°F

=====
703°F

GROUP 6
COND#1 #8

24 373°F
25 374°F
26 363°F

=====
370°F

GROUP 7
COND#3 #8

27 445°F
28 441°F
29 431°F

=====
439°F

GROUP 8
COND#6 #8

30 526°F
31 548°F
32 511°F

=====
528°F

GROUP 9
COND#9 #8

33 542°F
34 584°F
35 552°F

=====
559°F

GROUP 10

COND#11 #8

36 683°F
37 730°F
38 695°F

=====
703°F

89 MINUTES

GROUP 0
FURNACE

0 1783°F
1 1782°F
2 1789°F
3 1793°F
4 1789°F
5 1789°F
6 1804°F
7 1794°F
8 1793°F

=====
1791°F

GROUP 1
COND #1

9 388°F
10 400°F
11 377°F

=====
388°F

GROUP 2
COND #3

12 465°F
13 458°F
14 451°F

=====
458°F

GROUP 3
COND #6

15 534°F
16 540°F
17 509°F

=====
528°F

GROUP 4
COND #9

18 554°F
19 570°F
20 536°F

=====
553°F

GROUP 5
COND #11

21 738°F
22 753°F
23 673°F

=====
721°F

GROUP 6
COND#1 #8

24 377°F
25 379°F
26 368°F

=====
375°F

GROUP 7
COND#3 #8

27 450°F
28 446°F
29 436°F

=====
444°F

GROUP 8
COND#6 #8

30 533°F
31 555°F
32 516°F

=====
535°F

GROUP 9
COND#9 #8

33 547°F
34 592°F
35 558°F

=====
566°F

GROUP 10

COND#11 #8

36 697°F
37 745°F
38 709°F

=====
717°F

EVAL OF LAYERS & Wt/A ON E50 SERIES MATS

3M CHEM 63 FT #87-13 2/11/87

LINE 1	LINE 2	LINE 3	LINE 4	LINE 5
CNDT#4 B#8	CNDT#7 B#8	CNDT#9 B#8	CDT#10 B#8	CDT#12 B#8
GROUP 6	GROUP 7	GROUP 8	GROUP 9	GROUP 10

GROUP: 0 FURNACE TC's: 0 1 2 3 4 5 6 7 8

GROUP: 1 CNDT #4 TC's: 9 10 11

GROUP: 2 CNDT #7 TC's: 12 13 14

GROUP: 3 CNDT #9 TC's: 15 16 17

GROUP: 4 CNDT #10 TC's: 18 19 20

GROUP: 5 CNDT #12 TC's: 21 22 23

GROUP: 6 CNDT#4 B#8 TC's: 24 25 26

GROUP: 7 CNDT#7 B#8 TC's: 27 28 29

GROUP: 8 CNDT#9 B#8 TC's: 30 31 32

GROUP: 9 CDT#10 B#8 TC's: 33 34 35

GROUP: 10 CDT#12 B#8 TC's: 36 37 38

1 MINUTES

GROUP 0
FURNACE

0	72°F
1	71°F
2	71°F
3	70°F
4	81°F
5	74°F
6	73°F
7	67°F
8	82°F
=====	
	73°F

GROUP 1
CNDT #4

9	44°F
10	46°F
11	45°F
=====	
	45°F

GROUP 2
CNDT #7

12	43°F
13	44°F
14	44°F
=====	
	44°F

GROUP 3
CNDT #9

15	42°F
16	44°F
17	43°F
=====	
	43°F

GROUP 4
CNDT #10

18	43°F
19	44°F
20	42°F
=====	
	43°F

GROUP 5
CNDT #12

21	42°F
22	42°F
23	41°F
=====	
	42°F

GROUP 6
CNDT#4 B#8

24	44°F
25	44°F
26	43°F
=====	
	44°F

GROUP 7
CNDT#7 B#8

27	42°F
28	43°F
29	43°F
=====	
	43°F

GROUP 8
CNDT#9 B#8

30	42°F
31	44°F
32	43°F
=====	
	43°F

GROUP 9
CDT#10 B#8

33	43°F
34	44°F
35	43°F
=====	
	43°F

GROUP 10
CDT#12 B#8

36	42°F
37	43°F
38	43°F
=====	
	43°F

2 MINUTES

GROUP 0
FURNACE

0	213°F
1	194°F
2	221°F
3	223°F
4	239°F
5	216°F
6	217°F
7	187°F
8	224°F
=====	
	215°F

GROUP 1
CNDT #4

9	43°F
10	45°F
11	45°F
=====	
	44°F

GROUP 2
CNDT #7

12	43°F
13	44°F
14	44°F
=====	
	44°F

GROUP 3
CNDT #9

15	42°F
16	44°F
17	43°F
=====	
	43°F

GROUP 4
CNDT #10

18	43°F
19	44°F
20	42°F
=====	
	43°F

GROUP 5
CNDT #12

21	42°F
22	42°F
23	42°F
=====	
	42°F

GROUP 6
CNDT#4 B#8

24	44°F
25	45°F
26	43°F
=====	
	44°F

GROUP 7
CNDT#7 B#8

27	42°F
28	44°F
29	43°F
=====	
	43°F

GROUP 8
CNDT#9 B#8

30	43°F
31	44°F
32	43°F
=====	
	43°F

GROUP 9
CDT#10 B#8

33	43°F
34	44°F
35	43°F
=====	
	43°F

GROUP 10
CDT#12 B#8

36	42°F
37	44°F
38	43°F
=====	
	43°F

3 MINUTES

GROUP 0
FURNACE

0	457°F
1	432°F
2	466°F
3	470°F
4	479°F
5	437°F
6	457°F
7	415°F
8	435°F
=====	
	450°F

GROUP 1
CNDT #4

9	44°F
10	45°F
11	45°F
=====	
	45°F

GROUP 2
CNDT #7

12	43°F
13	45°F
14	44°F
=====	
	44°F

GROUP 3
CNDT #9

15	42°F
16	44°F
17	43°F
=====	
	43°F

GROUP 4
CNDT #10

18	43°F
19	44°F
20	42°F
=====	
	43°F

GROUP 5
CNDT #12

21	42°F
22	42°F
23	42°F
=====	
	42°F

GROUP 6
CNDT#4 B#8

24	44°F
25	45°F
26	43°F
=====	
	44°F

GROUP 7
CNDT#7 B#8

27	43°F
28	44°F
29	43°F
=====	
	43°F

GROUP 8
CNDT#9 B#8

30	42°F
31	44°F
32	43°F
=====	
	43°F

GROUP 9
CDT#10 B#8

33	43°F
34	44°F
35	43°F
=====	
	43°F

GROUP 10
CDT#12 B#8

36	42°F
37	43°F
38	43°F
=====	
	43°F

4 MINUTES

GROUP 0
FURNACE

0	680°F
1	673°F
2	706°F
3	710°F
4	711°F
5	663°F
6	694°F
7	680°F
8	666°F
=====	
	687°F

GROUP 1
CNDT #4

9	44°F
10	45°F
11	45°F
=====	
	45°F

GROUP 2
CNDT #7

12	43°F
13	44°F
14	44°F
=====	
	44°F

GROUP 3
CNDT #9

15	42°F
16	43°F
17	43°F
=====	
	43°F

GROUP 4
CNDT #10

18	42°F
19	44°F
20	42°F
=====	
	43°F

GROUP 5
CNDT #12

21	42°F
22	42°F
23	42°F
=====	
	42°F

GROUP 6
CNDT#4 B#8

24	44°F
25	44°F
26	43°F
=====	
	44°F

GROUP 7
CNDT#7 B#8

27	42°F
28	43°F
29	43°F
=====	
	43°F

GROUP 8
CNDT#9 B#8

30	42°F
31	44°F
32	43°F
=====	
	43°F

GROUP 9
CDT#10 B#8

33	43°F
34	44°F
35	43°F
=====	
	43°F

GROUP 10
CDT#12 B#8

36	42°F
37	43°F
38	43°F
=====	
	43°F

5 MINUTES

GROUP 0
FURNACE

0 854°F
1 848°F
2 890°F
3 894°F
4 888°F
5 846°F
6 860°F
7 881°F
8 843°F

=====
867°F

GROUP 1
CNDT #4

9 44°F
10 45°F
11 45°F

=====
45°F

GROUP 2
CNDT #7

12 43°F
13 44°F
14 44°F

=====
44°F

GROUP 3
CNDT #9

15 42°F
16 44°F
17 43°F

=====
43°F

GROUP 4
CNDT #10

18 43°F
19 44°F
20 42°F

=====
43°F

GROUP 5
CNDT #12

21 42°F
22 42°F
23 42°F

=====
42°F

GROUP 6
CNDT#4 B#8

24 44°F
25 44°F
26 43°F

=====
44°F

GROUP 7
CNDT#7 B#8

27 42°F
28 43°F
29 43°F

=====
43°F

GROUP 8
CNDT#9 B#8

30 42°F
31 44°F
32 43°F

=====
43°F

GROUP 9
CDT#10 B#8

33 43°F
34 44°F
35 43°F

=====
43°F

GROUP 10
CDT#12 B#8

36 42°F
37 43°F
38 43°F

=====
43°F

6 MINUTES

GROUP 0
FURNACE

0 984°F
1 974°F
2 1024°F
3 1031°F
4 1020°F
5 988°F
6 986°F
7 1028°F
8 989°F

=====
1003°F

GROUP 1
CNDT #4

9 44°F
10 46°F
11 45°F

=====
45°F

GROUP 2
CNDT #7

12 43°F
13 45°F
14 44°F

=====
44°F

GROUP 3
CNDT #9

15 43°F
16 44°F
17 43°F

=====
43°F

GROUP 4
CNDT #10

18 43°F
19 45°F
20 42°F

=====
43°F

GROUP 5
CNDT #12

21 43°F
22 43°F
23 42°F

=====
43°F

GROUP 6
CNDT#4 B#8

24 44°F
25 44°F
26 43°F

=====
44°F

GROUP 7
CNDT#7 B#8

27 42°F
28 43°F
29 43°F

=====
43°F

GROUP 8
CNDT#9 B#8

30 43°F
31 45°F
32 43°F

=====
44°F

GROUP 9
CDT#10 B#8

33 43°F
34 44°F
35 43°F

=====
43°F

GROUP 10
CDT#12 B#8

36 42°F
37 44°F
38 43°F

=====
43°F

7 MINUTES

GROUP 0
FURNACE
0 1073°F
1 1060°F
2 1112°F
3 1122°F
4 1106°F
5 1080°F
6 1068°F
7 1122°F
8 1083°F
=====
1092°F

GROUP 1
CNDT #4
9 44°F
10 46°F
11 45°F
=====
45°F

GROUP 2
CNDT #7
12 43°F
13 45°F
14 44°F
=====
44°F

GROUP 3
CNDT #9
15 43°F
16 45°F
17 43°F
=====
44°F

GROUP 4
CNDT #10
18 44°F
19 46°F
20 42°F
=====
44°F

GROUP 5
CNDT #12
21 43°F
22 44°F
23 43°F
=====
43°F

GROUP 6
CNDT#4 B#8
24 44°F
25 44°F
26 43°F
=====
44°F

GROUP 7
CNDT#7 B#8
27 43°F
28 44°F
29 43°F
=====
43°F

GROUP 8
CNDT#9 B#8
30 43°F
31 45°F
32 43°F
=====
44°F

GROUP 9
CDT#10 B#8
33 43°F
34 45°F
35 43°F
=====
44°F

GROUP 10
CDT#12 B#8
36 43°F
37 44°F
38 43°F
=====
43°F

8 MINUTES

GROUP 0
FURNACE
0 1139°F
1 1121°F
2 1178°F
3 1189°F
4 1172°F
5 1148°F
6 1130°F
7 1193°F
8 1150°F
=====
1158°F

GROUP 1
CNDT #4
9 44°F
10 46°F
11 45°F
=====
45°F

GROUP 2
CNDT #7
12 44°F
13 46°F
14 44°F
=====
45°F

GROUP 3
CNDT #9
15 44°F
16 46°F
17 44°F
=====
45°F

GROUP 4
CNDT #10
18 45°F
19 47°F
20 43°F
=====
45°F

GROUP 5
CNDT #12
21 45°F
22 46°F
23 45°F
=====
45°F

GROUP 6
CNDT#4 B#8
24 44°F
25 45°F
26 43°F
=====
44°F

GROUP 7
CNDT#7 B#8
27 43°F
28 44°F
29 43°F
=====
43°F

GROUP 8
CNDT#9 B#8
30 44°F
31 45°F
32 43°F
=====
44°F

GROUP 9
CDT#10 B#8
33 43°F
34 45°F
35 43°F
=====
44°F

GROUP 10
CDT#12 B#8
36 43°F
37 45°F
38 44°F
=====
44°F

9 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1191°F	9 44°F	12 45°F	15 46°F	18 47°F
1 1172°F	10 47°F	13 47°F	16 47°F	19 49°F
2 1223°F	11 45°F	14 44°F	17 45°F	20 45°F
3 1237°F				
4 1222°F				
5 1200°F				
6 1177°F				
7 1243°F				
8 1199°F				
=====	=====	=====	=====	=====
1207°F	45°F	45°F	46°F	47°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 48°F	24 44°F	27 43°F	30 44°F	33 44°F
22 49°F	25 45°F	28 44°F	31 46°F	34 45°F
23 47°F	26 43°F	29 43°F	32 44°F	35 43°F
=====	=====	=====	=====	=====
48°F	44°F	43°F	45°F	44°F

