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Temperature Measurements in Fire Resistance Tests on Small-Scale, Insulated and Non-Insulated, Regular Gypsum Board Assemblies

by M.A. Sultan, E.M.A. Denham, R.C. Monette and D.W. Morwick

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TEMPERATURE MEASUREMENTS IN FIRE RESISTANCE TESTS ON SMALL-SCALE, INSULATED AND NON-INSULATED, REGULAR GYPSUM BOARD ASSEMBLIES

ABSTRACT

This report presents the temperature measurements from fire resistance tests conducted at the National Fire Laboratory (NFL) on insulated and non-insulated, small-scale, regular gypsum board protected assemblies. Assemblies studied were 2x2 (two layers of board on each of the exposed and unexposed sides) on wood and on lightweight steel studs. Three types of regular gypsum board were studied: 7.82 kg/m² without glass fibre in the gypsum board core, 7.35 kg/m² with glass fibre in the gypsum board core and 7.27 kg/m² without glass fibre in the gypsum board core. The insulations used were glass, mineral and cellulose (blown dry) fibres. The effect of using different insulations, type of studs, different mass per unit area of gypsum board and the presence of glass fibre in the core of the gypsum board on the fire performance of small-scale wallboard assemblies were addressed. The average temperatures on the unexposed surface, as well as on the inner-surfaces, are presented.

TEMPERATURE MEASUREMENTS IN FIRE RESISTANCE TESTS ON SMALL-SCALE, INSULATED AND NON-INSULATED REGULAR GYPSUM BOARD ASSEMBLIES

1 INTRODUCTION

A number of recent changes to the 1990 edition of the National Building Code of Canada (NBCC) and to CAN/CSA-A82.27-M91 Standard "Gypsum Board-Building Materials and Products" may have an effect on the fire performance of insulated and non-insulated gypsum board assemblies. One of the major issues is that the requirement for weight per unit area for gypsum board products has been removed. As well, there have been changes in the NBCC to increase the sound transmission ratings (STC) between dwelling units. These changes may have an impact on the fire resistance of both wall and floor assemblies referenced in Parts 3 and 9 of the NBCC, as well as the calculation methods in Chapter 2 of the Supplement to the NBCC.

As a result of these changes, a Joint Research Project between IRC/NRCC and 8 industry partners has been conducted with the primary objective of determining the impact that the various changes to the codes and standards may have had on the fire resistance ratings of insulated and non-insulated gypsum board wall assemblies. A number of full-and small-scale tests have been conducted to study the effect of different parameters, such as the installation of resilient channels, insulation in the wall cavity, gypsum board types and symmetrical and asymmetrical gypsum board installations.

This report presents the results of 7 small-scale fire tests conducted at the National Fire Laboratory, National Research Council Canada (NFL/NRCC), as part of the joint research project to determine the effect of using different insulations; glass, mineral and cellulose (dry application) fibre in the wall cavity; wood or steel studs; reduction in mass per unit area of regular gypsum board and the presence of glass fibre in the gypsum board core on the fire performance of the assemblies. The results of the fire performance of the small-scale assemblies are analyzed and presented. Other reports will deal with other issues in this project.

2 DESCRIPTION OF TEST ASSEMBLIES

The small-scale test assembly furnace set-up is shown in Figure 1.

2.1 Dimensions

Seven assemblies were constructed 914 mm high by 914 mm wide by 141 mm thick. The specific dimensions of each assembly are given in Figures 2 to 8.

2.2 Materials

Materials used in the assemblies were as follows.

2.2.1 Gypsum Board

Regular gypsum board conforming to the requirements of CSA standard CAN/CSA-A82.27-M91 [1] was used. Three type of regular gypsum board were considered: the firsts has a mass/unit area of 7.82 kg/m² with no glass fibre in the gypsum

core (Assembly S-03); the second, low density regular gypsum board with glass fibre in the gypsum board core, has a mass/unit area of 7.35 kg/m^2 (Assemblies S-01, S-02, S-32, S-33 and S-34) and the third, low density regular gypsum board without glass fibre in the gypsum board core, has a mass/unit area of 7.27 kg/m^2 (Assembly S-49). The thicknesses of the gypsum board used in the assemblies was 12.7 mm. Two layers of board were applied to each side of the studs.

2.2.2 Framing Materials

The steel studs used conformed to CGSB CAN/CGSB-7.1 [2] and the wood studs were nominal 2x4's (38 mm thick by 89 mm deep) and conformed to CSA 0141-1970 [3].

2.2.3 Insulation

Three types of insulation were used in three assemblies; Glass Fibre-R12 (Supplied by Fiberglass Canada Inc., Willowdale, Ontario with a mass per unit area of 1.08 kg/m^2), Mineral Fibre Roxul Plus-R13 (Supplied by Roxul Inc., Milton, Ontario and mass per unit area of 2.78 kg/m^2) and Cellulosic Fibre (Supplied by Thermo-Cell Insulation Ltd., Orleans, Ontario with a mass per unit area of 4.57 kg/m^2 and 5.25 kg/m^2 for wood stud and steel stud assemblies respectively). All of the types of insulation used conform to CSA-A101 [4]. Glass fibre insulation was used in Assembly S-32; Mineral fibre insulation was used in Assembly S-33; and Cellulosic Fibre Insulation (dry application) was used in Assembly S-34.

2.3 **Fabrication**

The small-scale assemblies were constructed using similar construction practices to those employed for full-scale fire test assemblies. All small-scale tests were non-load bearing.

2.3.1 Wood Stud Assemblies

The wood studs used in Assemblies S-02 and S-49 were 38 mm by 89 mm (SPF No. 1 and No. 2, S-Dry, QLMA Mill Grade 149) spaced at 600 mm O.C. in Assembly S-02 and spaced at 400 mm O.C. in Assembly S-49. To make up the required furnace width of 914 by 914 mm, an additional stud was added to each end (see Figure 3). The top and bottom plates were then added to complete the box assembly construction.

In Assembly S-02, both the exposed and unexposed sides had two gypsum board layers: base and face layers. The base layer was attached to the wood studs with Type S drywall screws, 41 mm long spaced at 600 mm O.C. along the edges and in the field of the board. Screw locations and gypsum board joints are shown in Figure 9 [5]. The face layer was attached to both the base layer and the studs with Type S drywall screws, 51 mm long spaced at 400 mm O.C. along the edges and in the field of the board. Screw heads on both the exposed and unexposed faces were covered with joint compound. Gypsum board joints were taped and also covered with joint compound.

In Assembly S-49, both the exposed and unexposed sides had two gypsum board layers: base and face layers. The base layer was attached to the wood studs with Type S drywall screws, 41 mm long spaced at 600 mm O.C. in the field of the board and along the edges. Screw locations and gypsum board joints are shown in Figure 10 [5]. The face layer was attached to both the base layer and the studs with Type S drywall screws, 51 mm long spaced at 400 mm O.C. along the edges and in the field of the board. Screw

heads on both the exposed and unexposed faces were covered with joint compound. Gypsum board joints were taped and also covered with joint compound.

2.3.2 Steel Stud Assemblies

The steel studs used in Assemblies S-01, S-03, S-32 to S-34, S-46 and S-47 were light C sections, 90 mm by 30 mm by 0.6 mm thick and were spaced at 600 mm O.C.. To make up the required furnace width of 914 by 914 mm, an additional stud was added to each end. The top and bottom runners were then added to complete the box assembly construction.

In the steel stud assemblies, both the exposed and unexposed sides had two gypsum board layers: base and face layers. The base layer was attached to the studs with Type S drywall screws 25 mm long spaced at 300 mm O.C. along the edges and spaced at 600 mm O.C. in the field of the board. Screw locations and gypsum board joints are shown in Figure 11 [5]. The face layer was attached to both the base layer and the studs with Type S drywall screws 41 mm long spaced at 300 mm O.C. along the edges and in the field of the board. Screw heads on both the exposed and unexposed faces were covered with joint compound. Gypsum board joints were taped and also covered with joint compound.

2.3.3 Insulation

Mineral fibre and Glass fibre batts were 90 mm thick by 615 mm wide by 1220 mm long. The Cellulosic fibre insulation was blown into the cavity (blind fill), after the installation of the thermocouples.

2.4 Instrumentation

Type K (20 gauge) chromel-alumel thermocouples, with a thickness of 0.91 mm, were used for measuring temperatures at a number of locations throughout each assembly. Inside the cavities, the thermocouples were attached to 2 wire hangers, installed midway between the studs and at mid depth of the studs, at distances of 1/4 and 3/4 of the height of the wall. By providing tension to the hanger wire, the thermocouples were positioned flush with the surface of the wallboard.

Thermocouples located on stud/wallboard faces and those located between wallboard layers were taped into position and then the wallboard was screwed to the stud or the face wallboard layer.

A number of small holes, 12.7 mm diameter, were drilled through the wood studs at the bottom of Assemblies S-02 and S-49 to allow the thermocouple wiring to exit the assembly.

Thermocouple locations are shown for each assembly in Figures 2 to 8. Thermocouple locations on the unexposed surface for all assemblies are shown in Figure 12.

3 TEST APPARATUS

The tests were carried out by exposing the assemblies to heat in a propane-heated, fire brick lined vertical furnace with an 810 by 810 mm opening. The assemblies were sealed at the edges against the furnace with ceramic fibre blanket. The furnace temperature was measured by two 20 gauge shielded thermocouples, located near the vertical centreline of the furnace and 300 mm back from the exposed surface of the assembly. The average of the two thermocouple temperatures was used to control the furnace temperature.

4 TEST CONDITIONS AND PROCEDURES

4.1 Fire Exposure

The ambient temperature at the start of each test was approximately 22°C. During the test, the wall assembly was exposed to heating on the exposed side, in such a way that the average temperature in the furnace followed as closely as possible the CAN/ULC-S101 [6] standard temperature-time curve.

4.2 Failure Criteria

The failure criteria for the small-scale tests were derived from CAN/ULC-S101-M89 [6]. The assembly was considered to have failed if a single point thermocouple temperature reading on the unexposed face rose above 180°C or the average temperature of the 5 thermocouples readings under the insulated pads on the unexposed face rose 140°C above the ambient temperature or there was passage of flame or gasses hot enough to ignite cotton waste. The tests were run beyond the failure temperatures referred to above to provide additional performance data.

4.3 Recording of Results

The furnace and wall assembly temperatures were recorded at 1 minute intervals using LABTECH NOTEBOOK data acquisition software and a Fluke Helios-I data acquisition system. Individual thermocouple values and average furnace temperature values as well as the average surface temperature values for the 7 assemblies are listed in Tables 1 to 14.

5 RESULTS AND DISCUSSION

The results of the 7 small-scale fire tests are summarized in Table 15 in which the single point and average failure times are given for each assembly.

The average surface and inner-surface temperature distributions recorded throughout the tests are plotted in Figures 13 to 20. Detailed temperature distributions for all five thermocouples under the insulated pads on the unexposed surface are also plotted in Figures 13 to 20.

Fire Performance of Insulated Small-Scale Assemblies

The fire performance of insulated and non-insulated small-scale assemblies is shown in Figure 20.

Glass Fibre Insulation - Tests S-32 and S-01 were carried out to investigate the effect of the installation of glass fibre insulation (GFI) in a wall cavity on the fire performance of double layer (2x2), regular light gypsum board, small-scale wall assemblies. The temperature failure criterion was reached at 74 min for Test S-32 and at 82 min for Test S-01. These results suggest that, in small-scale, double layer, regular light gypsum, assemblies, the glass fibre insulation has a negative effect on the fire resistance performance compared to a non-insulated assembly.

With the small-scale tests, failure is predominantly due to heat transfer through the gypsum board layers. With the glass fibre insulation in the wall cavity, there is a more rapid temperature increase in the gypsum board on the fire-exposed side. As a result, the rate of calcination of the regular gypsum board increases and causes premature failure/splitting of the gypsum layers on the fire-exposed side and melting of the insulation. This then speeds up the rate of heat transfer through the layers of the assembly causing premature failure of the assembly.

Mineral Fibre Insulation - Tests S-33 and S-01 were conducted to investigate the effect of the installation of mineral fibre insulation (MFI) in the wall cavity on the fire performance of double layer, regular light gypsum board, small-scale wall assemblies. The temperature failure criterion was reached at 98 min for Test S-33 and at 82 min for Test S-01. These results suggest that, in small-scale double layer assemblies with 40 mm thick mineral fibre insulation in the wall cavity, the addition of mineral fibre generally has a positive effect on the fire resistance performance compared to the baseline Assembly S-01.

Cellulose Fibre Insulation - Tests S-34 and S-01 were conducted to investigate the effect of the installation of cellulose fibre insulation (CFI) in the wall cavity on the fire performance of double layer, regular light gypsum board, small-scale wall assemblies. The temperature failure criterion was reached at 102 min for Test S-34 and at 82 min for Test S-01. These results suggest that, in small-scale, double layer, regular light gypsum board, assemblies with 90 mm thick cellulose fibre insulation in the wall cavity, the addition of cellulose fibre insulation (blown dry) has a positive effect on the fire resistance performance compared to the baseline Assembly S-01.

Fire Performance of Wood and Steel Studs Non-Insulated Small-Scale Assemblies

Tests S-02 (wood stud) and S-01 (steel stud) were carried out to investigate the effect of stud type on the fire performance of double layer, regular light gypsum board, small-scale wall assemblies. The temperature failure criterion was reached at 88 min for Test S-02 and at 82 min for Test S-01. These results suggest that, in small-scale, double regular light gypsum board assemblies, the fire resistance performance of assemblies with wood studs is slightly higher than assemblies with steel studs.

Fire Performance Regular Gypsum Board with Different Mass/Unit Area in Non-Insulated Small-Scale Assemblies

Tests S-03 (7.82 kg/m²) and S-01 (7.35 kg/m²) were conducted to investigate the effect of the reduction in the mass/unit area of regular gypsum board on the fire

performance of double layer small-scale gypsum board wall assemblies. The temperature failure criterion was reached at 104 min for Test S-03 and at 82 min for Test S-01. These results, as shown in Figure 20, suggest that, in small-scale, double regular gypsum board layer assemblies, the reduction in the mass/unit area caused a negative effect on the fire resistance performance.

Fire Performance of Light Weight Gypsum Board with and without Glass Fibre in the Gypsum Board Core (Non-insulated Small-Scale Assemblies)

Tests S-01 and S-49 were carried out to investigate the effect of the presence of glass fibre in the gypsum board core on the fire performance of double layer gypsum board on steel stud, small-scale assemblies. Assembly S-01 was regular low density gypsum board with glass fibre in the gypsum board and a mass/unit area of 7.35 kg/m^2 . Assembly S-49 contained low density regular gypsum board without glass fibre in the gypsum board and had a mass/unit area of 7.27 kg/m^2 . The temperature failure criterion was reached at 87 min for Test S-49 (no glass fibre in gypsum core) and at 88 min for Test S-02 (with glass fibre in the gypsum board core). These results, as shown in Figure 22, suggest that, in small-scale double layer assemblies, the presence of glass fibre in light weight gypsum board did not show an effect on the fire performance.

REFERENCES

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2. CAN/CGSB-7.1-M86, Cold Formed Steel Framing Components. Canadian General Standards Board, Ottawa, Ontario, 1986.
3. CSA 0141-1970, Softwood Lumber, Canadian Standards Association, Rexdale, Ontario, 1970.
4. CSA-A101-M83, Thermal Insulation, Canadian Standards Association, Rexdale, Ontario, 1983.
5. CAN/CSA-A82.31-M91, Gypsum Board Application, Canadian Standards Association, Rexdale, Ontario, 1991.
6. CAN/ULC-S101-M89, Standard Methods of Fire Endurance Tests of Building Construction and Materials. Underwriters Laboratories of Canada, Scarborough, Ontario, 1989.

Table 1. Temperatures Measured in Assembly S-01, Steel Stud, 2x2 Gypsum Board Layers, No Resilient Channels.