GROUP 10
CDT#12 B#8

36 44°F
37 45°F
38 45°F
=====
45°F

10 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1233°F	9 45°F	12 46°F	15 49°F	18 49°F
1 1213°F	10 47°F	13 48°F	16 49°F	19 52°F
2 1260°F	11 46°F	14 45°F	17 47°F	20 47°F
3 1280°F				
4 1264°F				
5 1244°F				
6 1219°F				
7 1285°F				
8 1240°F				
=====	=====	=====	=====	=====
1249°F	46°F	46°F	48°F	49°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 52°F	24 44°F	27 43°F	30 46°F	33 45°F
22 53°F	25 45°F	28 44°F	31 47°F	34 46°F
23 52°F	26 44°F	29 44°F	32 44°F	35 44°F
=====	=====	=====	=====	=====
52°F	44°F	44°F	46°F	45°F

GROUP 10
CDT#12 B#8

36 46°F
37 47°F
38 47°F
=====
47°F

11 MINUTES

GROUP 0
FURNACE
0 1269°F
1 1252°F
2 1293°F
3 1317°F
4 1302°F
5 1282°F
6 1254°F
7 1319°F
8 1273°F
=====

GROUP 1
CNDT #4
9 45°F
10 49°F
11 47°F
=====

GROUP 2
CNDT #7
12 48°F
13 50°F
14 47°F
=====

GROUP 3
CNDT #9
15 52°F
16 52°F
17 50°F
=====

GROUP 4
CNDT #10
18 52°F
19 55°F
20 50°F
=====

1285°F

47°F

48°F

51°F

52°F

GROUP 5
CNDT #12
21 57°F
22 61°F
23 58°F
=====

GROUP 6
CNDT#4 B#8
24 44°F
25 46°F
26 44°F
=====

GROUP 7
CNDT#7 B#8
27 44°F
28 45°F
29 44°F
=====

GROUP 6
CNDT#9 B#8
30 47°F
31 48°F
32 45°F
=====

GROUP 9
CDT#10 B#8
33 46°F
34 47°F
35 45°F
=====

59°F

45°F

44°F

47°F

46°F

GROUP 10
CDT#12 B#8
36 48°F
37 49°F
38 50°F
=====

49°F

12 MINUTES

GROUP 0
FURNACE
0 1301°F
1 1287°F
2 1330°F
3 1349°F
4 1335°F
5 1318°F
6 1287°F
7 1350°F
8 1308°F
=====

GROUP 1
CNDT #4
9 47°F
10 51°F
11 48°F
=====

GROUP 2
CNDT #7
12 50°F
13 52°F
14 49°F
=====

GROUP 3
CNDT #9
15 55°F
16 55°F
17 55°F
=====

GROUP 4
CNDT #10
18 55°F
19 58°F
20 53°F
=====

1318°F

49°F

50°F

55°F

55°F

GROUP 5
CNDT #12
21 65°F
22 72°F
23 67°F
=====

68°F

GROUP 6
CNDT#4 B#8
24 45°F
25 46°F
26 44°F
=====

45°F

GROUP 7
CNDT#7 B#8
27 45°F
28 46°F
29 46°F
=====

46°F

GROUP 8
CNDT#9 B#8
30 50°F
31 50°F
32 47°F
=====

49°F

GROUP 9
CDT#10 B#8
33 47°F
34 49°F
35 46°F
=====

47°F

GROUP 10
CDT#12 B#8
36 51°F
37 53°F
38 55°F
=====

53°F

13 MINUTES

GROUP 0

FURNACE

0 1329°F
 1 1315°F
 2 1357°F
 3 1375°F
 4 1361°F
 5 1345°F
 6 1314°F
 7 1375°F
 8 1336°F

=====
 1345°F

GROUP 1

CNDT #4

9 48°F
 10 52°F
 11 49°F

=====
 50°F

GROUP 2

CNDT #7

12 52°F
 13 55°F
 14 52°F

=====
 53°F

GROUP 3

CNDT #9

15 59°F
 16 59°F
 17 59°F

=====
 59°F

GROUP 4

CNDT #10

18 57°F
 19 62°F
 20 57°F

=====
 59°F

GROUP 5

CNDT #12

21 72°F
 22 83°F
 23 77°F

=====
 77°F

GROUP 6

CNDT#4 B#8

24 45°F
 25 47°F
 26 45°F

=====
 46°F

GROUP 7

CNDT#7 B#8

27 47°F
 28 47°F
 29 47°F

=====
 47°F

GROUP 8

CNDT#9 B#8

30 52°F
 31 52°F
 32 49°F

=====
 51°F

GROUP 9

CDT#10 B#8

33 49°F
 34 51°F
 35 48°F

=====
 49°F

GROUP 10

CDT#12 B#8

36 55°F
 37 56°F
 38 61°F

=====
 57°F

14 MINUTES

GROUP 0

FURNACE

0 1357°F
 1 1339°F
 2 1381°F
 3 1398°F
 4 1384°F
 5 1369°F
 6 1340°F
 7 1399°F
 8 1362°F

=====
 1370°F

GROUP 1

CNDT #4

9 50°F
 10 55°F
 11 52°F

=====
 52°F

GROUP 2

CNDT #7

12 55°F
 13 58°F
 14 57°F

=====
 57°F

GROUP 3

CNDT #9

15 64°F
 16 64°F
 17 67°F

=====
 65°F

GROUP 4

CNDT #10

18 63°F
 19 67°F
 20 61°F

=====
 64°F

GROUP 5

CNDT #12

21 82°F
 22 97°F
 23 89°F

=====
 89°F

GROUP 6

CNDT#4 B#8

24 46°F
 25 49°F
 26 46°F

=====
 47°F

GROUP 7

CNDT#7 B#8

27 48°F
 28 50°F
 29 50°F

=====
 49°F

GROUP 8

CNDT#9 B#8

30 55°F
 31 55°F
 32 53°F

=====
 54°F

GROUP 9

CDT#10 B#8

33 51°F
 34 53°F
 35 50°F

=====
 51°F

GROUP 10

CDT#12 B#8

36 60°F
 37 61°F
 38 70°F

=====
 64°F

15 MINUTES

GROUP 0
FURNACE

0 1380°F
1 1361°F
2 1402°F
3 1419°F
4 1405°F
5 1391°F
6 1362°F
7 1419°F
8 1384°F

=====
1391°F

GROUP 1
CNDT #4

9 52°F
10 57°F
11 54°F

=====
54°F

GROUP 2
CNDT #7

12 58°F
13 61°F
14 62°F

=====
60°F

GROUP 3
CNDT #9

15 70°F
16 68°F
17 73°F

=====
70°F

GROUP 4
CNDT #10

18 68°F
19 71°F
20 66°F

=====
68°F

GROUP 5
CNDT #12

21 91°F
22 107°F
23 99°F

=====
99°F

GROUP 6
CNDT#4 B#8

24 47°F
25 50°F
26 47°F

=====
48°F

GROUP 7
CNDT#7 B#8

27 50°F
28 51°F
29 53°F

=====
51°F

GROUP 8
CNDT#9 B#8

30 59°F
31 58°F
32 55°F

=====
57°F

GROUP 9
CDT#10 B#8

33 53°F
34 55°F
35 52°F

=====
53°F

GROUP 10
CDT#12 B#8

36 65°F
37 67°F
38 79°F

=====
70°F

16 MINUTES

GROUP 0
FURNACE

0 1401°F
1 1382°F
2 1422°F
3 1439°F
4 1424°F
5 1411°F
6 1383°F
7 1438°F
8 1405°F

=====
1412°F

GROUP 1
CNDT #4

9 54°F
10 60°F
11 57°F

=====
57°F

GROUP 2
CNDT #7

12 61°F
13 65°F
14 67°F

=====
64°F

GROUP 3
CNDT #9

15 76°F
16 74°F
17 80°F

=====
77°F

GROUP 4
CNDT #10

18 73°F
19 77°F
20 71°F

=====
74°F

GROUP 5
CNDT #12

21 101°F
22 117°F
23 110°F

=====
109°F

GROUP 6
CNDT#4 B#8

24 49°F
25 52°F
26 48°F

=====
50°F

GROUP 7
CNDT#7 B#8

27 53°F
28 54°F
29 57°F

=====
55°F

GROUP 8
CNDT#9 B#8

30 64°F
31 62°F
32 60°F

=====
62°F

GROUP 9
CDT#10 B#8

33 57°F
34 59°F
35 55°F

=====
57°F

GROUP 10
CDT#12 B#8

36 72°F
37 74°F
38 91°F

=====
79°F

17 MINUTES

GROUP 0
FURNACE

0 1423°F
1 1405°F
2 1443°F
3 1459°F
4 1445°F
5 1432°F
6 1404°F
7 1456°F
8 1425°F
=====
1432°F

GROUP 1
CNDT #4

9 57°F
10 64°F
11 60°F
=====
60°F

GROUP 2
CNDT #7

12 65°F
13 69°F
14 74°F
=====
69°F

GROUP 3
CNDT #9

15 82°F
16 80°F
17 87°F
=====
83°F

GROUP 4
CNDT #10

18 78°F
19 82°F
20 76°F
=====
79°F

GROUP 5
CNDT #12

21 113°F
22 125°F
23 120°F
=====
119°F

GROUP 6
CNDT#4 B#8

24 51°F
25 54°F
26 50°F
=====
52°F

GROUP 7
CNDT#7 B#8

27 57°F
28 57°F
29 60°F
=====
58°F

GROUP 8
CNDT#9 B#8

30 68°F
31 65°F
32 64°F
=====
66°F

GROUP 9
CDT#10 B#8

33 60°F
34 62°F
35 58°F
=====
60°F

GROUP 10
CDT#12 B#8
36 79°F
37 81°F
38 101°F
=====
87°F

18 MINUTES

GROUP 0
FURNACE

0 1447°F
1 1431°F
2 1466°F
3 1481°F
4 1468°F
5 1456°F
6 1429°F
7 1479°F
8 1450°F
=====
1456°F

GROUP 1
CNDT #4

9 60°F
10 68°F
11 64°F
=====
64°F

GROUP 2
CNDT #7

12 70°F
13 74°F
14 80°F
=====
75°F

GROUP 3
CNDT #9

15 90°F
16 86°F
17 94°F
=====
90°F

GROUP 4
CNDT #10

18 85°F
19 90°F
20 82°F
=====
86°F

GROUP 5
CNDT #12

21 128°F
22 130°F
23 133°F
=====
130°F

GROUP 6
CNDT#4 B#8

24 53°F
25 56°F
26 53°F
=====
54°F

GROUP 7
CNDT#7 B#8

27 60°F
28 60°F
29 65°F
=====
62°F

GROUP 8
CNDT#9 B#8

30 74°F
31 70°F
32 70°F
=====
71°F

GROUP 9
CDT#10 B#8

33 65°F
34 67°F
35 62°F
=====
65°F

GROUP 10
CDT#12 B#8
36 87°F
37 90°F
38 115°F
=====
97°F

19 MINUTES

GROUP 0
FURNACE

0 1470°F
1 1455°F
2 1488°F
3 1502°F
4 1489°F
5 1478°F
6 1452°F
7 1500°F
8 1473°F
=====
1479°F

GROUP 1
CNDT #4

9 63°F
10 72°F
11 68°F
=====
68°F

GROUP 2
CNDT #7

12 75°F
13 78°F
14 86°F
=====
80°F

GROUP 3
CNDT #9

15 97°F
16 92°F
17 100°F
=====
96°F

GROUP 4
CNDT #10

18 91°F
19 96°F
20 87°F
=====
91°F

GROUP 5
CNDT #12

21 146°F
22 138°F
23 147°F
=====
144°F

GROUP 6
CNDT#4 B#8

24 56°F
25 59°F
26 55°F
=====
57°F

GROUP 7
CNDT#7 B#8

27 64°F
28 63°F
29 69°F
=====
65°F

GROUP 8
CNDT#9 B#8

30 79°F
31 75°F
32 75°F
=====
76°F

GROUP 9
CDT#10 B#8

33 69°F
34 71°F
35 66°F
=====
69°F

GROUP 10

CDT#12 B#8
36 96°F
37 99°F
38 126°F
=====
107°F

20 MINUTES

GROUP 0
FURNACE

0 1492°F
1 1478°F
2 1508°F
3 1522°F
4 1510°F
5 1500°F
6 1475°F
7 1520°F
8 1496°F
=====
1500°F

GROUP 1
CNDT #4

9 67°F
10 76°F
11 72°F
=====
72°F

GROUP 2
CNDT #7

12 81°F
13 83°F
14 93°F
=====
86°F

GROUP 3
CNDT #9

15 105°F
16 99°F
17 107°F
=====
104°F

GROUP 4
CNDT #10

18 98°F
19 103°F
20 94°F
=====
98°F

GROUP 5
CNDT #12

21 175°F
22 149°F
23 166°F
=====
163°F

GROUP 6
CNDT#4 B#8

24 59°F
25 62°F
26 58°F
=====
60°F

GROUP 7
CNDT#7 B#8

27 68°F
28 68°F
29 74°F
=====
70°F

GROUP 8
CNDT#9 B#8

30 86°F
31 81°F
32 81°F
=====
83°F

GROUP 9
CDT#10 B#8

33 75°F
34 77°F
35 71°F
=====
74°F

GROUP 10

CDT#12 B#8
36 107°F
37 110°F
38 141°F
=====
119°F

21 MINUTES

GROUP 0
FURNACE

0 1512°F
1 1498°F
2 1528°F
3 1541°F
4 1528°F
5 1521°F
6 1497°F
7 1540°F
8 1517°F
=====
1520°F

GROUP 1
CNDT #4

9 71°F
10 81°F
11 77°F
=====
76°F

GROUP 2
CNDT #7

12 86°F
13 88°F
14 99°F
=====
91°F

GROUP 3
CNDT #9

15 111°F
16 105°F
17 112°F
=====
109°F

GROUP 4
CNDT #10

18 105°F
19 109°F
20 100°F
=====
105°F

GROUP 5
CNDT #12

21 194°F
22 159°F
23 180°F
=====
178°F

GROUP 6
CNDT#4 B#8

24 62°F
25 65°F
26 61°F
=====
63°F

GROUP 7
CNDT#7 B#8

27 72°F
28 72°F
29 79°F
=====
74°F

GROUP 8
CNDT#9 B#8

30 91°F
31 87°F
32 87°F
=====
88°F

GROUP 9
CDT#10 B#8

33 80°F
34 81°F
35 76°F
=====
79°F

GROUP 10

CDT#12 B#8
36 118°F
37 120°F
38 151°F
=====
130°F

22 MINUTES

GROUP 0
FURNACE

0 1533°F
1 1520°F
2 1547°F
3 1560°F
4 1549°F
5 1544°F
6 1519°F
7 1560°F
8 1538°F
=====
1541°F

GROUP 1
CNDT #4

9 76°F
10 86°F
11 83°F
=====
82°F

GROUP 2
CNDT #7

12 92°F
13 94°F
14 105°F
=====
97°F

GROUP 3
CNDT #9

15 118°F
16 112°F
17 119°F
=====
116°F

GROUP 4
CNDT #10

18 113°F
19 117°F
20 107°F
=====
112°F

GROUP 5
CNDT #12

21 204°F
22 178°F
23 195°F
=====
192°F

GROUP 6
CNDT#4 B#8

24 67°F
25 69°F
26 65°F
=====
67°F

GROUP 7
CNDT#7 B#8

27 78°F
28 77°F
29 85°F
=====
80°F

GROUP 8
CNDT#9 B#8

30 99°F
31 94°F
32 94°F
=====
96°F

GROUP 9
CDT#10 B#8

33 87°F
34 88°F
35 82°F
=====
86°F

GROUP 10

CDT#12 B#8
36 133°F
37 135°F
38 164°F
=====
144°F

23 MINUTES

GROUP 0
FURNACE

0 1552°F
1 1540°F
2 1565°F
3 1578°F
4 1566°F
5 1563°F
6 1539°F
7 1577°F
8 1557°F

=====
1560°F

GROUP 1
CNDT #4

9 80°F
10 90°F
11 88°F

=====
86°F

GROUP 2
CNDT #7

12 97°F
13 100°F
14 111°F

=====
103°F

GROUP 3
CNDT #9

15 124°F
16 119°F
17 125°F

=====
123°F

GROUP 4
CNDT #10

18 120°F
19 124°F
20 114°F

=====
119°F

GROUP 5
CNDT #12

21 207°F
22 196°F
23 202°F

=====
202°F

GROUP 6
CNDT#4 B#8

24 71°F
25 72°F
26 69°F

=====
71°F

GROUP 7
CNDT#7 B#8

27 83°F
28 81°F
29 90°F

=====
85°F

GROUP 8
CNDT#9 B#8

30 104°F
31 99°F
32 100°F

=====
101°F

GROUP 9
CDT#10 B#8

33 93°F
34 93°F
35 87°F

=====
91°F

GROUP 10
CDT#12 B#8

36 145°F
37 149°F
38 173°F

=====
156°F

24 MINUTES

GROUP 0
FURNACE

0 1567°F
1 1555°F
2 1577°F
3 1590°F
4 1578°F
5 1576°F
6 1554°F
7 1590°F
8 1573°F

=====
1573°F

GROUP 1
CNDT #4

9 86°F
10 95°F
11 94°F

=====
92°F

GROUP 2
CNDT #7

12 103°F
13 106°F
14 116°F

=====
108°F

GROUP 3
CNDT #9

15 131°F
16 126°F
17 132°F

=====
130°F

GROUP 4
CNDT #10

18 128°F
19 131°F
20 121°F

=====
127°F

GROUP 5
CNDT #12

21 207°F
22 205°F
23 206°F

=====
206°F

GROUP 6
CNDT#4 B#8

24 76°F
25 77°F
26 74°F

=====
76°F

GROUP 7
CNDT#7 B#8

27 89°F
28 87°F
29 96°F

=====
91°F

GROUP 8
CNDT#9 B#8

30 112°F
31 107°F
32 107°F

=====
109°F

GROUP 9
CDT#10 B#8

33 101°F
34 100°F
35 95°F

=====
99°F

GROUP 10
CDT#12 B#8

36 160°F
37 167°F
38 182°F

=====
170°F

25 MINUTES

GROUP 0
FURNACE

0 1574°F
1 1563°F
2 1582°F
3 1596°F
4 1584°F
5 1581°F
6 1562°F
7 1596°F
8 1579°F

=====
1580°F

GROUP 1
CNDT #4

9 91°F
10 101°F
11 100°F

=====
97°F

GROUP 2
CNDT #7

12 109°F
13 113°F
14 121°F

=====
114°F

GROUP 3
CNDT #9

15 137°F
16 132°F
17 136°F

=====
136°F

GROUP 4
CNDT #10

18 135°F
19 138°F
20 129°F

=====
134°F

GROUP 5
CNDT #12

21 209°F
22 208°F
23 207°F

=====
208°F

GROUP 6
CNDT#4 B#8

24 81°F
25 81°F
26 78°F

=====
80°F

GROUP 7
CNDT#7 B#8

27 94°F
28 92°F
29 101°F

=====
96°F

GROUP 8
CNDT#9 B#8

30 118°F
31 113°F
32 113°F

=====
115°F

GROUP 9
CDT#10 B#8

33 107°F
34 106°F
35 101°F

=====
105°F

GROUP 10

CDT#12 B#8

36 170°F
37 178°F
38 188°F

=====
179°F

26 MINUTES

GROUP 0
FURNACE

0 1572°F
1 1561°F
2 1578°F
3 1592°F
4 1580°F
5 1577°F
6 1561°F
7 1593°F
8 1575°F

=====
1577°F

GROUP 1
CNDT #4

9 97°F
10 107°F
11 106°F

=====
103°F

GROUP 2
CNDT #7

12 117°F
13 120°F
14 127°F

=====
121°F

GROUP 3
CNDT #9

15 144°F
16 140°F
17 146°F

=====
143°F

GROUP 4
CNDT #10

18 143°F
19 146°F
20 137°F

=====
142°F

GROUP 5
CNDT #12

21 214°F
22 208°F
23 208°F

=====
210°F

GROUP 6
CNDT#4 B#8

24 88°F
25 87°F
26 83°F

=====
86°F

GROUP 7
CNDT#7 B#8

27 100°F
28 98°F
29 107°F

=====
102°F

GROUP 8
CNDT#9 B#8

30 126°F
31 121°F
32 121°F

=====
123°F

GROUP 9
CDT#10 B#8

33 116°F
34 113°F
35 110°F

=====
113°F

GROUP 10

CDT#12 B#8

36 181°F
37 188°F
38 194°F

=====
188°F

27 MINUTES

GROUP 0
FURNACE

0 1566°F
1 1555°F
2 1571°F
3 1584°F
4 1573°F
5 1570°F
6 1557°F
7 1586°F
8 1569°F

=====
1570°F

GROUP 1
CNDT #4

9 103°F
10 112°F
11 111°F

=====
109°F

GROUP 2
CNDT #7

12 123°F
13 127°F
14 132°F

=====
127°F

GROUP 3
CNDT #9

15 151°F
16 147°F
17 153°F

=====
150°F

GROUP 4
CNDT #10

18 150°F
19 154°F
20 145°F

=====
150°F

GROUP 5
CNDT #12

21 217°F
22 208°F
23 208°F

=====
211°F

GROUP 6
CNDT#4 B#8

24 94°F
25 91°F
26 89°F

=====
91°F

GROUP 7
CNDT#7 B#8

27 106°F
28 103°F
29 112°F

=====
107°F

GROUP 8
CNDT#9 B#8

30 133°F
31 127°F
32 127°F

=====
129°F

GROUP 9
CDT#10 B#8

33 123°F
34 120°F
35 117°F

=====
120°F

GROUP 10

CDT#12 B#8

36 188°F
37 193°F
38 197°F

=====
193°F

28 MINUTES

GROUP 0
FURNACE

0 1565°F
1 1556°F
2 1571°F
3 1583°F
4 1575°F
5 1571°F
6 1559°F
7 1585°F
8 1569°F

=====
1570°F

GROUP 1
CNDT #4

9 111°F
10 119°F
11 117°F

=====
116°F

GROUP 2
CNDT #7

12 130°F
13 134°F
14 137°F

=====
134°F

GROUP 3
CNDT #9

15 159°F
16 155°F
17 166°F

=====
160°F

GROUP 4
CNDT #10

18 160°F
19 162°F
20 155°F

=====
159°F

GROUP 5
CNDT #12

21 217°F
22 209°F
23 207°F

=====
211°F

GROUP 6
CNDT#4 B#8

24 102°F
25 97°F
26 95°F

=====
98°F

GROUP 7
CNDT#7 B#8

27 113°F
28 109°F
29 118°F

=====
113°F

GROUP 8
CNDT#9 B#8

30 141°F
31 135°F
32 136°F

=====
137°F

GROUP 9
CDT#10 B#8

33 132°F
34 128°F
35 127°F

=====
129°F

GROUP 10

CDT#12 B#8

36 194°F
37 198°F
38 201°F

=====
198°F

29 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1571°F	9 119°F	12 137°F	15 166°F	18 168°F
1 1562°F	10 125°F	13 140°F	16 162°F	19 170°F
2 1576°F	11 123°F	14 142°F	17 186°F	20 165°F
3 1588°F				
4 1581°F				
5 1577°F				
6 1565°F				
7 1589°F				
8 1574°F				
=====	=====	=====	=====	=====
1576°F	122°F	140°F	171°F	168°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 218°F	24 109°F	27 119°F	30 148°F	33 139°F
22 211°F	25 103°F	28 115°F	31 142°F	34 134°F
23 208°F	26 100°F	29 124°F	32 144°F	35 135°F
=====	=====	=====	=====	=====
212°F	104°F	119°F	145°F	136°F

GROUP 10
CDT#12 B#8

36 198°F
37 201°F
38 203°F
=====
201°F

30 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1578°F	9 130°F	12 146°F	15 176°F	18 178°F
1 1569°F	10 131°F	13 147°F	16 171°F	19 178°F
2 1583°F	11 128°F	14 147°F	17 206°F	20 178°F
3 1594°F				
4 1589°F				
5 1584°F				
6 1574°F				
7 1596°F				
8 1581°F				
=====	=====	=====	=====	=====
1583°F	130°F	147°F	184°F	178°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 215°F	24 119°F	27 126°F	30 158°F	33 148°F
22 214°F	25 109°F	28 121°F	31 151°F	34 143°F
23 207°F	26 106°F	29 130°F	32 155°F	35 146°F
=====	=====	=====	=====	=====
212°F	111°F	126°F	155°F	146°F

GROUP 10
CDT#12 B#8

36 202°F
37 204°F
38 205°F
=====
204°F

31 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1585°F	9 141°F	12 156°F	15 186°F	18 186°F
1 1576°F	10 136°F	13 154°F	16 179°F	19 193°F
2 1590°F	11 134°F	14 152°F	17 207°F	20 190°F
3 1600°F				
4 1595°F				
5 1590°F				
6 1581°F				
7 1602°F				
8 1588°F				
=====	=====	=====	=====	=====
1590°F	137°F	154°F	191°F	190°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 216°F	24 127°F	27 133°F	30 166°F	33 156°F
22 218°F	25 114°F	28 127°F	31 158°F	34 151°F
23 213°F	26 113°F	29 136°F	32 165°F	35 155°F
=====	=====	=====	=====	=====
216°F	118°F	132°F	163°F	154°F

GROUP 10
CDT#12 B#8

36 204°F
37 207°F
38 206°F
=====
206°F

32 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1592°F	9 156°F	12 166°F	15 196°F	18 198°F
1 1584°F	10 143°F	13 161°F	16 187°F	19 209°F
2 1595°F	11 140°F	14 157°F	17 206°F	20 204°F
3 1606°F				
4 1601°F				
5 1596°F				
6 1588°F				
7 1608°F				
8 1595°F				
=====	=====	=====	=====	=====
1596°F	146°F	161°F	196°F	204°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 221°F	24 138°F	27 141°F	30 177°F	33 167°F
22 228°F	25 121°F	28 134°F	31 167°F	34 163°F
23 217°F	26 120°F	29 143°F	32 176°F	35 165°F
=====	=====	=====	=====	=====
222°F	126°F	139°F	173°F	165°F

GROUP 10
CDT#12 B#8

36 207°F
37 211°F
38 208°F
=====
209°F

33 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1597°F	9 170°F	12 177°F	15 201°F	18 212°F
1 1589°F	10 148°F	13 168°F	16 197°F	19 208°F
2 1599°F	11 146°F	14 163°F	17 206°F	20 208°F
3 1609°F				
4 1604°F				
5 1600°F				
6 1594°F				
7 1612°F				
8 1599°F				
=====	=====	=====	=====	=====
1600°F	155°F	169°F	201°F	209°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 226°F	24 149°F	27 148°F	30 184°F	33 177°F
22 236°F	25 127°F	28 140°F	31 175°F	34 174°F
23 221°F	26 126°F	29 148°F	32 183°F	35 174°F
=====	=====	=====	=====	=====
228°F	134°F	145°F	181°F	175°F

GROUP 10
CDT#12 B#8

36 209°F
37 214°F
38 209°F
=====
211°F

34 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1600°F	9 186°F	12 190°F	15 207°F	18 222°F
1 1592°F	10 155°F	13 175°F	16 206°F	19 218°F
2 1601°F	11 151°F	14 175°F	17 205°F	20 209°F
3 1611°F				
4 1606°F				
5 1602°F				
6 1598°F				
7 1614°F				
8 1602°F				
=====	=====	=====	=====	=====
1603°F	164°F	180°F	206°F	216°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 230°F	24 162°F	27 158°F	30 192°F	33 187°F
22 244°F	25 134°F	28 148°F	31 185°F	34 185°F
23 226°F	26 134°F	29 157°F	32 190°F	35 183°F
=====	=====	=====	=====	=====
233°F	143°F	154°F	189°F	185°F