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	101.8	22.4	22.5	22.3	22.4	22.3	21.6	22.2	21.9	22.0	34.5	32.4	25.9	25.1	24.4	23.7	23.4	23.1	22.6	22.6	5.8
1	144.6	22.4	22.5	22.3	22.4	22.4	21.7	22.2	21.9	22.1	36.3	34.0	26.7	25.5	24.7	24.0	23.5	23.2	22.6	22.6	3.3
2	232.0	22.4	22.5	22.3	22.3	22.4	21.7	22.3	22.0	22.1	40.7	37.3	27.3	26.3	25.4	23.6	23.9	23.4	22.7	22.6	***
3	331.9	22.4	22.5	22.4	22.4	22.4	21.7	22.3	22.0	22.2	50.7	45.2	28.8	26.8	27.7	24.8	25.3	24.1	22.7	22.7	***
4	435.4	22.5	22.5	22.4	22.4	22.5	21.6	22.3	21.9	22.2	74.0	62.3	31.2	28.6	26.7	25.4	24.6	24.0	22.8	22.8	***
5	537.8	22.5	22.6	22.4	22.5	22.5	21.8	22.6	22.1	22.3	93.8	88.9	40.8	33.1	29.8	27.5	26.4	24.9	22.9	22.9	***
6	569.8	22.5	22.6	22.4	22.5	22.5	21.8	23.0	22.1	22.4	95.0	97.4	59.4	49.0	38.9	32.4	32.8	28.3	23.4	23.1	***
7	602.7	22.6	22.7	22.5	22.5	22.6	21.9	23.7	22.2	22.9	96.1	97.6	74.0	67.6	49.4	40.4	41.6	33.9	25.0	23.6	***
8	633.7	22.7	22.8	22.6	22.7	22.7	22.1	24.5	22.3	23.6	99.2	99.2	81.8	77.0	56.5	48.0	49.1	40.0	30.3	24.8	***
9	646.5	22.9	23.1	22.8	22.9	23.0	22.3	25.6	22.5	24.5	102.8	100.4	84.8	81.2	61.7	53.7	54.8	45.7	38.1	26.4	***
10	702.8	23.4	23.7	23.2	23.4	23.5	22.7	27.1	22.9	25.8	104.4	102.1	85.4	82.8	65.5	57.1	59.1	51.1	45.8	28.4	***
11	711.0	24.0	24.4	23.8	24.0	24.2	23.0	28.3	23.3	26.9	107.6	104.5	86.0	83.2	68.3	60.1	62.4	54.6	52.8	30.4	***
12	722.7	25.0	25.5	24.5	24.8	25.1	23.5	29.3	23.7	27.6	112.5	107.7	86.5	83.4	70.5	62.7	65.2	57.5	57.5	32.6	***
13	741.3	26.1	26.8	25.5	25.9	26.3	24.4	31.1	24.6	29.0	118.8	110.8	87.1	83.8	71.9	64.9	67.4	59.8	60.9	34.7	***
14	744.3	27.5	28.4	26.7	27.2	27.9	25.2	32.3	25.4	30.2	126.3	117.1	87.5	84.2	73.3	67.1	69.0	61.1	64.1	36.8	***
15	754.9	29.1	30.3	28.1	28.7	29.6	25.8	33.9	26.6	31.3	137.1	124.1	88.1	84.6	74.6	68.4	70.1	62.8	65.4	38.9	***
16	763.1	30.9	32.4	29.7	30.4	31.5	26.8	35.2	27.7	32.4	153.2	134.5	88.4	84.9	75.8	69.3	70.9	63.9	67.1	40.9	***
17	767.9	32.8	34.5	31.4	32.1	33.6	27.4	36.0	28.7	33.4	166.8	155.1	87.9	85.5	78.2	70.8	73.7	65.9	69.8	42.6	***
18	776.5	34.7	36.6	33.1	33.8	35.7	28.5	37.0	29.5	34.3	190.0	186.6	90.6	86.7	80.9	73.0	77.2	68.7	74.2	44.6	***
19	799.5	36.7	38.8	34.9	35.6	37.8	29.2	38.9	30.7	35.6	196.6	206.4	93.9	90.0	82.9	75.2	79.7	70.7	77.5	46.8	***
20	790.1	38.8	41.3	36.8	37.5	40.1	30.9	40.0	32.1	37.3	194.1	231.1	94.0	92.2	84.7	77.4	81.5	72.2	79.6	49.0	***
21	795.5	41.2	44.0	38.9	39.6	42.7	32.5	41.8	33.4	38.4	201.0	257.4	94.4	93.1	86.2	79.6	82.6	73.6	80.9	51.1	***
22	801.8	43.6	46.7	41.1	41.7	45.2	33.2	42.6	34.8	40.0	218.6	280.2	95.0	94.0	87.4	81.4	83.4	75.5	81.7	53.2	***
23	806.8	46.1	49.5	43.5	43.9	47.7	33.2	43.1	35.2	40.0	239.9	302.3	95.7	94.6	88.3	83.2	84.1	77.4	82.2	55.6	***
24	812.7	48.6	52.1	45.8	46.3	50.3	34.2	45.0	37.0	41.6	260.7	325.7	96.3	95.1	89.6	84.5	84.5	79.0	82.4	56.7	***
25	816.1	50.8	54.4	48.3	48.7	52.5	34.6	45.4	37.8	42.3	280.8	349.8	97.2	95.1	90.6	85.7	84.7	80.0	82.3	58.7	***
26	821.3	52.7	56.5	50.6	50.7	53.9	34.6	47.1	39.2	43.4	299.7	372.7	99.2	95.0	91.7	86.6	84.7	80.7	82.0	60.5	***
27	826.1	54.3	58.3	52.7	52.6	55.2	33.6	46.7	38.5	43.3	316.2	387.1	104.2	95.5	92.7	87.4	84.9	81.2	81.7	62.0	***
28	829.9	55.9	59.9	54.7	54.6	56.9	35.8	48.9	39.4	45.1	346.5	409.8	109.2	96.5	94.0	87.9	84.9	81.8	81.7	63.1	***
29	825.2	57.3	61.1	56.4	56.3	57.9	36.3	50.3	42.1	45.4	371.4	426.6	113.5	99.7	95.7	88.8	85.0	82.0	81.6	64.1	***
30	827.8	58.0	62.1	57.8	57.2	58.3	36.5	50.4	42.8	46.3	388.7	438.4	117.5	104.4	97.9	89.6	85.0	82.9	81.9	65.1	***
31	845.0	59.4	62.9	59.1	58.9	59.1	36.0	51.5	42.6	46.0	400.9	445.3	120.6	110.6	99.2	90.7	85.2	83.0	82.3	65.8	***
32	843.4	59.5	63.5	60.0	59.5	59.0	35.8	51.3	42.8	46.2	415.4	452.7	122.8	115.2	100.9	92.1	85.3	83.4	82.6	66.5	***
33	849.7	59.8	64.0	60.7	59.6	59.3	35.8	50.9	42.6	46.3	429.2	457.6	125.2	119.0	102.3	93.8	85.5	83.8	83.0	67.0	***
34	856.3	59.6	64.5	61.2	59.4	59.4	36.2	52.8	43.8	47.6	441.0	462.2	127.1	122.0	103.6	95.6	85.8	84.2	83.5	67.6	***
35	858.0	60.1	64.7	61.8	60.1	59.8	35.1	52.5	43.7	47.5	452.6	467.8	129.3	125.1	105.4	97.5	86.1	84.8	84.0	68.0	***
36	858.3	60.4	65.0	62.2	60.4	59.9	35.9	52.4	43.9	47.6	463.5	474.5	132.2	128.2	108.6	100.1	86.0	85.0	84.0	68.4	***
37	865.1	62.0	65.5	62.9	62.4	61.3	36.9	53.3	44.6	48.8	475.2	480.9	136.5	131.9	113.9	104.2	86.7	84.5	83.2	68.7	***
38	867.1	59.0	65.6	62.8	58.7	59.3	35.2	52.6	43.2	46.5	488.8	488.3	140.8	136.1	122.4	109.7	90.6	84.4	82.5	68.8	***
39	872.5	63.6	66.3	64.0	63.7	61.3	37.2	54.9	44.9	48.0	513.2	497.7	146.8	141.9	132.4	117.2	96.2	85.5	81.8	69.2	***
40	874.3	64.5	66.8	64.6	63.9	61.3	36.3	54.5	44.7	47.8	562.1	508.9	158.7	153.3	144.1	127.3	103.9	93.8	81.4	69.9	***
41	878.0	65.9	67.8	65.2	63.9	61.4	36.6	57.1	45.8	48.3	605.1	524.8	177.6	168.7	158.5	139.9	114.3	103.0	81.4	70.9	***
42	878.5	64.4	69.0	65.2	61.9	60.6	37.3	57.3	45.3	49.4	647.3	607.6	212.0	192.3	174.9	155.1	126.6	113.6	81.4	72.4	***
43	884.7	70.3	70.6	66.4	64.2	62.2	37.9	59.8	46.1	51.1	688.8	833.5	245.6	217.9	190.6	170.8	138.6	125.8	81.1	74.6	***
44	885.1	68.5	71.6	67.7	63.8	62.5	38.6	61.5	47.9	52.6	729.8	861.8	274.9	250.6	207.6	188.8	150.9	139.6	80.2	77.4	***
45	887.7	65.1	72.2	68.9	64.2	63.5	39.8	63.6	49.5	55.6	787.8	865.3	303.4	288.7	227.4	209.5	165.6	155.2	78.9	81.2	***
46	889.9	65.2	72.9	70.3	66.5	65.5	40.0	65.5	50.5	57.5	838.0	889.5	331.8	325.4	247.0	230.6	178.3	169.8	79.1	85.8	***
47	894.7	73.6	73.7	71.8	68.9	66.9	40.2	66.6	51.5	59.6	873.3	872.2	361.8	363.9	285.1	250.7	191.3	184.1	79.9	89.1	***
48	897.5	66.8	74.1	71.8	69.0	64.7	39.8	67.1	50.9	60.4	877.2	870.0	391.4	398.4	282.5	269.6	205.3	198.3	81.2	91.4	***
49	897.5	68.5	74.8	72.4	70.5	69.4	42.3	70.7	52.6	65.3	880.7	871.1	418.2	429.4	297.6	286.7	219.3	211.6	82.5	93.9	***
50	900.1	71.2	75.4	73.1	70.9	68.8	42.4	72.7	53.5	66.9	872.1	872.1	446.2	449.2	313.6	302.6	234.4	225.3	83.7	95.8	***
51	903.1	71.7	76.0	73.7	71.5	67.8	44.0	75.7	54.5	70.6	871.4	874.0	474.0	466.0	330.0	316.4	250.2	239.1	84.9	97.4	***
52	906.2	71.7	76.6	74.1	72.0	68.5	45.2	78.4	55.4	74.0	873.7	877.2	496.6	481.3	345.1	329.4	265.4	252.4	86.2	99.1	***
53	907.8	71.5	76.9	74.3	72.5	70.9	45.2	79.4	56.1	75.3	873.5	879.3	517.7	496.1	357.7	341.5	279.2	265.6	87.3	100.7	***
54	908.7	71.8	77.1	74.5	72.6	71.1	43.8	82.1	55.8	76.9	870.0	881.4	530.2	510.3	369.4	352.7	292.5	278.8	88.7	102.3	***
55	911.5	70.7	77.1	74.5	72.3	72.9	44.0	82.0	55.7	77.9	870.9	883.1	541.1	523.5	380.5	364.1	305.9	292.0	89.4	104.0	***
56	913.9	72.5	77.2	74.6	71.7	70.2	43.6	83.8	56.0	79.0	874.1	885.5	553.4	533.8	390.3	374.1	316.5	304.7	90.5	105.6	***
57	915.7	73.8	77.3	74.6	71.1	69.3	44.7	84.2	55.0	79.8	872.9	887.5	563.5	543.3	400.1	383.4	328.9	316.7	91.6	107.1	***

Table 1. Temperatures Measured in Assembly S-01, Steel Stud, 2x2 Gypsum Board Layers, No Resilient Channels (Cont).

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
58	918.8	70.9	77.4	74.4	71.2	71.5	42.7	86.6	53.5	81.5	875.5	889.5	572.0	552.6	409.9	392.8	341.4	328.6	92.9	108.9	***
59	920.3	71.9	77.4	74.5	71.5	71.3	41.8	86.9	53.1	81.4	875.8	892.1	579.3	561.4	418.4	400.7	352.7	339.8	94.1	110.6	***
60	922.7	71.5	77.3	74.5	71.3	70.3	40.4	85.0	50.7	79.2	880.6	895.4	587.1	569.0	424.8	409.4	364.1	351.5	95.1	112.2	***
61	923.7	72.1	77.5	74.7	73.0	70.1	40.5	87.0	52.2	81.6	877.4	896.2	592.3	577.0	434.0	416.0	374.0	361.7	96.3	114.0	***
62	925.1	71.7	77.4	74.6	73.7	69.5	41.6	86.6	52.2	82.6	876.4	896.8	597.2	584.8	442.8	424.0	384.7	372.8	97.2	116.4	***
63	925.8	72.2	77.6	74.7	74.9	69.3	41.1	90.1	52.7	86.5	879.9	898.9	603.3	591.5	450.5	431.4	395.1	383.2	98.3	118.8	***
64	926.7	73.5	78.0	75.1	76.9	69.8	42.7	89.3	52.2	88.4	879.1	899.9	610.0	597.6	458.5	438.8	405.3	393.6	99.7	121.9	***
65	926.1	75.6	78.0	75.4	78.6	70.3	43.8	92.2	53.4	91.9	879.0	901.0	614.7	603.8	466.4	446.3	415.7	403.2	100.8	125.6	***
66	929.1	80.5	77.9	76.2	80.8	71.4	43.8	90.6	52.8	91.1	884.2	902.1	622.2	607.5	473.4	452.0	426.7	411.4	101.5	130.4	***
67	932.5	86.1	79.1	77.6	83.4	73.3	46.1	94.3	54.5	94.0	887.4	905.3	629.3	611.7	480.9	457.6	435.4	419.0	102.4	136.1	***
68	935.6	90.4	81.4	79.1	85.4	76.2	45.0	92.1	52.4	93.0	889.0	907.8	634.6	615.6	489.0	463.4	446.2	427.0	103.8	140.5	***
69	939.7	93.3	83.3	80.6	87.2	80.8	45.5	94.3	52.8	94.5	888.5	911.8	638.5	616.9	496.8	469.3	456.7	434.9	106.0	147.8	***
70	941.6	95.6	84.6	82.0	90.0	85.2	45.7	94.2	53.4	94.4	891.6	912.4	643.9	618.7	503.4	475.0	465.5	442.5	108.6	156.7	***
71	944.3	97.9	86.2	83.6	92.7	88.7	46.7	97.0	56.4	98.1	893.1	915.2	648.9	621.6	509.1	480.0	473.7	449.4	112.2	166.6	***
72	944.7	100.1	88.4	86.2	94.4	91.0	46.8	95.6	57.2	99.4	898.2	916.1	654.2	624.6	514.7	484.9	480.7	455.8	117.2	176.0	***
73	946.8	102.1	90.9	88.9	95.5	93.2	47.7	97.6	58.7	103.3	897.1	917.5	659.2	627.3	518.9	489.3	486.3	461.5	124.6	186.0	***
74	933.3	103.7	93.2	91.0	96.2	95.0	46.5	99.7	60.3	105.9	899.3	919.7	663.6	629.9	522.7	493.7	491.7	467.4	132.9	194.7	***
75	949.1	105.2	95.5	92.5	97.4	96.7	46.6	99.6	59.5	101.7	901.0	920.2	668.2	634.0	525.6	497.8	496.0	473.3	142.2	203.0	***
76	950.9	106.5	97.5	93.7	98.5	98.0	51.0	93.3	62.0	107.9	901.4	922.8	672.2	636.0	529.2	501.8	500.4	478.8	151.9	211.8	***
77	953.0	107.7	99.4	95.1	99.5	99.3	43.8	93.0	63.2	109.3	903.7	924.2	676.5	639.4	532.2	504.9	504.5	484.1	160.9	220.1	***
78	954.4	108.7	101.3	96.5	100.3	100.5	52.5	93.1	47.6	114.4	907.7	925.3	681.7	640.3	534.7	508.6	508.2	488.9	168.7	231.9	***
79	957.0	109.8	103.1	97.8	101.1	101.6	55.7	92.9	60.8	111.4	911.4	928.5	687.8	645.2	537.3	512.0	512.3	493.6	175.4	240.4	***
80	958.5	110.9	104.6	98.9	101.9	102.4	56.8	93.0	65.3	59.9	911.0	930.1	690.3	645.9	540.2	515.2	515.7	497.5	182.5	251.2	***
81	960.1	112.0	106.0	100.1	102.8	103.1	58.6	96.2	67.5	63.7	911.7	932.8	698.8	649.4	544.1	520.1	520.8	502.3	189.5	261.8	***
82	961.7	113.2	107.2	101.1	103.1	103.8	58.3	95.1	67.0	64.7	914.6	933.7	699.3	654.6	547.0	523.4	524.2	506.3	197.0	270.9	***
83	963.1	114.5	108.4	101.9	103.5	104.5	59.1	93.1	68.1	67.3	915.3	935.5	703.7	657.4	550.9	526.6	527.4	509.8	204.8	281.7	***
84	964.9	115.7	109.7	102.8	104.2	105.5	59.6	64.3	68.2	67.8	916.5	938.4	704.7	660.0	555.2	531.8	532.4	514.4	212.5	291.6	***
85	966.6	116.9	111.0	103.6	105.0	106.8	63.1	75.4	71.4	69.2	918.1	940.1	704.7	663.8	558.8	535.4	536.0	518.6	220.3	300.0	***
86	968.3	118.0	112.1	104.3	105.8	108.0	61.9	75.5	71.2	69.8	918.5	941.8	710.0	666.5	563.1	540.9	541.0	523.3	229.8	307.6	***
87	969.9	119.2	113.3	105.2	106.8	109.2	63.6	76.3	72.3	69.8	921.5	943.3	718.4	671.1	567.1	544.5	545.5	527.9	239.3	314.2	***
88	970.4	120.6	114.6	106.1	107.8	110.3	63.7	76.9	74.2	69.1	921.6	944.8	722.3	674.4	572.2	549.8	551.0	532.9	250.7	318.9	***
89	972.6	122.4	116.3	107.1	109.0	111.6	67.1	79.3	76.0	65.0	921.9	945.1	726.1	678.3	576.5	554.2	556.0	538.8	260.7	326.2	***
90	974.7	125.0	118.1	108.0	110.0	112.8	67.1	78.2	76.2	68.1	926.1	948.7	729.8	681.4	580.8	559.2	560.9	544.6	272.1	333.6	***
91	974.4	128.8	120.5	109.1	111.1	114.1	68.8	77.9	78.0	69.5	926.5	948.8	734.5	685.2	585.5	563.9	567.2	551.0	282.5	341.7	***
92	975.6	134.5	123.1	110.1	112.2	115.5	67.5	76.3	77.1	68.1	929.0	948.7	737.6	689.1	590.2	567.2	573.5	555.6	291.5	350.1	***
93	976.5	138.3	125.3	111.2	113.2	117.3	70.7	75.4	79.0	70.9	927.9	948.4	738.9	690.5	595.5	570.9	580.4	561.0	301.6	359.5	***
94	978.3	146.1	126.7	112.2	114.4	120.2	71.9	76.1	79.2	68.7	931.6	950.7	741.3	693.9	601.6	575.0	588.0	566.6	311.0	368.5	***
95	979.1	158.2	127.6	113.5	116.0	124.5	76.1	79.9	83.5	77.5	933.2	950.9	744.3	697.2	606.9	579.0	594.8	573.0	319.8	377.3	***
96	980.9	184.7	127.9	114.8	118.1	129.5	77.5	79.3	82.5	82.5	935.2	952.3	747.1	699.8	613.5	583.3	601.9	579.4	330.0	386.5	***
97	982.1	209.7	128.1	116.5	120.8	133.8	80.0	82.2	87.1	84.9	935.5	951.9	750.6	702.7	619.6	587.2	609.1	584.4	339.0	395.9	***
98	983.7	231.6	128.5	118.8	124.6	143.6	79.3	82.3	85.9	84.7	936.2	954.3	753.8	703.6	626.6	591.7	617.1	590.8	350.7	405.9	***
99	985.1	252.8	129.7	121.4	129.4	160.6	79.4	83.3	86.8	87.2	939.7	955.5	757.9	707.2	633.3	596.4	625.3	597.1	361.1	415.0	***
100	986.9	274.9	132.4	123.9	132.9	186.5	81.7	85.4	89.3	83.1	941.5	955.9	764.4	711.3	641.0	601.3	634.2	603.7	370.5	423.6	***
101	988.1	297.7	135.7	125.8	137.5	211.4	86.9	87.1	91.6	90.5	944.7	957.9	772.5	714.0	650.2	607.4	645.2	611.7	381.4	431.9	***
102	988.8	328.1	140.7	127.1	147.9	236.0	97.3	88.6	94.4	88.7	943.7	957.9	781.3	716.7	661.0	614.1	658.4	619.7	394.6	441.8	***
103	990.2	388.2	149.8	127.8	167.9	262.4	104.5	89.7	96.1	90.1	948.4	960.0	791.2	721.5	673.6	621.2	673.7	626.9	406.3	450.0	***
104	990.7	446.1	155.7	128.6	189.7	294.0	110.1	90.3	96.6	91.1	950.2	959.4	801.2	726.4	688.8	629.0	688.4	635.5	420.7	458.3	***
105	992.7	481.8	169.0	129.1	209.7	339.7	114.8	90.0	95.9	91.4	951.9	961.0	809.6	731.0	701.9	636.8	702.3	644.9	436.7	467.3	***

Table 1. Temperatures Measured in Assembly S-01, Steel Stud, 2x2 Gypsum Board Layers, No Resilient Channels (Cont).