GROUP 10
CDT#12 B#8

36 212°F
37 220°F
38 211°F
=====
214°F

35 MINUTES

GROUP 0
FURNACE

0 1604°F
1 1597°F
2 1605°F
3 1615°F
4 1610°F
5 1606°F
6 1603°F
7 1618°F
8 1607°F

=====
1607°F

GROUP 1
CNDT #4

9 196°F
10 161°F
11 157°F

=====
171°F

GROUP 2
CNDT #7

12 202°F
13 183°F
14 189°F

=====
191°F

GROUP 3
CNDT #9

15 211°F
16 211°F
17 205°F

=====
209°F

GROUP 4
CNDT #10

18 226°F
19 223°F
20 216°F

=====
222°F

GROUP 5
CNDT #12

21 236°F
22 251°F
23 231°F

=====
239°F

GROUP 6
CNDT#4 B#8

24 172°F
25 140°F
26 141°F

=====
151°F

GROUP 7
CNDT#7 B#8

27 166°F
28 154°F
29 165°F

=====
162°F

GROUP 8
CNDT#9 B#8

30 198°F
31 192°F
32 194°F

=====
195°F

GROUP 9
CDT#10 B#8

33 193°F
34 191°F
35 189°F

=====
191°F

GROUP 10

CDT#12 B#8

36 216°F
37 225°F
38 214°F

=====
218°F

36 MINUTES

GROUP 0
FURNACE

0 1610°F
1 1603°F
2 1611°F
3 1620°F
4 1615°F
5 1612°F
6 1609°F
7 1624°F
8 1613°F

=====
1613°F

GROUP 1
CNDT #4

9 201°F
10 168°F
11 163°F

=====
177°F

GROUP 2
CNDT #7

12 211°F
13 194°F
14 201°F

=====
202°F

GROUP 3
CNDT #9

15 216°F
16 217°F
17 206°F

=====
213°F

GROUP 4
CNDT #10

18 229°F
19 227°F
20 219°F

=====
225°F

GROUP 5
CNDT #12

21 242°F
22 259°F
23 239°F

=====
247°F

GROUP 6
CNDT#4 B#8

24 180°F
25 148°F
26 149°F

=====
159°F

GROUP 7
CNDT#7 B#8

27 174°F
28 163°F
29 175°F

=====
171°F

GROUP 8
CNDT#9 B#8

30 204°F
31 199°F
32 198°F

=====
200°F

GROUP 9
CDT#10 B#8

33 198°F
34 197°F
35 194°F

=====
196°F

GROUP 10

CDT#12 B#8

36 220°F
37 232°F
38 218°F

=====
223°F

37 MINUTES

GROUP 0
FURNACE

0 1611°F
1 1604°F
2 1612°F
3 1621°F
4 1616°F
5 1613°F
6 1612°F
7 1624°F
8 1614°F

=====
1614°F

GROUP 1
CNDT #4

9 204°F
10 175°F
11 170°F

=====
183°F

GROUP 2
CNDT #7

12 216°F
13 207°F
14 206°F

=====
210°F

GROUP 3
CNDT #9

15 222°F
16 222°F
17 208°F

=====
217°F

GROUP 4
CNDT #10

18 232°F
19 232°F
20 222°F

=====
229°F

GROUP 5
CNDT #12

21 248°F
22 267°F
23 245°F

=====
253°F

GROUP 6
CNDT#4 B#8

24 185°F
25 154°F
26 156°F

=====
165°F

GROUP 7
CNDT#7 B#8

27 181°F
28 171°F
29 183°F

=====
178°F

GROUP 8
CNDT#9 B#8

30 209°F
31 205°F
32 202°F

=====
205°F

GROUP 9
CDT#10 B#8

33 202°F
34 202°F
35 198°F

=====
201°F

GROUP 10

CDT#12 B#8

36 225°F
37 238°F
38 223°F

=====
229°F

38 MINUTES

GROUP 0
FURNACE

0 1614°F
1 1607°F
2 1615°F
3 1624°F
4 1619°F
5 1616°F
6 1616°F
7 1627°F
8 1617°F

=====
1617°F

GROUP 1
CNDT #4

9 207°F
10 182°F
11 177°F

=====
189°F

GROUP 2
CNDT #7

12 223°F
13 213°F
14 207°F

=====
214°F

GROUP 3
CNDT #9

15 230°F
16 229°F
17 211°F

=====
223°F

GROUP 4
CNDT #10

18 236°F
19 239°F
20 227°F

=====
234°F

GROUP 5
CNDT #12

21 255°F
22 275°F
23 253°F

=====
261°F

GROUP 6
CNDT#4 B#8

24 190°F
25 162°F
26 164°F

=====
172°F

GROUP 7
CNDT#7 B#8

27 188°F
28 181°F
29 191°F

=====
187°F

GROUP 8
CNDT#9 B#8

30 216°F
31 212°F
32 205°F

=====
211°F

GROUP 9
CDT#10 B#8

33 206°F
34 208°F
35 203°F

=====
206°F

GROUP 10

CDT#12 B#8

36 231°F
37 246°F
38 228°F

=====
235°F

39 MINUTES

GROUP 0
FURNACE

0 1618'F
1 1610'F
2 1619'F
3 1627'F
4 1622'F
5 1619'F
6 1620'F
7 1630'F
8 1621'F

=====
1621'F

GROUP 1
CNDT #4

9 209'F
10 188'F
11 188'F

=====
195'F

GROUP 2
CNDT #7

12 226'F
13 219'F
14 207'F

=====
217'F

GROUP 3
CNDT #9

15 236'F
16 236'F
17 214'F

=====
229'F

GROUP 4
CNDT #10

18 241'F
19 246'F
20 231'F

=====
239'F

GROUP 5
CNDT #12

21 261'F
22 283'F
23 260'F

=====
268'F

GROUP 6
CNDT#4 B#8

24 194'F
25 168'F
26 172'F

=====
178'F

GROUP 7
CNDT#7 B#8

27 193'F
28 189'F
29 195'F

=====
192'F

GROUP 8
CNDT#9 B#8

30 221'F
31 218'F
32 208'F

=====
216'F

GROUP 9
CDT#10 B#8

33 211'F
34 214'F
35 207'F

=====
211'F

GROUP 10
CDT#12 B#8

36 236'F
37 254'F
38 233'F

=====
241'F

40 MINUTES

GROUP 0
FURNACE

0 1622'F
1 1615'F
2 1623'F
3 1632'F
4 1627'F
5 1623'F
6 1625'F
7 1635'F
8 1625'F

=====
1625'F

GROUP 1
CNDT #4

9 212'F
10 195'F
11 198'F

=====
202'F

GROUP 2
CNDT #7

12 226'F
13 222'F
14 207'F

=====
218'F

GROUP 3
CNDT #9

15 245'F
16 244'F
17 218'F

=====
236'F

GROUP 4
CNDT #10

18 247'F
19 255'F
20 237'F

=====
246'F

GROUP 5
CNDT #12

21 268'F
22 292'F
23 267'F

=====
276'F

GROUP 6
CNDT#4 B#8

24 198'F
25 176'F
26 181'F

=====
185'F

GROUP 7
CNDT#7 B#8

27 198'F
28 195'F
29 199'F

=====
197'F

GROUP 8
CNDT#9 B#8

30 229'F
31 226'F
32 212'F

=====
222'F

GROUP 9
CDT#10 B#8

33 216'F
34 222'F
35 213'F

=====
217'F

GROUP 10
CDT#12 B#8

36 244'F
37 263'F
38 239'F

=====
249'F

41 MINUTES

GROUP 0
FURNACE

0 1626°F
1 1620°F
2 1628°F
3 1636°F
4 1631°F
5 1628°F
6 1631°F
7 1639°F
8 1630°F

=====
1630°F

GROUP 1
CNDT #4

9 214°F
10 202°F
11 206°F

=====
207°F

GROUP 2
CNDT #7

12 223°F
13 227°F
14 207°F

=====
219°F

GROUP 3
CNDT #9

15 252°F
16 252°F
17 223°F

=====
242°F

GROUP 4
CNDT #10

18 253°F
19 263°F
20 243°F

=====
253°F

GROUP 5
CNDT #12

21 275°F
22 300°F
23 274°F

=====
283°F

GROUP 6
CNDT#4 B#8

24 200°F
25 182°F
26 187°F

=====
190°F

GROUP 7
CNDT#7 B#8

27 202°F
28 201°F
29 202°F

=====
202°F

GROUP 8
CNDT#9 B#8

30 234°F
31 232°F
32 216°F

=====
227°F

GROUP 9
CDT#10 B#8

33 221°F
34 228°F
35 218°F

=====
222°F

GROUP 10
CDT#12 B#8

36 250°F
37 270°F
38 245°F

=====
255°F

42 MINUTES

GROUP 0
FURNACE

0 1627°F
1 1621°F
2 1629°F
3 1637°F
4 1632°F
5 1629°F
6 1633°F
7 1640°F
8 1631°F

=====
1631°F

GROUP 1
CNDT #4

9 217°F
10 210°F
11 210°F

=====
212°F

GROUP 2
CNDT #7

12 227°F
13 233°F
14 207°F

=====
222°F

GROUP 3
CNDT #9

15 261°F
16 261°F
17 229°F

=====
250°F

GROUP 4
CNDT #10

18 260°F
19 272°F
20 251°F

=====
261°F

GROUP 5
CNDT #12

21 283°F
22 310°F
23 282°F

=====
292°F

GROUP 6
CNDT#4 B#8

24 202°F
25 189°F
26 192°F

=====
194°F

GROUP 7
CNDT#7 B#8

27 206°F
28 206°F
29 204°F

=====
205°F

GROUP 8
CNDT#9 B#8

30 242°F
31 240°F
32 221°F

=====
234°F

GROUP 9
CDT#10 B#8

33 228°F
34 236°F
35 225°F

=====
230°F

GROUP 10
CDT#12 B#8

36 258°F
37 279°F
38 252°F

=====
263°F

43 MINUTES

GROUP 0
FURNACE

0 1630°F
1 1624°F
2 1633°F
3 1640°F
4 1635°F
5 1633°F
6 1636°F
7 1643°F
8 1634°F
=====
1634°F

GROUP 1
CNDT #4

9 219°F
10 216°F
11 213°F
=====
216°F

GROUP 2
CNDT #7

12 234°F
13 239°F
14 208°F
=====
227°F

GROUP 3
CNDT #9

15 268°F
16 269°F
17 234°F
=====
257°F

GROUP 4
CNDT #10

18 267°F
19 280°F
20 257°F
=====
268°F

GROUP 5
CNDT #12

21 291°F
22 318°F
23 284°F
=====
299°F

GROUP 6
CNDT#4 B#8

24 204°F
25 195°F
26 196°F
=====
198°F

GROUP 7
CNDT#7 B#8

27 210°F
28 211°F
29 206°F
=====
209°F

GROUP 8
CNDT#9 B#8

30 248°F
31 246°F
32 226°F
=====
240°F

GROUP 9
CDT#10 B#8

33 234°F
34 244°F
35 231°F
=====
236°F

GROUP 10
CDT#12 B#8

36 265°F
37 287°F
38 258°F
=====
270°F

44 MINUTES

GROUP 0
FURNACE

0 1634°F
1 1628°F
2 1636°F
3 1643°F
4 1639°F
5 1637°F
6 1640°F
7 1647°F
8 1638°F
=====
1638°F

GROUP 1
CNDT #4

9 223°F
10 222°F
11 217°F
=====
221°F

GROUP 2
CNDT #7

12 240°F
13 247°F
14 209°F
=====
232°F

GROUP 3
CNDT #9

15 277°F
16 277°F
17 241°F
=====
265°F

GROUP 4
CNDT #10

18 276°F
19 289°F
20 266°F
=====
277°F

GROUP 5
CNDT #12

21 300°F
22 328°F
23 297°F
=====
308°F

GROUP 6
CNDT#4 B#8

24 206°F
25 202°F
26 200°F
=====
203°F

GROUP 7
CNDT#7 B#8

27 215°F
28 217°F
29 208°F
=====
213°F

GROUP 8
CNDT#9 B#8

30 257°F
31 255°F
32 233°F
=====
248°F

GROUP 9
CDT#10 B#8

33 242°F
34 253°F
35 240°F
=====
245°F

GROUP 10
CDT#12 B#8

36 274°F
37 298°F
38 267°F
=====
280°F

45 MINUTES

GROUP 0
FURNACE

0 1638°F
1 1632°F
2 1640°F
3 1647°F
4 1643°F
5 1641°F
6 1645°F
7 1650°F
8 1642°F

=====
1642°F

GROUP 1
CNDT #4

9 226°F
10 227°F
11 221°F

=====
225°F

GROUP 2
CNDT #7

12 247°F
13 254°F
14 211°F

=====
237°F

GROUP 3
CNDT #9

15 284°F
16 285°F
17 248°F

=====
272°F

GROUP 4
CNDT #10

18 283°F
19 297°F
20 273°F

=====
284°F

GROUP 5
CNDT #12

21 309°F
22 336°F
23 304°F

=====
316°F

GROUP 6
CNDT#4 B#8

24 208°F
25 206°F
26 203°F

=====
206°F

GROUP 7
CNDT#7 B#8

27 219°F
28 223°F
29 210°F

=====
217°F

GROUP 8
CNDT#9 B#8

30 264°F
31 262°F
32 239°F

=====
255°F

GROUP 9
CDT#10 B#8

33 249°F
34 261°F
35 247°F

=====
252°F

GROUP 10
CDT#12 B#8

36 281°F
37 306°F
38 274°F

=====
287°F

46 MINUTES

GROUP 0
FURNACE

0 1642°F
1 1636°F
2 1644°F
3 1650°F
4 1646°F
5 1644°F
6 1649°F
7 1655°F
8 1647°F

=====
1646°F

GROUP 1
CNDT #4

9 230°F
10 233°F
11 226°F

=====
230°F

GROUP 2
CNDT #7

12 254°F
13 261°F
14 215°F

=====
243°F

GROUP 3
CNDT #9

15 293°F
16 293°F
17 255°F

=====
280°F

GROUP 4
CNDT #10

18 292°F
19 305°F
20 281°F

=====
293°F

GROUP 5
CNDT #12

21 318°F
22 344°F
23 312°F

=====
325°F

GROUP 6
CNDT#4 B#8

24 211°F
25 212°F
26 207°F

=====
210°F

GROUP 7
CNDT#7 B#8

27 225°F
28 229°F
29 213°F

=====
222°F

GROUP 8
CNDT#9 B#8

30 272°F
31 271°F
32 246°F

=====
263°F

GROUP 9
CDT#10 B#8

33 258°F
34 271°F
35 256°F

=====
262°F

GROUP 1
CDT#12 B#8

36 291°F
37 317°F
38 283°F

=====
297°F

47 MINUTES

GROUP 0
FURNACE

0 1646°F
1 1640°F
2 1649°F
3 1655°F
4 1650°F
5 1648°F
6 1654°F
7 1658°F
8 1651°F

=====
1650°F

GROUP 1
CNDT #4

9 234°F
10 239°F
11 231°F

=====
235°F

GROUP 2
CNDT #7

12 261°F
13 268°F
14 221°F

=====
250°F

GROUP 3
CNDT #9

15 300°F
16 300°F
17 262°F

=====
287°F

GROUP 4
CNDT #10

18 300°F
19 313°F
20 289°F

=====
301°F

GROUP 5
CNDT #12

21 326°F
22 354°F
23 319°F

=====
333°F

GROUP 6
CNDT#4 B#8

24 215°F
25 217°F
26 212°F

=====
215°F

GROUP 7
CNDT#7 B#8

27 230°F
28 235°F
29 216°F

=====
227°F

GROUP 8
CNDT#9 B#8

30 279°F
31 278°F
32 253°F

=====
270°F

GROUP 9
CDT#10 B#8

33 266°F
34 279°F
35 264°F

=====
270°F

GROUP 10
CDT#12 B#8

36 298°F
37 326°F
38 290°F

=====
305°F

48 MINUTES

GROUP 0
FURNACE

0 1650°F
1 1645°F
2 1653°F
3 1659°F
4 1654°F
5 1653°F
6 1659°F
7 1663°F
8 1655°F

=====
1655°F

GROUP 1
CNDT #4

9 239°F
10 246°F
11 237°F

=====
241°F

GROUP 2
CNDT #7

12 268°F
13 276°F
14 227°F

=====
257°F

GROUP 3
CNDT #9

15 308°F
16 308°F
17 270°F

=====
295°F

GROUP 4
CNDT #10

18 307°F
19 321°F
20 297°F

=====
309°F

GROUP 5
CNDT #12

21 334°F
22 364°F
23 328°F

=====
342°F

GROUP 6
CNDT#4 B#8

24 219°F
25 223°F
26 217°F

=====
220°F

GROUP 7
CNDT#7 B#8

27 236°F
28 242°F
29 220°F

=====
233°F

GROUP 8
CNDT#9 B#8

30 289°F
31 286°F
32 261°F

=====
279°F

GROUP 9
CDT#10 B#8

33 275°F
34 290°F
35 273°F

=====
279°F

GROUP 10
CDT#12 B#8

36 308°F
37 336°F
38 300°F

=====
315°F

49 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1654°F	9 244°F	12 274°F	15 315°F	18 316°F
1 1649°F	10 253°F	13 283°F	16 315°F	19 329°F
2 1657°F	11 243°F	14 233°F	17 277°F	20 305°F
3 1663°F				
4 1659°F				
5 1658°F				
6 1664°F				
7 1667°F				
8 1660°F				
=====	=====	=====	=====	=====
1659°F	247°F	263°F	302°F	317°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 341°F	24 223°F	27 242°F	30 295°F	33 282°F
22 372°F	25 229°F	28 249°F	31 294°F	34 299°F
23 335°F	26 222°F	29 225°F	32 268°F	35 280°F
=====	=====	=====	=====	=====
349°F	225°F	239°F	286°F	287°F

GROUP 10
CDT#12 B#8
36 316°F
37 345°F
38 308°F
=====
323°F

50 MINUTES

GROUP 0 FURNACE	GROUP 1 CNDT #4	GROUP 2 CNDT #7	GROUP 3 CNDT #9	GROUP 4 CNDT #10
0 1659°F	9 250°F	12 282°F	15 323°F	18 323°F
1 1654°F	10 259°F	13 291°F	16 323°F	19 337°F
2 1662°F	11 249°F	14 239°F	17 285°F	20 313°F
3 1668°F				
4 1664°F				
5 1663°F				
6 1669°F				
7 1672°F				
8 1665°F				
=====	=====	=====	=====	=====
1664°F	253°F	271°F	310°F	324°F

GROUP 5 CNDT #12	GROUP 6 CNDT#4 B#8	GROUP 7 CNDT#7 B#8	GROUP 8 CNDT#9 B#8	GROUP 9 CDT#10 B#8
21 349°F	24 229°F	27 249°F	30 304°F	33 292°F
22 381°F	25 236°F	28 256°F	31 302°F	34 309°F
23 343°F	26 228°F	29 231°F	32 276°F	35 290°F
=====	=====	=====	=====	=====
358°F	231°F	245°F	294°F	297°F