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
0	101.8	34.7	26.8	26.0	24.3	23.6	22.9	22.9	36.3	33.4	26.7	25.5	24.4	23.6	23.3	19.4	22.5	22.4
1	144.6	36.6	27.6	26.7	24.6	23.9	22.9	23.0	38.5	35.0	27.5	26.0	24.9	24.0	23.5	19.3	22.6	22.5
2	232.0	40.8	28.7	27.6	25.1	24.2	23.0	23.0	44.3	38.3	28.6	27.2	25.4	23.9	23.9	19.2	22.6	22.4
3	331.9	59.1	31.2	31.0	25.7	24.6	23.1	23.1	62.8	51.6	34.3	31.0	25.6	24.8	23.9	20.4	22.6	22.5
4	435.4	75.5	44.4	40.1	27.3	25.5	23.4	23.2	78.1	69.7	70.2	66.0	29.3	26.4	25.4	18.6	22.8	22.7
5	537.8	83.8	50.9	49.6	31.6	27.9	23.7	23.4	85.0	84.2	80.2	81.1	39.5	34.8	28.7	15.9	23.0	22.8
6	569.8	85.2	55.6	52.6	38.4	32.7	24.6	23.8	88.7	85.4	83.0	81.9	48.5	42.6	36.6	10.3	23.6	23.2
7	602.7	89.0	61.5	56.3	46.1	39.6	26.3	24.7	92.7	88.1	84.5	82.3	55.7	48.6	43.5	4.2	25.1	24.3
8	633.7	95.2	66.6	60.2	52.7	46.5	29.1	26.2	97.6	92.3	85.6	84.0	61.2	54.2	49.5	***	27.4	25.2
9	646.5	102.1	69.7	63.8	57.3	51.7	32.5	28.3	102.4	96.9	86.2	85.3	65.7	58.4	54.1	***	30.1	27.4
10	702.8	107.6	72.8	67.2	60.9	54.8	36.4	31.0	108.0	101.5	86.7	86.0	68.7	61.8	58.2	***	33.0	29.5
11	711.0	112.5	74.8	69.1	63.4	58.2	40.2	33.8	113.8	106.3	87.1	86.5	71.5	64.9	61.5	***	36.1	32.6
12	722.7	117.5	76.5	70.8	65.5	60.6	43.2	36.7	118.8	111.6	86.8	86.4	73.6	67.6	64.0	***	39.1	35.1
13	741.3	127.2	77.8	72.1	67.6	62.6	46.3	39.6	127.4	117.1	86.8	85.9	74.9	69.3	66.1	***	41.9	37.4
14	744.3	145.0	78.3	73.6	68.6	64.2	49.9	42.5	137.6	126.9	84.9	84.3	75.9	70.2	67.7	***	44.6	39.7
15	754.9	195.3	77.9	73.9	69.5	65.3	52.5	44.9	169.3	139.1	***	***	***	***	***	***	***	***
16	763.1	242.5	80.0	74.1	70.6	66.1	54.1	47.4	203.0	178.7	87.8	84.6	76.5	70.9	69.1	***	48.7	44.0
17	767.9	282.3	83.8	78.3	75.6	68.6	56.6	50.0	228.0	199.5	89.7	90.8	78.4	71.6	71.7	***	51.0	46.0
18	776.5	311.1	86.4	81.7	76.6	71.5	59.0	52.6	249.5	219.5	95.9	97.9	81.9	76.0	74.6	***	52.1	47.9
19	799.5	338.9	89.3	85.1	78.9	73.8	62.0	55.5	273.3	244.8	100.2	100.6	84.9	78.6	76.6	***	55.0	50.2
20	790.1	369.2	93.5	89.5	80.4	75.6	64.9	58.5	295.5	262.9	103.6	100.5	87.5	80.5	77.9	***	58.4	52.7
21	795.5	391.5	97.9	94.4	81.7	77.4	67.2	61.3	318.8	282.9	106.0	101.3	89.4	82.1	79.0	***	60.8	54.8
22	801.8	408.2	102.1	99.5	82.7	79.1	68.9	63.8	346.6	302.0	108.4	102.5	91.3	83.4	80.2	***	62.5	57.1
23	806.8	423.3	105.2	104.1	83.7	80.4	70.0	66.1	369.8	325.7	111.1	104.7	93.2	85.1	81.4	***	64.0	59.2
24	812.7	436.6	108.5	107.5	84.7	81.7	71.4	68.2	387.6	347.9	114.1	107.6	95.1	87.1	82.1	***	65.5	61.0
25	816.1	454.7	110.6	110.3	85.6	82.5	72.1	69.8	401.7	365.3	116.5	110.6	96.7	89.0	82.7	***	67.1	62.5
26	821.3	473.4	112.2	112.6	86.3	83.4	72.5	71.5	416.4	383.1	118.6	113.8	98.3	90.5	83.1	***	68.1	63.8
27	826.1	490.7	113.7	114.5	87.1	85.5	72.7	71.4	432.9	401.8	121.1	117.7	99.9	92.1	80.9	***	68.8	64.8
28	829.9	507.3	115.0	116.0	87.8	87.0	72.8	72.0	453.7	420.1	125.3	122.8	101.6	94.0	81.4	***	69.4	65.7
29	825.2	522.6	116.5	117.4	88.3	88.2	73.1	72.6	475.3	439.1	132.2	130.3	103.6	95.9	81.6	***	69.9	67.0
30	827.8	536.4	117.0	119.4	88.8	88.7	73.8	73.4	497.8	460.1	147.2	144.1	105.4	97.9	82.8	***	70.5	67.6
31	845.0	549.8	119.5	120.8	89.8	89.4	73.3	73.2	520.3	481.0	167.5	174.1	110.4	100.5	83.6	***	70.7	68.0
32	843.4	562.2	122.4	123.6	90.5	89.1	73.2	73.6	541.5	502.8	188.8	192.0	115.2	104.3	85.1	***	71.3	68.4
33	849.7	575.3	128.4	128.4	91.9	90.7	73.6	74.3	558.2	523.7	213.9	205.8	121.7	108.7	87.5	***	71.5	69.1
34	856.3	588.2	136.2	136.2	94.1	91.5	73.5	75.2	576.7	542.3	239.6	223.4	130.2	114.3	90.9	***	71.9	69.5
35	858.0	606.0	144.0	143.5	97.3	93.2	73.5	75.2	593.8	560.2	263.0	243.0	139.8	121.3	95.0	***	72.7	69.9
36	858.3	624.8	168.4	159.7	104.3	94.4	73.8	75.2	609.0	576.0	280.1	263.8	150.2	129.0	99.5	***	73.5	70.6
37	865.1	648.8	201.4	189.9	118.8	98.5	73.8	75.2	622.7	592.0	299.5	284.8	161.5	137.1	108.1	***	74.4	71.3
38	867.1	677.7	231.3	215.5	138.6	107.4	74.3	75.7	636.4	606.9	324.6	310.5	173.9	146.0	116.2	***	75.5	72.2
39	872.5	710.7	259.0	237.1	161.4	119.6	74.3	76.1	649.9	622.1	345.1	342.0	188.2	154.7	125.3	***	76.4	72.8
40	874.3	738.6	282.0	256.9	178.5	135.8	75.3	77.5	665.1	636.5	368.1	365.7	207.1	164.8	136.1	***	77.4	73.8
41	878.0	766.7	298.6	275.1	189.6	151.7	77.6	80.4	679.5	651.0	388.0	381.5	219.6	175.9	146.7	***	78.9	75.4
42	878.5	817.1	312.4	292.2	201.7	165.5	79.9	83.1	689.9	664.2	373.5	366.3	230.6	187.6	155.2	***	81.6	77.1
43	884.7	874.6	328.7	307.7	213.6	176.7	81.6	84.4	699.1	675.6	385.5	382.3	241.0	198.2	161.1	***	84.6	80.4
44	885.1	878.3	382.1	325.5	232.8	182.8	84.3	84.2	709.6	686.3	400.7	382.6	252.3	208.6	168.1	***	86.8	83.6
45	887.7	878.8	465.4	347.0	257.9	186.5	86.9	87.8	715.8	696.3	409.1	388.0	263.9	217.5	176.3	***	88.3	86.5
46	889.9	881.0	507.8	363.4	284.8	200.7	89.5	89.6	718.0	705.9	***	***	***	***	***	***	***	***
47	894.7	879.9	526.5	379.3	310.5	222.7	92.2	91.1	720.3	712.2	***	***	***	***	***	***	***	***
48	897.5	885.0	531.3	398.5	334.6	247.0	94.3	92.4	722.1	717.6	433.7	395.0	303.3	252.4	210.5	***	93.1	91.6
49	897.5	882.4	530.3	414.2	356.5	268.1	96.1	93.9	725.0	720.1	443.7	402.8	317.9	264.2	221.3	***	94.6	93.5
50	900.1	885.6	540.8	428.1	376.9	286.0	97.7	95.4	728.0	722.3	455.8	410.0	330.8	274.2	231.9	***	96.3	95.2
51	903.1	889.2	559.5	440.1	398.7	300.4	99.1	96.3	731.2	725.7	468.2	416.4	343.1	283.5	242.9	***	98.1	96.6
52	906.2	890.5	560.3	448.5	416.4	313.6	100.5	97.3	735.1	728.9	480.4	422.9	354.5	292.7	253.6	***	99.8	97.8
53	907.8	891.8	566.1	456.5	431.8	327.4	102.0	98.4	738.7	732.1	491.6	429.9	365.6	302.3	264.3	***	101.5	99.1
54	908.7	896.0	581.6	465.9	446.6	341.3	103.6	99.8	741.2	736.0	500.9	436.4	375.4	311.7	274.5	***	103.1	100.0
55	911.5	899.5	588.9	475.8	461.3	358.1	105.3	101.1	743.7	740.5	510.1	443.6	385.5	322.1	285.5	***	104.9	101.0
56	913.9	898.9	584.7	483.8	472.3	371.5	107.3	102.4	746.5	743.7	518.9	451.7	395.2	331.1	295.7	***	106.4	102.0
57	915.7	905.1	594.7	492.5	482.7	383.2	109.0	104.1	748.6	746.2	527.1	458.8	404.2	340.3	305.6	***	107.8	103.0

Table 1. Temperatures Measured in Assembly S-01, Steel Stud, 2x2 Gypsum Board Layers, No Resilient Channels (Cont).