GROUP 10
CDT#12 B#8
36 326°F
37 356°F
38 317°F
=====
333°F

51 MINUTES

GROUP 0
FURNACE

0 1664°F
1 1659°F
2 1667°F
3 1672°F
4 1669°F
5 1668°F
6 1674°F
7 1676°F
8 1669°F
=====
1669°F

GROUP 1
CNDT #4

9 255°F
10 266°F
11 255°F
=====
259°F

GROUP 2
CNDT #7

12 289°F
13 299°F
14 245°F
=====
278°F

GROUP 3
CNDT #9

15 329°F
16 330°F
17 293°F
=====
317°F

GROUP 4
CNDT #10

18 330°F
19 344°F
20 320°F
=====
331°F

GROUP 5
CNDT #12

21 356°F
22 388°F
23 351°F
=====
365°F

GROUP 6
CNDT#4 B#8

24 234°F
25 241°F
26 233°F
=====
236°F

GROUP 7
CNDT#7 B#8

27 255°F
28 262°F
29 236°F
=====
251°F

GROUP 8
CNDT#9 B#8

30 311°F
31 309°F
32 283°F
=====
301°F

GROUP 9
CDT#10 B#8

33 299°F
34 317°F
35 297°F
=====
304°F

GROUP 10
CDT#12 B#8

36 334°F
37 366°F
38 325°F
=====
342°F

52 MINUTES

GROUP 0
FURNACE

0 1667°F
1 1663°F
2 1670°F
3 1676°F
4 1672°F
5 1672°F
6 1678°F
7 1680°F
8 1674°F
=====
1672°F

GROUP 1
CNDT #4

9 266°F
10 273°F
11 262°F
=====
267°F

GROUP 2
CNDT #7

12 296°F
13 307°F
14 252°F
=====
285°F

GROUP 3
CNDT #9

15 337°F
16 338°F
17 300°F
=====
325°F

GROUP 4
CNDT #10

18 338°F
19 353°F
20 329°F
=====
340°F

GROUP 5
CNDT #12

21 364°F
22 397°F
23 359°F
=====
373°F

GROUP 6
CNDT#4 B#8

24 240°F
25 249°F
26 240°F
=====
243°F

GROUP 7
CNDT#7 B#8

27 262°F
28 270°F
29 243°F
=====
258°F

GROUP 8
CNDT#9 B#8

30 320°F
31 318°F
32 292°F
=====
310°F

GROUP 9
CDT#10 B#8

33 308°F
34 327°F
35 307°F
=====
314°F

GROUP 10
CDT#12 B#8

36 344°F
37 377°F
38 335°F
=====
352°F

53 MINUTES

GROUP 0
FURNACE

0 1671°F
1 1666°F
2 1673°F
3 1679°F
4 1675°F
5 1675°F
6 1682°F
7 1683°F
8 1677°F
=====

1676°F

GROUP 1
CNDT #4

9 273°F
10 280°F
11 268°F
=====

274°F

GROUP 2
CNDT #7

12 303°F
13 315°F
14 259°F
=====

292°F

GROUP 3
CNDT #9

15 344°F
16 345°F
17 308°F
=====

332°F

GROUP 4
CNDT #10

18 345°F
19 360°F
20 336°F
=====

347°F

GROUP 5
CNDT #12

21 371°F
22 404°F
23 366°F
=====

380°F

GROUP 6
CNDT#4 B#8

24 246°F
25 255°F
26 246°F
=====

249°F

GROUP 7
CNDT#7 B#8

27 269°F
28 276°F
29 249°F
=====

265°F

GROUP 8
CNDT#9 B#8

30 327°F
31 325°F
32 299°F
=====

317°F

GROUP 9
CDT#10 B#8

33 315°F
34 335°F
35 314°F
=====

321°F

GROUP 10
CDT#12 B#8

36 352°F
37 386°F
38 343°F
=====

360°F

54 MINUTES

GROUP 0
FURNACE

0 1675°F
1 1671°F
2 1678°F
3 1683°F
4 1680°F
5 1680°F
6 1687°F
7 1688°F
8 1682°F
=====

1680°F

GROUP 1
CNDT #4

9 279°F
10 287°F
11 274°F
=====

280°F

GROUP 2
CNDT #7

12 310°F
13 323°F
14 266°F
=====

300°F

GROUP 3
CNDT #9

15 351°F
16 352°F
17 315°F
=====

339°F

GROUP 4
CNDT #10

18 353°F
19 368°F
20 343°F
=====

355°F

GROUP 5
CNDT #12

21 379°F
22 412°F
23 373°F
=====

388°F

GROUP 6
CNDT#4 B#8

24 253°F
25 262°F
26 253°F
=====

256°F

GROUP 7
CNDT#7 B#8

27 276°F
28 284°F
29 256°F
=====

272°F

GROUP 8
CNDT#9 B#8

30 335°F
31 333°F
32 307°F
=====

325°F

GROUP 9
CDT#10 B#8

33 325°F
34 344°F
35 323°F
=====

331°F

GROUP 10
CDT#12 B#8

36 363°F
37 398°F
38 352°F
=====

371°F

55 MINUTES

GROUP 0
FURNACE

0 1681°F
1 1677°F
2 1684°F
3 1689°F
4 1685°F
5 1685°F
6 1693°F
7 1693°F
8 1688°F

=====
1686°F

GROUP 1
CNDT #4

9 285°F
10 293°F
11 281°F

=====
286°F

GROUP 2
CNDT #7

12 317°F
13 330°F
14 272°F

=====
306°F

GROUP 3
CNDT #9

15 358°F
16 359°F
17 322°F

=====
346°F

GROUP 4
CNDT #10

18 360°F
19 375°F
20 350°F

=====
362°F

GROUP 5
CNDT #12

21 386°F
22 420°F
23 380°F

=====
395°F

GROUP 6
CNDT#4 B#8

24 259°F
25 268°F
26 259°F

=====
262°F

GROUP 7
CNDT#7 B#8

27 283°F
28 290°F
29 263°F

=====
279°F

GROUP 8
CNDT#9 B#8

30 342°F
31 340°F
32 314°F

=====
332°F

GROUP 9
CDT#10 B#8

33 332°F
34 352°F
35 330°F

=====
338°F

GROUP 10

CDT#12 B#8

36 371°F
37 409°F
38 360°F

=====
380°F

56 MINUTES

GROUP 0
FURNACE

0 1686°F
1 1682°F
2 1689°F
3 1695°F
4 1691°F
5 1691°F
6 1699°F
7 1699°F
8 1693°F

=====
1692°F

GROUP 1
CNDT #4

9 292°F
10 300°F
11 287°F

=====
293°F

GROUP 2
CNDT #7

12 324°F
13 336°F
14 279°F

=====
313°F

GROUP 3
CNDT #9

15 366°F
16 366°F
17 330°F

=====
354°F

GROUP 4
CNDT #10

18 368°F
19 383°F
20 358°F

=====
370°F

GROUP 5
CNDT #12

21 394°F
22 428°F
23 387°F

=====
403°F

GROUP 6
CNDT#4 B#8

24 267°F
25 276°F
26 266°F

=====
270°F

GROUP 7
CNDT#7 B#8

27 291°F
28 298°F
29 271°F

=====
287°F

GROUP 8
CNDT#9 B#8

30 351°F
31 349°F
32 322°F

=====
341°F

GROUP 9
CDT#10 B#8

33 340°F
34 361°F
35 339°F

=====
347°F

GROUP 10

CDT#12 B#8

36 381°F
37 421°F
38 370°F

=====
391°F

57 MINUTES

GROUP 0
FURNACE

0 1691°F
1 1687°F
2 1694°F
3 1699°F
4 1696°F
5 1695°F
6 1704°F
7 1703°F
8 1698°F

=====
1696°F

GROUP 1
CNDT #4

9 298°F
10 306°F
11 294°F

=====
299°F

GROUP 2
CNDT #7

12 330°F
13 341°F
14 286°F

=====
319°F

GROUP 3
CNDT #9

15 372°F
16 373°F
17 337°F

=====
361°F

GROUP 4
CNDT #10

18 374°F
19 389°F
20 364°F

=====
376°F

GROUP 5
CNDT #12

21 401°F
22 436°F
23 393°F

=====
410°F

GROUP 6
CNDT#4 B#8

24 273°F
25 282°F
26 273°F

=====
276°F

GROUP 7
CNDT#7 B#8

27 297°F
28 305°F
29 277°F

=====
293°F

GROUP 8
CNDT#9 B#8

30 358°F
31 356°F
32 329°F

=====
348°F

GROUP 9
CDT#10 B#8

33 348°F
34 368°F
35 346°F

=====
354°F

GROUP 10

CDT#12 B#8

36 390°F
37 429°F
38 377°F

=====
399°F

58 MINUTES

GROUP 0
FURNACE

0 1695°F
1 1691°F
2 1699°F
3 1704°F
4 1700°F
5 1700°F
6 1709°F
7 1708°F
8 1703°F

=====
1701°F

GROUP 1
CNDT #4

9 305°F
10 313°F
11 300°F

=====
306°F

GROUP 2
CNDT #7

12 335°F
13 346°F
14 294°F

=====
325°F

GROUP 3
CNDT #9

15 379°F
16 380°F
17 344°F

=====
368°F

GROUP 4
CNDT #10

18 382°F
19 396°F
20 372°F

=====
383°F

GROUP 5
CNDT #12

21 408°F
22 445°F
23 400°F

=====
418°F

GROUP 6
CNDT#4 B#8

24 280°F
25 290°F
26 280°F

=====
283°F

GROUP 7
CNDT#7 B#8

27 305°F
28 313°F
29 285°F

=====
301°F

GROUP 8
CNDT#9 B#8

30 366°F
31 364°F
32 337°F

=====
356°F

GROUP 9
CDT#10 B#8

33 356°F
34 377°F
35 355°F

=====
363°F

GROUP 10

CDT#12 B#8

36 401°F
37 440°F
38 387°F

=====
409°F

59 MINUTES

GROUP 0
FURNACE

0 1697 F
1 1696 F
2 1702 F
3 1707 F
4 1703 F
5 1704 F
6 1713 F
7 1712 F
8 1707 F

=====
1705 F

GROUP 1
CNDT #4

9 311 F
10 319 F
11 306 F

=====
312 F

GROUP 2
CNDT #7

12 341 F
13 351 F
14 300 F

=====
331 F

GROUP 3
CNDT #9

15 366 F
16 386 F
17 351 F

=====
374 F

GROUP 4
CNDT #10

18 388 F
19 403 F
20 378 F

=====
390 F

GROUP 5
CNDT #12

21 415 F
22 453 F
23 406 F

=====
425 F

GROUP 6
CNDT#4 B#8

24 287 F
25 296 F
26 286 F

=====
290 F

GROUP 7
CNDT#7 B#8

27 311 F
28 319 F
29 291 F

=====
307 F

GROUP 8
CNDT#9 B#8

30 373 F
31 371 F
32 344 F

=====
363 F

GROUP 9
CDT#10 B#8

33 363 F
34 384 F
35 362 F

=====
370 F

GROUP 10

CDT#12 B#8

36 410 F
37 448 F
38 394 F

=====
417 F

60 MINUTES

GROUP 0
FURNACE

0 1703 F
1 1699 F
2 1706 F
3 1711 F
4 1707 F
5 1707 F
6 1717 F
7 1716 F
8 1711 F

=====
1709 F

GROUP 1
CNDT #4

9 318 F
10 326 F
11 313 F

=====
319 F

GROUP 2
CNDT #7

12 348 F
13 358 F
14 308 F

=====
338 F

GROUP 3
CNDT #9

15 392 F
16 393 F
17 358 F

=====
381 F

GROUP 4
CNDT #10

18 395 F
19 410 F
20 385 F

=====
397 F

GROUP 5
CNDT #12

21 423 F
22 462 F
23 412 F

=====
432 F

GROUP 6
CNDT#4 B#8

24 294 F
25 304 F
26 294 F

=====
297 F

GROUP 7
CNDT#7 B#8

27 319 F
28 327 F
29 299 F

=====
315 F

GROUP 8
CNDT#9 B#8

30 381 F
31 380 F
32 352 F

=====
371 F

GROUP 9
CDT#10 B#8

33 371 F
34 392 F
35 370 F

=====
378 F

GROUP 10

CDT#12 B#8

36 421 F
37 459 F
38 404 F

=====
428 F