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
58	918.8	902.7	596.8	501.1	492.8	394.5	111.0	106.3	750.2	747.6	534.4	466.2	413.4	348.6	315.9	***	109.3	104.3
59	920.3	906.8	602.9	509.2	501.8	404.9	114.6	109.5	751.3	747.6	540.9	473.4	421.7	356.9	325.0	***	110.8	105.4
60	922.7	907.5	601.6	516.0	508.9	414.4	120.7	114.3	752.1	747.7	546.6	481.3	428.9	364.7	333.8	***	112.1	106.7
61	923.7	909.1	610.8	524.1	517.1	424.3	127.0	119.8	752.6	747.6	553.2	487.8	435.9	373.4	342.3	***	113.6	108.0
62	925.1	914.2	622.4	531.6	526.4	433.0	132.5	124.6	753.0	748.0	559.3	494.1	443.4	380.5	350.8	***	115.2	109.3
63	925.8	911.8	626.0	537.5	535.0	441.2	137.2	135.3	753.3	748.4	564.7	500.9	450.4	388.0	359.1	***	116.8	110.8
64	926.7	914.0	631.6	543.4	543.4	449.2	151.1	153.5	754.0	748.9	571.5	506.7	456.8	394.7	366.8	***	118.5	112.4
65	926.1	914.5	645.6	551.3	554.7	458.8	172.4	175.5	754.8	750.2	580.1	511.2	465.1	401.3	375.8	***	120.4	114.3
66	929.1	915.0	644.6	558.6	561.8	465.2	195.4	188.0	754.6	751.7	587.0	516.4	473.2	408.7	384.9	***	122.5	116.5
67	932.5	917.2	650.3	564.1	568.7	472.0	211.0	197.7	755.8	752.9	592.1	520.9	478.9	414.6	392.3	***	124.6	119.4
68	935.6	920.5	659.0	569.6	576.4	479.3	221.3	207.2	757.5	754.4	596.1	524.6	484.7	420.1	399.3	***	127.5	122.8
69	939.7	927.6	676.1	571.7	585.0	486.2	231.3	217.3	759.4	756.6	600.7	528.4	491.8	426.6	406.8	***	131.2	126.9
70	941.6	930.3	681.6	572.8	590.7	492.0	241.1	227.3	761.2	758.9	605.1	532.7	497.8	432.4	414.1	***	135.8	131.9
71	944.3	933.9	688.6	576.3	596.3	497.7	250.9	236.9	763.1	761.0	610.4	536.5	504.4	438.9	421.7	***	140.8	137.6
72	944.7	930.6	686.1	581.5	602.0	505.1	259.7	246.1	764.9	763.2	614.7	540.9	511.2	444.4	429.2	***	145.6	144.1
73	946.8	937.8	697.7	585.9	606.5	510.5	269.0	255.5	766.7	765.1	618.3	544.2	516.5	450.5	436.0	***	151.0	150.9
74	933.3	938.3	693.6	589.7	610.0	514.9	278.2	265.2	768.5	767.4	622.4	548.0	522.3	457.1	443.1	***	156.7	158.3
75	949.1	936.7	684.9	593.8	612.9	520.8	286.8	275.6	770.2	769.2	626.0	552.5	527.6	463.1	449.3	***	163.3	166.5
76	950.9	942.4	694.9	597.9	616.6	525.8	296.2	286.1	771.7	771.2	629.2	557.0	532.5	468.3	454.9	***	169.9	174.6
77	953.0	943.6	695.0	602.2	620.3	531.1	306.1	297.4	773.2	773.5	632.3	561.0	537.2	473.6	460.2	***	176.2	182.2
78	954.4	939.6	682.4	606.1	622.5	536.2	317.2	309.3	774.4	775.7	635.4	566.2	541.5	479.3	465.2	***	182.7	189.6
79	957.0	942.2	683.5	609.7	625.2	540.6	329.6	321.2	775.7	777.5	637.8	570.0	544.6	484.1	469.3	***	188.7	195.8
80	958.5	948.2	698.6	613.7	629.4	545.0	343.5	336.4	776.7	779.4	640.6	573.5	549.0	489.1	473.8	***	194.4	201.3
81	960.1	947.6	694.3	616.9	633.0	548.8	357.4	353.6	777.4	781.4	642.8	576.7	552.5	493.4	477.9	***	200.0	206.1
82	961.7	948.1	683.9	620.4	633.0	553.4	370.0	369.1	778.0	782.9	644.4	579.4	555.9	498.0	481.4	***	205.6	210.1
83	963.1	950.5	689.2	624.4	636.4	558.4	381.1	381.0	778.4	784.0	646.5	578.6	559.2	502.9	485.1	***	210.8	213.9
84	964.9	956.8	697.7	629.1	641.7	563.3	393.3	389.9	778.7	785.5	648.4	580.7	562.3	506.0	488.6	***	215.7	217.8
85	966.6	955.4	689.9	633.4	643.7	568.9	402.7	399.6	778.8	786.8	650.3	584.9	565.9	512.6	492.3	***	220.3	221.9
86	968.3	957.9	702.7	638.2	649.9	573.4	406.0	408.7	779.3	787.9	652.6	588.8	570.3	516.5	496.4	***	224.7	226.2
87	969.9	955.3	699.0	643.0	653.3	580.0	413.0	417.5	779.8	788.6	655.1	593.6	575.1	520.2	500.6	***	229.1	230.7
88	970.4	957.8	708.0	648.7	660.3	586.5	416.5	425.1	780.3	789.0	657.8	598.6	580.5	524.5	505.5	***	233.7	235.2
89	972.6	962.3	709.4	652.8	663.7	590.9	421.1	431.0	781.0	789.1	660.7	601.7	585.5	529.0	510.8	***	238.4	239.7
90	974.7	966.7	713.6	656.4	667.8	593.9	429.2	438.4	781.6	789.7	663.4	605.2	590.5	534.2	516.0	***	243.5	244.3
91	974.4	964.2	718.8	659.4	673.7	595.9	445.1	446.0	782.1	790.1	666.2	608.0	595.6	539.6	521.4	***	248.6	248.8
92	975.6	963.6	723.0	662.1	678.5	597.9	456.3	454.7	782.7	790.3	668.8	610.8	600.1	543.2	526.7	***	254.0	253.6
93	976.5	963.7	727.3	665.3	681.2	600.7	467.1	463.1	783.4	790.3	672.2	613.5	606.6	547.6	532.5	***	259.8	258.3
94	978.3	966.8	735.7	669.4	688.2	605.1	477.8	470.8	783.8	790.7	674.2	615.4	611.3	552.4	538.4	***	265.3	263.1
95	979.1	967.9	744.3	678.8	690.5	609.2	487.5	478.3	784.3	790.7	677.1	616.9	617.8	556.5	545.4	***	270.9	268.0
96	980.9	969.5	763.2	688.2	698.6	614.3	497.5	486.3	784.6	790.9	679.9	619.7	624.3	561.1	553.2	***	276.5	273.0
97	982.1	969.7	769.5	693.1	704.7	618.7	506.8	495.4	785.0	791.3	682.6	622.7	629.8	565.5	560.7	***	282.5	278.5
98	983.7	975.3	784.6	699.7	712.3	624.6	515.9	505.3	785.7	791.7	686.0	624.8	636.2	569.7	568.5	***	288.7	284.2
99	985.1	973.9	804.9	703.4	721.4	630.4	525.8	515.4	787.1	793.0	***	***	***	***	***	***	***	***
100	986.9	976.7	792.8	707.0	733.0	636.0	535.3	525.6	789.2	793.3	695.7	628.4	653.3	578.1	585.7	***	302.3	296.2
101	988.1	979.9	858.1	711.4	742.9	642.5	546.4	534.1	792.0	793.4	702.0	631.4	663.4	583.7	596.2	***	309.6	302.6
102	988.8	978.7	868.2	715.7	754.4	649.3	562.0	538.3	794.5	794.1	709.9	633.0	674.4	589.4	608.3	***	317.4	309.0
103	990.2	979.4	870.1	719.8	770.3	656.4	577.4	545.3	798.3	796.4	720.9	634.5	686.8	595.7	623.6	***	325.8	315.3
104	990.7	983.2	880.2	724.8	788.9	664.5	594.8	557.1	803.9	796.8	733.3	638.0	699.5	602.1	640.2	***	335.0	321.2
105	992.7	984.3	888.4	730.8	807.0	671.3	611.2	569.3	808.5	796.7	745.5	643.9	712.4	609.4	655.6	***	345.4	327.3

Table 2. Average Temperatures Measured in Assembly S-01, Steel Stud, 2x2 Gypsum Board Layers, No Resilient Channels.

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(10,11,20,21,28,29)	BL/SStd. (Exp.) Av(12,13,30,31)	BL/Cav. (Exp.) Av(22,23)	Mid. SStd. Av(14,15,32,33)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(16,17,34,35)	BL/FL (UnExp.) Av(18,19,26,27,36,37)	UnExp. Av(1,2,3,4,5)
0	101.8	29.5	25.8	26.4	24.0	24.0	22.3	22.6	22.4
1	144.6	30.6	26.5	27.1	24.4	24.3	22.4	22.7	22.4
2	232.0	40.3	27.4	28.1	24.6	24.6	22.6	22.7	22.4
3	331.9	53.9	30.2	31.1	25.7	25.2	23.4	22.8	22.4
4	435.4	71.9	49.0	42.2	27.0	26.4	23.1	23.0	22.5
5	537.8	87.1	58.8	50.3	32.9	29.8	24.0	23.1	22.5
6	569.8	90.3	68.3	54.1	40.6	35.6	27.0	23.6	22.5
7	602.7	92.7	77.1	58.9	48.5	42.9	30.8	24.8	22.6
8	633.7	96.7	82.1	63.4	55.0	49.6	46.2	27.1	22.7
9	646.5	100.9	84.4	66.7	59.9	54.5	51.5	30.5	22.9
10	702.8	104.7	85.2	70.0	63.3	57.9	56.1	34.0	23.4
11	711.0	108.9	85.7	72.0	66.2	60.8	59.5	37.6	24.1
12	722.7	113.6	85.8	73.6	68.6	63.1	62.2	40.7	25.0
13	741.3	120.2	85.9	75.0	70.3	65.1	64.4	43.5	26.1
14	744.3	130.6	85.2	76.0	71.6	66.4	65.9	46.3	27.5
15	754.9	153.0	86.4	75.9	71.5	67.4	66.5	50.4	29.2
16	763.1	182.4	86.4	77.0	73.1	68.3	67.9	50.4	31.0
17	767.9	206.3	88.5	81.0	74.8	72.1	70.4	52.7	32.9
18	776.5	231.3	92.8	84.0	77.9	74.0	73.5	55.1	34.8
19	799.5	252.0	96.2	87.2	80.4	76.3	75.7	57.9	36.7
20	790.1	270.6	97.6	91.5	82.5	78.0	77.2	60.5	38.9
21	795.5	290.3	98.7	96.1	84.3	79.6	78.4	62.7	41.2
22	801.8	311.1	100.0	100.8	85.9	80.9	79.7	64.6	43.7
23	806.8	332.2	101.5	104.7	87.4	82.1	81.0	66.2	46.1
24	812.7	351.7	103.3	108.0	89.1	83.2	81.8	67.5	48.6
25	816.1	370.5	104.8	110.5	90.5	84.1	82.5	68.8	50.9
26	821.3	389.0	106.7	112.4	91.8	84.9	82.8	69.7	52.9
27	826.1	405.8	109.6	114.1	93.0	86.3	82.3	70.2	54.6
28	829.9	427.5	113.4	115.5	94.4	87.4	82.7	70.8	56.4
29	825.2	447.0	116.9	116.9	96.0	88.2	82.9	71.4	57.8
30	827.8	464.3	128.3	118.2	97.7	88.7	83.5	72.0	58.7
31	845.0	479.5	143.2	120.2	100.2	89.6	84.0	72.2	59.9
32	843.4	494.9	154.7	123.0	103.1	89.8	84.8	72.6	60.3
33	849.7	508.8	166.0	128.4	106.6	91.3	85.6	73.1	60.7
34	856.3	522.1	178.1	136.2	110.9	92.8	87.0	73.5	60.8
35	858.0	536.1	190.1	143.7	116.0	95.2	88.6	73.9	61.3
36	858.3	549.5	201.1	164.1	122.0	99.4	90.2	74.2	61.6
37	865.1	563.9	213.2	195.6	129.2	108.7	93.1	74.4	62.8
38	867.1	579.6	228.0	223.4	138.0	123.0	97.1	74.8	61.1
39	872.5	598.7	243.9	248.1	148.1	140.5	102.3	75.1	63.8
40	874.3	622.3	261.5	269.4	160.8	157.1	111.3	75.9	64.2
41	878.0	645.4	273.9	286.8	173.5	170.7	121.3	77.4	64.8
42	878.5	665.2	291.0	302.3	187.1	183.6	131.8	79.2	64.2
43	884.7	754.3	307.8	318.2	200.1	195.1	141.8	81.1	66.7
44	885.1	773.2	327.2	353.8	214.3	207.8	152.9	82.7	66.8
45	887.7	788.8	347.3	406.2	229.6	222.2	165.7	84.9	66.8
46	889.9	802.5	328.6	435.6	238.8	242.7	174.0	86.0	68.1
47	894.7	811.6	362.8	452.9	257.9	266.6	187.7	88.1	71.0
48	897.5	814.4	404.6	464.9	277.0	290.8	204.7	90.7	69.3
49	897.5	815.8	423.5	472.2	291.6	312.3	217.4	92.4	71.1
50	900.1	817.3	440.3	484.5	305.3	331.5	230.6	94.0	71.9
51	903.1	818.3	456.1	499.8	318.2	349.6	244.1	95.4	72.1
52	906.2	821.1	470.8	504.4	330.4	365.0	257.1	96.8	72.6
53	907.8	823.1	483.8	511.3	341.8	379.6	269.7	98.2	73.2
54	908.7	824.9	494.4	523.7	352.3	393.9	281.9	99.6	73.4
55	911.5	827.5	504.6	532.4	363.0	409.7	294.5	100.9	73.5
56	913.9	829.6	514.5	534.2	372.7	421.9	305.6	102.3	73.3
57	915.7	832.1	523.2	543.6	382.0	433.0	317.1	103.8	73.2

Table 2. Average Temperatures Measured in Assembly S-01, Steel Stud, 2x2 Gypsum Board Layers, No Resilient Channels (Cont.)

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(10,11,20,21,28,29)	BL/SStd. (Exp.) Av(12,13,30,31)	BL/Cav. (Exp.) Av(22,23)	Mid. SStd. Av(14,15,32,33)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(16,17,34,35)	BL/FL (UnExp.) Av(18,19,26,27,36,37)	UnExp. Av(1,2,3,4,5)
58	918.8	833.1	531.3	548.9	391.2	443.7	328.6	105.4	73.1
59	920.3	834.7	538.7	556.1	399.4	453.4	339.2	107.5	73.3
60	922.7	836.7	546.0	558.8	407.0	461.6	349.8	110.2	73.0
61	923.7	836.6	552.6	567.5	414.8	470.7	359.3	113.1	73.5
62	925.1	837.7	558.8	577.0	422.7	479.7	369.4	115.9	73.4
63	925.8	838.5	565.1	581.7	430.1	488.1	379.1	119.5	73.7
64	926.7	839.2	571.5	587.5	437.2	496.3	388.5	126.2	74.7
65	926.1	839.9	577.4	596.5	444.8	506.7	398.2	134.8	75.6
66	929.1	841.5	583.3	601.6	451.8	513.5	407.6	142.4	77.3
67	932.5	843.7	588.5	607.2	458.0	520.4	415.6	148.5	79.9
68	935.6	845.9	592.7	614.3	464.3	527.8	424.1	153.9	82.5
69	939.7	848.8	596.1	623.9	471.1	535.6	432.8	160.1	85.0
70	941.6	850.9	600.1	627.2	477.2	541.3	440.7	166.9	87.5
71	944.3	853.2	604.4	632.5	483.1	547.0	448.3	174.2	89.8
72	944.7	854.6	608.6	633.8	488.8	553.5	455.2	181.5	92.0
73	946.8	856.6	612.3	641.8	493.8	558.5	461.2	189.5	94.1
74	933.3	858.7	616.0	641.6	499.0	562.5	467.4	197.7	95.8
75	949.1	859.5	620.1	639.4	503.5	566.8	472.9	206.2	97.5
76	950.9	861.9	623.6	646.4	508.0	571.2	478.0	215.1	98.8
77	953.0	863.6	627.3	648.6	512.0	575.7	482.9	223.8	100.2
78	954.4	864.5	630.9	644.3	516.0	579.3	487.4	233.2	101.5
79	957.0	867.1	635.2	646.6	519.5	582.9	491.7	241.8	102.7
80	958.5	869.1	637.6	656.1	523.4	587.2	495.7	251.6	103.7
81	960.1	870.2	641.9	655.6	527.5	590.9	500.3	261.4	104.8
82	961.7	871.5	644.4	652.2	531.1	593.2	503.9	270.4	105.7
83	963.1	872.8	646.6	656.8	534.9	597.4	507.4	278.9	106.6
84	964.9	875.2	648.4	663.4	539.3	602.5	511.8	286.8	107.6
85	966.6	875.8	650.9	661.6	543.2	606.3	515.6	294.1	108.6
86	968.3	877.1	654.5	670.4	547.7	611.7	520.2	300.5	109.6
87	969.9	877.7	659.6	671.0	551.7	616.7	524.7	307.3	110.8
88	970.4	878.7	663.3	678.3	556.7	623.4	529.8	313.4	111.9
89	972.6	879.9	666.7	681.1	561.3	627.3	535.2	319.5	113.3
90	974.7	882.5	669.9	685.0	566.2	630.9	540.5	326.9	114.8
91	974.4	882.4	673.5	689.1	570.9	634.8	546.5	335.5	116.7
92	975.6	882.9	676.6	692.6	575.2	638.2	551.9	343.4	119.1
93	976.5	882.7	678.8	696.3	580.2	641.0	558.0	351.6	121.1
94	978.3	884.7	681.2	702.5	585.1	646.6	564.3	359.4	123.9
95	979.1	885.4	683.9	711.6	590.0	649.8	571.1	366.9	127.9
96	980.9	886.5	686.6	725.7	595.5	656.5	578.2	375.0	135.0
97	982.1	886.7	689.7	731.3	600.6	661.7	584.7	383.0	141.8
98	983.7	888.6	692.1	742.1	606.0	668.5	592.1	391.8	149.4
99	985.1	889.8	732.6	754.2	614.9	675.9	611.2	454.3	158.8
100	986.9	891.3	699.9	749.9	618.4	684.5	607.9	408.9	170.1
101	988.1	893.6	705.0	784.7	626.2	692.7	617.7	417.7	181.6
102	988.8	893.8	710.2	791.9	634.7	701.9	628.8	427.2	196.0
103	990.2	896.5	717.0	794.9	644.3	713.3	641.4	436.7	219.2
104	990.7	898.7	724.7	802.5	654.9	726.7	654.7	447.9	242.8
105	992.7	900.5	732.5	809.6	665.2	739.1	667.6	459.5	265.8

Table 3. Temperatures Measured in Assembly S-02, Wood Stud, 2x2 Gypsum Board Layers, No Insulation