61 MINUTES

GROUP 0
FURNACE

0 1707°F
1 1703°F
2 1710°F
3 1715°F
4 1711°F
5 1711°F
6 1721°F
7 1719°F
8 1714°F

=====
1712°F

GROUP 1
CNDT #4

9 324°F
10 332°F
11 319°F

=====
325°F

GROUP 2
CNDT #7

12 354°F
13 364°F
14 314°F

=====
344°F

GROUP 3
CNDT #9

15 398°F
16 399°F
17 364°F

=====
387°F

GROUP 4
CNDT #10

18 400°F
19 417°F
20 391°F

=====
403°F

GROUP 5
CNDT #12

21 431°F
22 470°F
23 418°F

=====
440°F

GROUP 6
CNDT#4 B#8

24 301°F
25 310°F
26 301°F

=====
304°F

GROUP 7
CNDT#7 B#8

27 325°F
28 333°F
29 306°F

=====
321°F

GROUP 8
CNDT#9 B#8

30 388°F
31 386°F
32 358°F

=====
377°F

GROUP 9
CDT#10 B#8

33 778°F
34 399°F
35 377°F

=====
385°F

GROUP 10

CDT#12 B#8

36 428°F
37 467°F
38 411°F

=====
435°F

62 MINUTES

GROUP 0
FURNACE

0 1704°F
1 1701°F
2 1707°F
3 1712°F
4 1708°F
5 1708°F
6 1718°F
7 1716°F
8 1712°F

=====
1710°F

GROUP 1
CNDT #4

9 330°F
10 338°F
11 326°F

=====
331°F

GROUP 2
CNDT #7

12 361°F
13 371°F
14 321°F

=====
351°F

GROUP 3
CNDT #9

15 405°F
16 406°F
17 371°F

=====
394°F

GROUP 4
CNDT #10

18 407°F
19 425°F
20 398°F

=====
410°F

GROUP 5
CNDT #12

21 439°F
22 479°F
23 425°F

=====
448°F

GROUP 6
CNDT#4 B#8

24 308°F
25 317°F
26 308°F

=====
311°F

GROUP 7
CNDT#7 B#8

27 333°F
28 341°F
29 313°F

=====
329°F

GROUP 8
CNDT#9 B#8

30 395°F
31 395°F
32 367°F

=====
386°F

GROUP 9
CDT#10 B#8

33 386°F
34 408°F
35 386°F

=====
393°F

GROUP 10

CDT#12 B#8

36 438°F
37 478°F
38 420°F

=====
445°F

63 MINUTES

GROUP 0
FURNACE

0 1704°F
1 1700°F
2 1706°F
3 1711°F
4 1707°F
5 1707°F
6 1719°F
7 1715°F
8 1711°F

=====
1709°F

GROUP 1
CNDT #4

9 336°F
10 344°F
11 332°F

=====
337°F

GROUP 2
CNDT #7

12 367°F
13 377°F
14 328°F

=====
357°F

GROUP 3
CNDT #9

15 410°F
16 412°F
17 377°F

=====
400°F

GROUP 4
CNDT #10

18 413°F
19 432°F
20 403°F

=====
416°F

GROUP 5
CNDT #12

21 447°F
22 488°F
23 431°F

=====
455°F

GROUP 6
CNDT#4 B#8

24 314°F
25 323°F
26 314°F

=====
317°F

GROUP 7
CNDT#7 B#8

27 339°F
28 347°F
29 319°F

=====
335°F

GROUP 8
CNDT#9 B#8

30 402°F
31 402°F
32 373°F

=====
392°F

GROUP 9
CDT#10 B#8

33 393°F
34 414°F
35 393°F

=====
400°F

GROUP 10
CDT#12 B#8

36 445°F
37 487°F
38 427°F

=====
453°F

64 MINUTES

GROUP 0
FURNACE

0 1704°F
1 1701°F
2 1707°F
3 1711°F
4 1708°F
5 1708°F
6 1720°F
7 1716°F
8 1712°F

=====
1710°F

GROUP 1
CNDT #4

9 342°F
10 350°F
11 338°F

=====
343°F

GROUP 2
CNDT #7

12 374°F
13 384°F
14 335°F

=====
364°F

GROUP 3
CNDT #9

15 417°F
16 419°F
17 384°F

=====
407°F

GROUP 4
CNDT #10

18 420°F
19 440°F
20 409°F

=====
423°F

GROUP 5
CNDT #12

21 456°F
22 498°F
23 439°F

=====
464°F

GROUP 6
CNDT#4 B#8

24 322°F
25 330°F
26 321°F

=====
324°F

GROUP 7
CNDT#7 B#8

27 346°F
28 355°F
29 327°F

=====
343°F

GROUP 8
CNDT#9 B#8

30 409°F
31 410°F
32 381°F

=====
400°F

GROUP 9
CDT#10 B#8

33 401°F
34 422°F
35 402°F

=====
408°F

GROUP 10
CDT#12 B#8

36 454°F
37 501°F
38 436°F

=====
464°F

65 MINUTES

GROUP 0
FURNACE

0 1705°F
1 1702°F
2 1708°F
3 1712°F
4 1708°F
5 1709°F
6 1721°F
7 1717°F
8 1713°F

=====
1711°F

GROUP 1
CNDT #4

9 348°F
10 356°F
11 344°F

=====
349°F

GROUP 2
CNDT #7

12 380°F
13 389°F
14 341°F

=====
370°F

GROUP 3
CNDT #9

15 423°F
16 425°F
17 389°F

=====
412°F

GROUP 4
CNDT #10

18 427°F
19 447°F
20 414°F

=====
429°F

GROUP 5
CNDT #12

21 463°F
22 507°F
23 446°F

=====
472°F

GROUP 6
CNDT #4 B#8

24 328°F
25 336°F
26 328°F

=====
331°F

GROUP 7
CNDT #7 B#8

27 353°F
28 361°F
29 333°F

=====
349°F

GROUP 8
CNDT #9 B#8

30 415°F
31 416°F
32 387°F

=====
406°F

GROUP 9
CNDT #10 B#8

33 407°F
34 429°F
35 409°F

=====
415°F

GROUP 10
CNDT #12 B#8

36 461°F
37 512°F
38 443°F

=====
472°F

66 MINUTES

GROUP 0
FURNACE

0 1706°F
1 1704°F
2 1709°F
3 1713°F
4 1710°F
5 1710°F
6 1723°F
7 1718°F
8 1715°F

=====
1712°F

GROUP 1
CNDT #4

9 354°F
10 361°F
11 350°F

=====
355°F

GROUP 2
CNDT #7

12 386°F
13 396°F
14 347°F

=====
376°F

GROUP 3
CNDT #9

15 430°F
16 432°F
17 395°F

=====
419°F

GROUP 4
CNDT #10

18 434°F
19 455°F
20 421°F

=====
437°F

GROUP 5
CNDT #12

21 471°F
22 518°F
23 454°F

=====
481°F

GROUP 6
CNDT #4 B#8

24 335°F
25 343°F
26 334°F

=====
337°F

GROUP 7
CNDT #7 B#8

27 361°F
28 368°F
29 340°F

=====
356°F

GROUP 8
CNDT #9 B#8

30 423°F
31 424°F
32 395°F

=====
414°F

GROUP 9
CNDT #10 B#8

33 415°F
34 437°F
35 418°F

=====
423°F

GROUP 10
CNDT #12 B#8

36 470°F
37 525°F
38 452°F

=====
482°F

67 MINUTES

GROUP 0
FURNACE

0 1709°F
1 1706°F
2 1712°F
3 1716°F
4 1712°F
5 1713°F
6 1726°F
7 1721°F
8 1716°F

=====
1715°F

GROUP 1
CNDT #4

9 360°F
10 367°F
11 355°F

=====
361°F

GROUP 2
CNDT #7

12 392°F
13 401°F
14 353°F

=====
382°F

GROUP 3
CNDT #9

15 436°F
16 439°F
17 401°F

=====
425°F

GROUP 4
CNDT #10

18 441°F
19 461°F
20 427°F

=====
443°F

GROUP 5
CNDT #12

21 479°F
22 529°F
23 461°F

=====
490°F

GROUP 6
CNDT#4 B#8

24 341°F
25 349°F
26 340°F

=====
343°F

GROUP 7
CNDT#7 B#8

27 367°F
28 375°F
29 347°F

=====
363°F

GROUP 8
CNDT#9 B#8

30 429°F
31 430°F
32 402°F

=====
420°F

GROUP 9
CDT#10 B#8

33 422°F
34 444°F
35 425°F

=====
430°F

GROUP 10

CDT#12 B#8

36 478°F
37 535°F
38 459°F

=====
491°F

68 MINUTES

GROUP 0
FURNACE

0 1713°F
1 1710°F
2 1716°F
3 1720°F
4 1716°F
5 1717°F
6 1730°F
7 1725°F
8 1722°F

=====
1719°F

GROUP 1
CNDT #4

9 366°F
10 373°F
11 361°F

=====
367°F

GROUP 2
CNDT #7

12 398°F
13 407°F
14 359°F

=====
388°F

GROUP 3
CNDT #9

15 443°F
16 446°F
17 407°F

=====
432°F

GROUP 4
CNDT #10

18 448°F
19 469°F
20 434°F

=====
450°F

GROUP 5
CNDT #12

21 487°F
22 540°F
23 470°F

=====
499°F

GROUP 6
CNDT#4 B#8

24 348°F
25 355°F
26 347°F

=====
350°F

GROUP 7
CNDT#7 B#8

27 374°F
28 382°F
29 354°F

=====
370°F

GROUP 8
CNDT#9 B#8

30 436°F
31 438°F
32 409°F

=====
428°F

GROUP 9
CDT#10 B#8

33 430°F
34 452°F
35 432°F

=====
438°F

GROUP 10

CDT#12 B#8

36 487°F
37 548°F
38 468°F

=====
501°F

69 MINUTES

GROUP 0
FURNACE

0 1716°F
1 1714°F
2 1719°F
3 1723°F
4 1720°F
5 1720°F
6 1733°F
7 1728°F
8 1725°F

=====
1722°F

GROUP 1
CNDT #4

9 371°F
10 378°F
11 366°F

=====
372°F

GROUP 2
CNDT #7

12 403°F
13 413°F
14 365°F

=====
394°F

GROUP 3
CNDT #9

15 449°F
16 452°F
17 412°F

=====
438°F

GROUP 4
CNDT #10

18 454°F
19 475°F
20 441°F

=====
457°F

GROUP 5
CNDT #12

21 495°F
22 550°F
23 477°F

=====
507°F

GROUP 6
CNDT#4 B#8

24 354°F
25 361°F
26 353°F

=====
356°F

GROUP 7
CNDT#7 B#8

27 380°F
28 389°F
29 360°F

=====
376°F

GROUP 8
CNDT#9 B#8

30 441°F
31 444°F
32 416°F

=====
434°F

GROUP 9
CDT#10 B#8

33 436°F
34 459°F
35 438°F

=====
444°F

GROUP 10
CDT#12 B#8

36 497°F
37 558°F
38 475°F

=====
510°F

70 MINUTES

GROUP 0
FURNACE

0 1719°F
1 1717°F
2 1722°F
3 1726°F
4 1722°F
5 1723°F
6 1736°F
7 1731°F
8 1728°F

=====
1725°F

GROUP 1
CNDT #4

9 377°F
10 383°F
11 371°F

=====
377°F

GROUP 2
CNDT #7

12 409°F
13 419°F
14 371°F

=====
400°F

GROUP 3
CNDT #9

15 456°F
16 458°F
17 418°F

=====
444°F

GROUP 4
CNDT #10

18 461°F
19 483°F
20 448°F

=====
464°F

GROUP 5
CNDT #12

21 504°F
22 560°F
23 485°F

=====
516°F

GROUP 6
CNDT#4 B#8

24 360°F
25 367°F
26 359°F

=====
362°F

GROUP 7
CNDT#7 B#8

27 387°F
28 397°F
29 367°F

=====
384°F

GROUP 8
CNDT#9 B#8

30 448°F
31 451°F
32 423°F

=====
441°F

GROUP 9
CDT#10 B#8

33 444°F
34 467°F
35 446°F

=====
452°F

GROUP 10
CDT#12 B#8

36 509°F
37 571°F
38 484°F

=====
521°F

71 MINUTES

GROUP 0
FURNACE

0 1722°F
1 1720°F
2 1725°F
3 1729°F
4 1725°F
5 1726°F
6 1740°F
7 1734°F
8 1732°F

=====
1728°F

GROUP 1
CNDT #4

9 382°F
10 389°F
11 377°F

=====
383°F

GROUP 2
CNDT #7

12 414°F
13 425°F
14 376°F

=====
405°F

GROUP 3
CNDT #9

15 462°F
16 464°F
17 423°F

=====
450°F

GROUP 4
CNDT #10

18 468°F
19 490°F
20 454°F

=====
471°F

GROUP 5
CNDT #12

21 512°F
22 569°F
23 492°F

=====
524°F

GROUP 6
CNDT#4 B#8

24 366°F
25 373°F
26 364°F

=====
368°F

GROUP 7
CNDT#7 B#8

27 393°F
28 404°F
29 372°F

=====
390°F

GROUP 8
CNDT#9 B#8

30 454°F
31 457°F
32 429°F

=====
447°F

GROUP 9
CDT#10 B#8

33 450°F
34 474°F
35 452°F

=====
459°F

GROUP 10
CDT#12 B#8

36 518°F
37 582°F
38 491°F

=====
530°F

72 MINUTES

GROUP 0
FURNACE

0 1731°F
1 1728°F
2 1734°F
3 1737°F
4 1734°F
5 1735°F
6 1748°F
7 1743°F
8 1740°F

=====
1737°F

GROUP 1
CNDT #4

9 387°F
10 394°F
11 382°F

=====
388°F

GROUP 2
CNDT #7

12 420°F
13 432°F
14 382°F

=====
411°F

GROUP 3
CNDT #9

15 468°F
16 471°F
17 430°F

=====
456°F

GROUP 4
CNDT #10

18 475°F
19 497°F
20 462°F

=====
478°F

GROUP 5
CNDT #12

21 521°F
22 579°F
23 500°F

=====
533°F

GROUP 6
CNDT#4 B#8

24 373°F
25 379°F
26 370°F

=====
374°F

GROUP 7
CNDT#7 B#8

27 400°F
28 412°F
29 379°F

=====
397°F

GROUP 8
CNDT#9 B#8

30 461°F
31 464°F
32 436°F

=====
454°F

GROUP 9
CDT#10 B#8

33 458°F
34 482°F
35 460°F

=====
467°F

GROUP 10
CDT#12 B#8

36 529°F
37 595°F
38 501°F

=====
542°F

73 MINUTES

GROUP 0

FURNACE

0 1737°F
 1 1735°F
 2 1740°F
 3 1744°F
 4 1740°F
 5 1741°F
 6 1754°F
 7 1749°F
 8 1746°F

=====
 1743°F

GROUP 1

CNDT #4

9 393°F
 10 399°F
 11 386°F

=====
 393°F

GROUP 2

CNDT #7

12 426°F
 13 437°F
 14 387°F

=====
 417°F

GROUP 3

CNDT #9

15 474°F
 16 477°F
 17 435°F

=====
 462°F

GROUP 4

CNDT #10

18 481°F
 19 503°F
 20 468°F

=====
 484°F

GROUP 5

CNDT #12

21 529°F
 22 586°F
 23 508°F

=====
 541°F

GROUP 6

CNDT#4 B#8

24 378°F
 25 385°F
 26 376°F

=====
 380°F

GROUP 7

CNDT#7 B#8

27 406°F
 28 419°F
 29 385°F

=====
 403°F

GROUP 8

CNDT#9 B#8

30 466°F
 31 470°F
 32 442°F

=====
 459°F

GROUP 9

CDT#10 B#8

33 464°F
 34 490°F
 35 466°F

=====
 473°F

GROUP 10

CDT#12 B#8

36 539°F
 37 606°F
 38 507°F

=====
 551°F

74 MINUTES

GROUP 0

FURNACE

0 1740°F
 1 1738°F
 2 1744°F
 3 1747°F
 4 1743°F
 5 1743°F
 6 1757°F
 7 1752°F
 8 1749°F

=====
 1746°F

GROUP 1

CNDT #4

9 398°F
 10 404°F
 11 391°F

=====
 398°F

GROUP 2

CNDT #7

12 432°F
 13 443°F
 14 392°F

=====
 422°F

GROUP 3

CNDT #9

15 480°F
 16 483°F
 17 442°F

=====
 468°F

GROUP 4

CNDT #10

18 488°F
 19 510°F
 20 474°F

=====
 491°F

GROUP 5

CNDT #12

21 538°F
 22 595°F
 23 516°F

=====
 550°F

GROUP 6

CNDT#4 B#8

24 385°F
 25 392°F
 26 382°F

=====
 386°F

GROUP 7

CNDT#7 B#8

27 412°F
 28 425°F
 29 392°F

=====
 410°F

GROUP 8

CNDT#9 B#8

30 473°F
 31 476°F
 32 449°F

=====
 466°F

GROUP 9

CDT#10 B#8

33 471°F
 34 498°F
 35 473°F

=====
 481°F

GROUP 10

CDT#12 B#8

36 550°F
 37 619°F
 38 516°F

=====
 562°F

75 MINUTES

GROUP 0
FURNACE

0 1740°F
1 1738°F
2 1743°F
3 1746°F
4 1743°F
5 1743°F
6 1758°F
7 1752°F
8 1749°F

=====
1746°F

GROUP 1
CNDT #4

9 403°F
10 409°F
11 395°F

=====
402°F

GROUP 2
CNDT #7

12 438°F
13 449°F
14 397°F

=====
428°F

GROUP 3
CNDT #9

15 486°F
16 488°F
17 447°F

=====
474°F

GROUP 4
CNDT #10

18 494°F
19 516°F
20 481°F

=====
497°F

GROUP 5
CNDT #12

21 546°F
22 602°F
23 523°F

=====
557°F

GROUP 6
CNDT#4 B#8

24 391°F
25 398°F
26 387°F

=====
392°F

GROUP 7
CNDT#7 B#8

27 417°F
28 430°F
29 397°F

=====
415°F

GROUP 8
CNDT#9 B#8

30 478°F
31 482°F
32 454°F

=====
471°F

GROUP 9
CDT#10 B#8

33 477°F
34 504°F
35 479°F

=====
487°F

GROUP 10
CDT#12 B#8

36 560°F
37 629°F
38 523°F

=====
571°F

76 MINUTES

GROUP 0
FURNACE

0 1741°F
1 1739°F
2 1744°F
3 1748°F
4 1744°F
5 1745°F
6 1759°F
7 1753°F
8 1750°F

=====
1747°F

GROUP 1
CNDT #4

9 409°F
10 415°F
11 400°F

=====
408°F

GROUP 2
CNDT #7

12 443°F
13 455°F
14 402°F

=====
433°F

GROUP 3
CNDT #9

15 493°F
16 494°F
17 454°F

=====
480°F

GROUP 4
CNDT #10

18 500°F
19 522°F
20 488°F

=====
503°F

GROUP 5
CNDT #12

21 554°F
22 612°F
23 531°F

=====
566°F

GROUP 6
CNDT#4 B#8

24 397°F
25 404°F
26 393°F

=====
398°F

GROUP 7
CNDT#7 B#8

27 423°F
28 436°F
29 404°F

=====
421°F

GROUP 8
CNDT#9 B#8

30 485°F
31 489°F
32 461°F

=====
478°F

GROUP 9
CDT#10 B#8

33 484°F
34 511°F
35 489°F

=====
495°F

GROUP 10
CDT#12 B#8

36 572°F
37 641°F
38 532°F

=====
582°F

77 MINUTES

GROUP 0

FURNACE

0 1743°F
 1 1741°F
 2 1746°F
 3 1749°F
 4 1745°F
 5 1746°F
 6 1761°F
 7 1754°F
 8 1752°F

=====
 1749°F

GROUP 1

CNDT #4

9 414°F
 10 420°F
 11 404°F

=====
 413°F

GROUP 2

CNDT #7

12 449°F
 13 460°F
 14 406°F

=====
 438°F

GROUP 3

CNDT #9

15 498°F
 16 500°F
 17 460°F

=====
 486°F

GROUP 4

CNDT #10

18 506°F
 19 528°F
 20 494°F

=====
 509°F

GROUP 5

CNDT #12

21 561°F
 22 621°F
 23 538°F

=====
 573°F

GROUP 6

CNDT#4 B#8

24 403°F
 25 409°F
 26 399°F

=====
 404°F

GROUP 7

CNDT#7 B#8

27 428°F
 28 442°F
 29 409°F

=====
 426°F

GROUP 8

CNDT#9 B#8

30 491°F
 31 495°F
 32 467°F

=====
 484°F

GROUP 9

CDT#10 B#8

33 491°F
 34 517°F
 35 496°F

=====
 501°F

GROUP 10

CDT#12 B#8

36 581°F
 37 652°F
 38 539°F

=====
 591°F

78 MINUTES

GROUP 0

FURNACE

0 1744°F
 1 1742°F
 2 1747°F
 3 1751°F
 4 1747°F
 5 1748°F
 6 1762°F
 7 1755°F
 8 1753°F

=====
 1750°F

GROUP 1

CNDT #4

9 420°F
 10 426°F
 11 409°F

=====
 418°F

GROUP 2

CNDT #7

12 455°F
 13 466°F
 14 411°F

=====
 444°F

GROUP 3

CNDT #9

15 504°F
 16 506°F
 17 466°F

=====
 492°F

GROUP 4

CNDT #10

18 512°F
 19 535°F
 20 500°F

=====
 516°F

GROUP 5

CNDT #12

21 568°F
 22 633°F
 23 544°F

=====
 582°F

GROUP 6

CNDT#4 B#8

24 409°F
 25 415°F
 26 405°F

=====
 410°F

GROUP 7

CNDT#7 B#8

27 435°F
 28 448°F
 29 415°F

=====
 433°F

GROUP 8

CNDT#9 B#8

30 498°F
 31 503°F
 32 473°F

=====
 491°F

GROUP 9

CDT#10 B#8

33 499°F
 34 524°F
 35 503°F

=====
 509°F

GROUP 10

CDT#12 B#8

36 593°F
 37 665°F
 38 548°F

=====
 602°F

79 MINUTES

GROUP 0
FURNACE

0 1745°F
1 1744°F
2 1749°F
3 1752°F
4 1748°F
5 1749°F
6 1764°F
7 1757°F
8 1755°F
=====

1751°F

GROUP 1
CNDT #4

9 425°F
10 431°F
11 413°F

=====

423°F

GROUP 2
CNDT #7

12 460°F
13 472°F
14 415°F

=====

449°F

GROUP 3
CNDT #9

15 509°F
16 511°F
17 471°F

=====

497°F

GROUP 4
CNDT #10

18 517°F
19 540°F
20 506°F

=====

521°F

GROUP 5
CNDT #12

21 574°F
22 645°F
23 550°F
=====

590°F

GROUP 6
CNDT#4 B#8

24 414°F
25 420°F
26 410°F
=====

415°F

GROUP 7
CNDT#7 B#8

27 440°F
28 454°F
29 421°F
=====

438°F

GROUP 8
CNDT#9 B#8

30 503°F
31 508°F
32 479°F
=====

497°F

GROUP 9
CDT#10 B#8

33 504°F
34 529°F
35 509°F
=====

514°F

GROUP 10

CDT#12 B#8
36 603°F
37 676°F
38 554°F
=====

611°F

80 MINUTES

GROUP 0
FURNACE

0 1748°F
1 1747°F
2 1752°F
3 1755°F
4 1751°F
5 1752°F
6 1767°F
7 1760°F
8 1758°F
=====

1754°F

GROUP 1
CNDT #4

9 431°F
10 437°F
11 418°F

=====

429°F

GROUP 2
CNDT #7

12 466°F
13 478°F
14 421°F

=====

455°F

GROUP 3
CNDT #9

15 514°F
16 517°F
17 478°F

=====

503°F

GROUP 4
CNDT #10

18 523°F
19 546°F
20 513°F

=====

527°F

GROUP 5
CNDT #12

21 580°F
22 662°F
23 556°F
=====

599°F

GROUP 6
CNDT#4 B#8

24 420°F
25 426°F
26 416°F
=====

421°F

GROUP 7
CNDT#7 B#8

27 447°F
28 460°F
29 427°F
=====

445°F

GROUP 8
CNDT#9 B#8

30 509°F
31 515°F
32 485°F
=====

503°F

GROUP 9
CDT#10 B#8

33 511°F
34 536°F
35 516°F
=====

521°F

GROUP 10

CDT#12 B#8
36 615°F
37 691°F
38 563°F
=====

623°F

81 MINUTES

GROUP 0
FURNACE

0 1752°F
1 1751°F
2 1756°F
3 1759°F
4 1755°F
5 1756°F
6 1771°F
7 1764°F
8 1762°F
=====
1758°F

GROUP 1

CNDT #4
9 437°F
10 442°F
11 423°F
=====
434°F

GROUP 2

CNDT #7
12 471°F
13 483°F
14 425°F
=====
460°F

GROUP 3

CNDT #9
15 519°F
16 522°F
17 483°F
=====
508°F

GROUP 4

CNDT #10
18 528°F
19 552°F
20 518°F
=====
533°F

GROUP 5

CNDT #12
21 587°F
22 688°F
23 561°F
=====
612°F

GROUP 6

CNDT#4 B#8
24 425°F
25 431°F
26 421°F
=====
426°F

GROUP 7

CNDT#7 B#8
27 452°F
28 465°F
29 432°F
=====
450°F

GROUP 8

CNDT#9 B#8
30 514°F
31 521°F
32 491°F
=====
509°F

GROUP 9

CDT#10 B#8
33 517°F
34 542°F
35 521°F
=====
527°F

GROUP 10

CDT#12 B#8
36 624°F
37 704°F
38 570°F
=====
633°F

82 MINUTES

GROUP 0
FURNACE

0 1755°F
1 1754°F
2 1759°F
3 1762°F
4 1758°F
5 1759°F
6 1774°F
7 1767°F
8 1765°F
=====
1761°F

GROUP 1

CNDT #4
9 442°F
10 448°F
11 428°F
=====
439°F

GROUP 2

CNDT #7
12 477°F
13 489°F
14 431°F
=====
466°F

GROUP 3

CNDT #9
15 524°F
16 528°F
17 489°F
=====
514°F

GROUP 4

CNDT #10
18 533°F
19 557°F
20 524°F
=====
538°F

GROUP 5

CNDT #12
21 594°F
22 718°F
23 566°F
=====
626°F

GROUP 6

CNDT#4 B#8
24 431°F
25 437°F
26 426°F
=====
431°F

GROUP 7

CNDT#7 B#8
27 458°F
28 472°F
29 438°F
=====
456°F

GROUP 8

CNDT#9 B#8
30 520°F
31 528°F
32 497°F
=====
515°F

GROUP 9

CDT#10 B#8
33 523°F
34 549°F
35 527°F
=====
533°F

GROUP 10

CDT#12 B#8
36 637°F
37 723°F
38 579°F
=====
646°F

83 MINUTES

GROUP 0
FURNACE

0 1758°F
1 1757°F
2 1761°F
3 1765°F
4 1760°F
5 1761°F
6 1777°F
7 1769°F
8 1768°F

=====
1764°F

GROUP 1
CNDT #4

9 448°F
10 453°F
11 433°F

=====
445°F

GROUP 2
CNDT #7

12 482°F
13 494°F
14 436°F

=====
471°F

GROUP 3
CNDT #9

15 528°F
16 534°F
17 495°F

=====
519°F

GROUP 4
CNDT #10

18 538°F
19 563°F
20 529°F

=====
543°F

GROUP 5
CNDT #12

21 603°F
22 737°F
23 570°F

=====
637°F

GROUP 6
CNDT#4 B#8

24 436°F
25 442°F
26 431°F

=====
436°F

GROUP 7
CNDT#7 B#8

27 463°F
28 477°F
29 443°F

=====
461°F

GROUP 8
CNDT#9 B#8

30 525°F
31 534°F
32 503°F

=====
521°F

GROUP 9
CDT#10 B#8

33 528°F
34 555°F
35 533°F

=====
539°F

GROUP 10
CDT#12 B#8

36 647°F
37 737°F
38 586°F

=====
657°F

84 MINUTES

GROUP 0
FURNACE

0 1760°F
1 1759°F
2 1764°F
3 1767°F
4 1763°F
5 1764°F
6 1779°F
7 1771°F
8 1770°F

=====
1766°F

GROUP 1
CNDT #4

9 453°F
10 459°F
11 438°F

=====
450°F

GROUP 2
CNDT #7

12 487°F
13 500°F
14 441°F

=====
476°F

GROUP 3
CNDT #9

15 533°F
16 539°F
17 501°F

=====
524°F

GROUP 4
CNDT #10

18 544°F
19 569°F
20 535°F

=====
549°F

GROUP 5
CNDT #12

21 615°F
22 759°F
23 574°F

=====
649°F

GROUP 6
CNDT#4 B#8

24 441°F
25 449°F
26 437°F

=====
442°F

GROUP 7
CNDT#7 B#8

27 469°F
28 484°F
29 449°F

=====
467°F

GROUP 8
CNDT#9 B#8

30 531°F
31 543°F
32 509°F

=====
528°F

GROUP 9
CDT#10 B#8

33 535°F
34 565°F
35 538°F

=====
546°F

GROUP 10
CDT#12 B#8

36 661°F
37 756°F
38 596°F

=====
671°F

85 MINUTES

GROUP 0
FURNACE
0 1762°F
1 1761°F
2 1766°F
3 1769°F
4 1765°F
5 1766°F
6 1781°F
7 1773°F
8 1772°F
=====

GROUP 1
CNDT #4
9 459°F
10 464°F
11 443°F
=====

GROUP 2
CNDT #7
12 492°F
13 505°F
14 446°F
=====

GROUP 3
CNDT #9
15 538°F
16 545°F
17 506°F
=====

GROUP 4
CNDT #10
18 548°F
19 575°F
20 539°F
=====

1768°F 455°F 481°F 530°F 554°F

GROUP 5
CNDT #12
21 636°F
22 777°F
23 579°F
=====

GROUP 6
CNDT#4 B#8
24 446°F
25 454°F
26 442°F
=====

GROUP 7
CNDT#7 B#8
27 475°F
28 490°F
29 454°F
=====

GROUP 8
CNDT#9 B#8
30 537°F
31 550°F
32 514°F
=====

GROUP 9
CDT#10 B#8
33 539°F
34 573°F
35 543°F
=====

664°F 447°F 473°F 534°F 552°F

GROUP 10
CDT#12 B#8
36 672°F
37 769°F
38 603°F
=====

681°F

86 MINUTES

GROUP 0
FURNACE
0 1765°F
1 1764°F
2 1769°F
3 1772°F
4 1768°F
5 1768°F
6 1784°F
7 1776°F
8 1775°F
=====

GROUP 1
CNDT #4
9 464°F
10 470°F
11 449°F
=====

GROUP 2
CNDT #7
12 497°F
13 511°F
14 452°F
=====

GROUP 3
CNDT #9
15 543°F
16 551°F
17 512°F
=====

GROUP 4
CNDT #10
18 553°F
19 584°F
20 544°F
=====

1771°F 461°F 487°F 535°F 560°F

GROUP 5
CNDT #12
21 671°F
22 794°F
23 584°F
=====

GROUP 6
CNDT#4 B#8
24 452°F
25 460°F
26 448°F
=====

GROUP 7
CNDT#7 B#8
27 481°F
28 497°F
29 460°F
=====

GROUP 8
CNDT#9 B#8
30 543°F
31 560°F
32 521°F
=====

GROUP 9
CDT#10 B#8
33 545°F
34 584°F
35 549°F
=====

683°F 453°F 479°F 541°F 559°F

GROUP 10
CDT#12 B#8
36 688°F
37 786°F
38 614°F
=====

696°F

87 MINUTES

GROUP 0
FURNACE
0 1768°F
1 1767°F
2 1771°F
3 1774°F
4 1770°F
5 1771°F
6 1787°F
7 1778°F
8 1778°F
=====

GROUP 1
CNDT #4
9 469°F
10 475°F
11 453°F
=====

GROUP 2
CNDT #7
12 502°F
13 517°F
14 457°F
=====

GROUP 3
CNDT #9
15 547°F
16 557°F
17 516°F
=====

GROUP 4
CNDT #10
18 557°F
19 596°F
20 548°F
=====

1774°F 466°F 492°F 540°F 567°F

GROUP 5
CNDT #12
21 693°F
22 811°F
23 590°F
=====

GROUP 6
CNDT#4 B#8
24 457°F
25 464°F
26 453°F
=====

GROUP 7
CNDT#7 B#8
27 486°F
28 503°F
29 465°F
=====

GROUP 8
CNDT#9 B#8
30 550°F
31 568°F
32 525°F
=====

GROUP 9
CDT#10 B#8
33 550°F
34 595°F
35 554°F
=====

698°F 458°F 485°F 548°F 566°F

GROUP 10
CDT#12 B#8
36 701°F
37 802°F
38 623°F
=====

709°F

88 MINUTES

GROUP 0
FURNACE
0 1770°F
1 1769°F
2 1774°F
3 1777°F
4 1772°F
5 1774°F
6 1789°F
7 1781°F
8 1781°F
=====

GROUP 1
CNDT #4
9 475°F
10 480°F
11 459°F
=====

GROUP 2
CNDT #7
12 507°F
13 522°F
14 462°F
=====

GROUP 3
CNDT #9
15 552°F
16 563°F
17 522°F
=====

GROUP 4
CNDT #10
18 562°F
19 618°F
20 553°F
=====

1776°F 471°F 497°F 546°F 578°F

GROUP 5
CNDT #12
21 713°F
22 830°F
23 598°F
=====

GROUP 6
CNDT#4 B#8
24 462°F
25 470°F
26 458°F
=====

GROUP 7
CNDT#7 B#8
27 492°F
28 510°F
29 471°F
=====

GROUP 8
CNDT#9 B#8
30 558°F
31 577°F
32 532°F
=====

GROUP 9
CDT#10 B#8
33 556°F
34 608°F
35 560°F
=====

714°F 463°F 491°F 556°F 575°F

GROUP 10
CDT#12 B#8
36 717°F
37 821°F
38 637°F
=====

725°F

39 MINUTES

GROUP 0
FURNACE

0 1773°F
1 1772°F
2 1776°F
3 1778°F
4 1774°F
5 1776°F
6 1792°F
7 1783°F
8 1783°F

=====
1779°F

GROUP 1
CNDT #4

9 480°F
10 486°F
11 463°F

=====
476°F

GROUP 2
CNDT #7

12 511°F
13 527°F
14 467°F

=====
502°F

GROUP 3
CNDT #9

15 556°F
16 569°F
17 526°F

=====
550°F

GROUP 4
CNDT #10

18 566°F
19 638°F
20 557°F

=====
587°F

GROUP 5
CNDT #12

21 729°F
22 846°F
23 608°F

=====
728°F

GROUP 6
CNDT#4 B#8

24 466°F
25 475°F
26 463°F

=====
459°F

GROUP 7
CNDT#7 B#8

27 497°F
28 516°F
29 475°F

=====
496°F

GROUP 8
CNDT#9 B#8

30 565°F
31 585°F
32 537°F

=====
562°F

GROUP 9
CDT#10 B#8

33 562°F
34 620°F
35 565°F

=====
582°F

GROUP 10

CDT#12 B#8
36 730°F
37 838°F
38 649°F

=====
739°F

90 MINUTES

GROUP 0
FURNACE

0 1774°F
1 1774°F
2 1778°F
3 1781°F
4 1776°F
5 1778°F
6 1793°F
7 1785°F
8 1784°F

=====
1780°F

GROUP 1
CNDT #4

9 485°F
10 491°F
11 469°F

=====
482°F

GROUP 2
CNDT #7

12 516°F
13 534°F
14 473°F

=====
508°F

GROUP 3
CNDT #9

15 561°F
16 575°F
17 531°F

=====
556°F

GROUP 4
CNDT #10

18 572°F
19 659°F
20 562°F

=====
598°F

GROUP 5
CNDT #12

21 748°F
22 864°F
23 628°F

=====
747°F

GROUP 6
CNDT#4 B#8

24 472°F
25 481°F
26 469°F

=====
474°F

GROUP 7
CNDT#7 B#8

27 504°F
28 524°F
29 481°F

=====
503°F

GROUP 8
CNDT#9 B#8

30 574°F
31 595°F
32 543°F

=====
571°F

GROUP 9
CDT#10 B#8

33 570°F
34 637°F
35 572°F

=====
593°F

GROUP 10

CDT#12 B#8
36 747°F
37 857°F
38 665°F

=====
756°F