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	33.9	24.7	24.9	24.2	24.1	24.9	22.9	23.2	22.5	22.1	32.1	30.4	30.9	29.1	28.3	26.9	25.5	24.6	24.5	23.6	33.1
1	131.6	24.7	24.9	24.2	24.1	24.9	22.6	23.0	22.2	21.9	33.2	30.6	30.8	29.1	28.3	26.9	25.5	24.5	24.4	23.7	34.6
2	233.1	24.7	24.9	24.2	24.1	24.9	22.6	23.0	22.2	21.9	43.6	34.5	30.9	29.1	28.3	26.9	25.5	24.5	24.4	23.7	50.4
3	332.8	24.6	24.9	24.1	24.1	24.8	22.6	22.9	22.1	21.9	68.1	46.8	31.4	29.3	28.4	26.9	25.5	24.5	24.4	23.7	71.8
4	445.2	24.6	24.9	24.1	24.1	24.8	22.6	23.0	22.2	22.0	89.3	73.9	35.9	30.7	30.1	27.3	25.6	24.5	24.4	23.8	81.9
5	538.8	24.6	24.8	24.1	24.0	24.8	22.6	23.0	22.2	22.0	93.6	90.4	49.5	38.1	36.0	29.5	26.4	24.6	24.3	23.7	83.8
6	572.1	24.6	24.8	24.1	24.0	24.8	22.3	22.7	22.0	21.7	95.1	96.2	67.4	57.2	44.6	33.7	28.0	24.8	24.4	23.7	87.4
7	602.2	24.6	24.8	24.1	24.0	24.8	22.3	22.6	21.9	21.6	96.4	96.9	78.3	74.5	53.6	40.0	31.6	25.2	24.6	23.8	90.4
8	635.1	24.7	24.9	24.1	24.1	24.9	22.7	22.9	21.9	21.7	99.4	98.0	82.5	82.3	58.4	45.9	37.3	25.7	25.0	23.9	92.6
9	666.1	24.9	25.2	24.3	24.2	25.2	22.8	23.0	21.9	21.6	102.4	99.9	84.0	85.4	63.4	50.7	43.6	27.5	25.7	24.2	94.9
10	698.9	25.3	25.7	24.5	24.4	25.7	23.4	23.2	22.2	21.9	105.7	102.3	84.8	86.0	66.7	54.8	49.6	29.0	26.7	24.5	96.8
11	711.6	26.0	26.5	24.9	24.9	26.6	24.0	23.7	22.3	22.0	110.2	105.0	85.1	86.0	69.5	57.8	54.8	30.9	27.9	25.1	99.0
12	723.0	26.9	27.6	25.5	25.6	27.9	25.1	24.6	22.7	22.3	115.1	108.4	85.6	85.9	71.5	60.2	59.0	33.0	29.5	25.9	102.9
13	734.1	28.2	29.1	26.3	26.5	29.6	26.4	25.6	23.2	22.9	119.4	112.9	86.1	85.8	73.3	62.3	62.6	35.4	31.4	26.7	111.2
14	743.8	29.8	30.9	27.4	27.6	31.6	26.8	26.4	23.5	22.9	126.7	117.9	86.6	85.9	73.7	63.9	65.4	38.0	32.6	27.8	144.1
15	753.3	31.5	32.9	28.6	29.0	33.7	29.0	28.0	24.5	23.8	146.4	124.2	86.7	85.9	73.3	65.0	66.7	40.6	35.1	29.0	182.6
16	763.0	33.4	35.1	30.4	30.5	36.0	30.2	28.9	25.2	24.3	193.1	132.0	87.4	86.0	75.6	65.9	69.9	45.2	37.1	30.4	200.5
17	769.2	35.2	37.3	32.1	32.0	38.2	32.6	30.8	26.3	26.1	214.6	157.0	92.2	84.9	79.2	69.1	73.5	48.4	38.9	32.1	224.9
18	776.2	37.1	39.4	33.9	33.5	40.3	30.7	31.4	26.4	25.7	239.5	215.3	94.0	85.7	81.7	73.1	77.0	52.9	42.1	34.0	252.7
19	781.4	39.0	41.6	35.8	35.1	42.5	33.3	33.5	27.8	26.8	258.7	235.7	94.5	90.6	83.5	76.2	78.8	56.7	46.1	36.0	278.3
20	790.1	41.1	44.1	37.8	36.8	45.0	34.0	33.9	28.5	27.3	275.6	244.7	94.7	93.0	84.6	78.6	79.9	58.7	50.3	38.3	293.5
21	801.7	43.4	46.7	40.0	38.7	47.5	35.1	35.9	29.6	27.9	291.4	260.7	95.4	93.5	85.5	81.0	81.1	62.0	54.2	40.4	312.6
22	800.9	45.7	49.3	42.3	40.7	49.9	36.6	38.3	30.2	29.8	309.4	277.2	96.2	94.5	86.8	82.4	82.7	65.3	58.0	42.8	335.8
23	806.8	48.2	51.8	44.8	42.9	52.5	35.3	36.6	31.5	28.7	331.0	293.7	98.3	95.1	87.5	83.7	83.5	67.6	61.3	45.1	358.1
24	812.7	50.2	54.0	47.1	45.1	54.4	36.1	40.3	32.5	29.9	351.0	310.2	100.7	95.7	88.0	84.7	84.0	69.2	63.8	47.5	379.3
25	807.8	52.3	56.0	49.5	47.3	56.5	37.7	42.4	33.9	30.7	368.4	327.1	103.1	96.8	88.4	84.9	84.2	70.8	65.8	49.5	409.4
26	821.7	53.9	57.7	51.7	49.4	57.4	37.1	43.0	35.0	30.8	382.9	345.0	105.6	98.8	88.3	85.5	84.3	72.0	67.3	51.7	439.0
27	827.7	55.5	59.2	53.7	51.3	59.2	37.3	43.7	35.7	31.4	398.2	359.7	108.3	101.2	88.6	85.7	84.7	73.1	68.8	53.8	469.4
28	829.8	56.5	60.3	55.4	52.8	59.4	37.9	44.4	36.9	32.3	414.1	372.8	111.2	103.3	88.8	86.1	84.6	72.9	69.8	56.2	498.0
29	835.5	57.5	61.2	56.8	54.1	60.2	39.4	45.9	37.9	33.6	430.9	385.9	114.3	106.2	89.4	86.1	84.6	73.3	70.5	57.6	529.0
30	838.3	58.0	61.8	57.9	55.1	60.2	38.5	46.2	38.3	34.1	446.9	401.8	117.1	108.7	89.7	86.3	84.5	73.1	71.3	58.9	556.8
31	840.5	58.6	62.4	58.8	56.0	60.7	39.0	46.3	39.2	35.0	462.5	418.6	119.5	111.4	90.6	86.5	84.6	73.2	71.7	60.0	603.2
32	846.5	59.0	62.8	59.5	56.6	60.9	40.0	47.1	39.8	34.9	478.3	433.1	122.0	113.9	91.4	86.7	84.8	73.7	71.9	60.8	651.4
33	850.9	59.4	63.2	60.2	57.2	61.3	39.4	46.9	39.4	34.8	491.3	448.0	125.3	116.3	92.5	87.2	84.9	74.1	72.6	61.8	692.7
34	853.8	59.8	63.5	60.8	57.7	61.5	39.7	46.9	39.0	34.3	502.7	462.5	130.5	118.8	94.2	88.2	85.0	74.7	72.9	62.6	737.5
35	857.1	60.1	63.8	61.2	58.0	61.6	41.7	48.9	40.9	36.9	513.4	476.0	136.2	121.6	97.2	89.3	84.9	75.3	73.1	63.3	775.4
36	860.1	60.3	64.1	61.5	58.3	61.8	40.0	46.5	39.8	35.4	523.0	488.8	139.9	125.1	103.1	90.7	84.3	75.2	73.4	64.0	782.6
37	864.2	60.5	64.2	61.8	58.5	61.9	39.1	47.6	39.4	34.7	533.1	500.5	145.6	129.4	114.0	93.2	83.3	75.0	73.4	64.6	813.9
38	867.1	60.7	64.4	62.1	58.5	61.8	40.5	47.4	40.2	35.4	543.2	510.6	159.5	133.7	130.3	97.5	82.5	74.9	73.2	64.9	815.2
39	870.7	61.5	64.7	62.4	58.9	62.1	41.3	47.9	41.2	36.7	554.5	520.2	178.9	137.0	149.1	104.5	82.3	75.1	73.4	65.1	818.2
40	873.1	62.3	65.1	62.8	59.0	62.2	42.5	48.4	41.6	36.4	568.3	530.2	205.1	141.1	165.1	115.9	82.8	75.4	73.7	65.5	828.9
41	876.9	64.5	66.2	63.2	59.4	62.8	44.8	49.7	42.5	38.5	583.4	540.3	227.6	150.9	181.0	129.8	83.4	75.7	73.6	65.7	839.8
42	879.3	65.6	67.6	63.6	59.6	63.7	44.4	50.4	42.2	38.9	600.0	550.3	248.5	166.2	194.0	144.5	84.7	75.9	75.1	66.1	845.9
43	881.9	67.8	69.1	64.6	60.4	65.5	44.1	51.5	42.9	36.0	616.8	561.8	268.9	192.5	206.2	158.5	85.9	76.3	76.1	66.4	851.0
44	885.0	68.2	70.2	66.0	61.2	66.5	45.6	53.3	44.8	38.1	633.0	575.5	289.2	219.6	217.2	172.3	87.0	76.9	76.9	66.8	853.8
45	887.7	69.2	71.0	67.4	62.5	67.2	47.3	53.7	46.4	40.4	648.9	590.7	309.3	242.9	229.9	185.1	87.8	77.5	77.8	67.2	856.3
46	890.0	70.3	71.7	68.6	64.2	68.1	46.6	53.5	45.8	39.2	665.8	606.6	328.4	263.9	241.8	198.4	88.4	77.8	78.6	67.7	859.6
47	893.0	71.1	72.2	69.2	65.6	68.7	48.2	55.5	47.4	40.8	682.5	623.3	345.4	283.9	255.0	212.4	89.3	78.3	79.2	68.0	861.0
48	896.1	71.9	72.6	69.8	66.7	69.3	47.1	54.9	47.5	40.8	700.8	640.9	363.9	303.2	266.4	226.0	90.4	79.2	80.0	68.5	861.6
49	898.4	71.8	72.8	70.1	67.5	69.7	48.1	57.0	48.4	42.0	718.5	669.8	377.8	321.9	279.2	240.5	91.4	80.3	81.0	69.0	865.4
50	901.0	72.7	73.3	70.8	68.4	70.0	48.2	56.7	49.7	42.8	733.3	702.4	389.6	339.6	291.7	255.9	92.7	81.7	82.0	69.8	874.2
51	903.4	73.2	73.7	71.4	69.3	70.5	48.5	57.2	49.6	43.0	744.3	735.9	405.2	361.9	305.4	271.1	94.3	83.2	83.3	70.7	880.2
52	905.8	72.5	74.0	72.0	70.0	72.0	50.7	58.6	51.0	44.7	753.9	773.5	424.1	384.3	319.0	285.8	97.1	84.2	84.3	71.5	883.6
53	908.0	73.2	74.3	72.8	70.8	72.1	50.8	58.8	51.0	44.4	761.6	795.8	443.7	404.5	335.2	301.5	100.5	85.4	85.7	72.2	890.3
54	909.9	73.6	74.5	73.3	71.3	70.2	51.7	59.3	52.2	45.6	789.3	830.2	467.6	424.1	350.4	317.2	104.2	87.1	86.7	73.1	894.8
55	912.3	73.5	74.7	73.8	71.9	71.0	49.6	57.8	51.0	44.8	776.2	859.6	493.7	444.8	363.9	332.9	107.9	89.4	87.5	74.8	900.6
56	913.3	73.5	74.9	74.2	72.1	70.2	49.6	57.8	50.9	44.9	784.1	914.9	511.0	467.4	376.7	350.1	112.5	92.7	88.4	76.8	908.9
57	917.1	72.7	75.1	74.4	72.2	71.2	49.7	57.5	50.2	44.1	788.8	926.9	523.2	493.0	389.9	366.1	118.8				

Table 3. Temperatures Measured in Assembly S-02, Wood Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
58	916.3	71.7	75.1	74.2	72.3	73.0	49.5	57.0	50.3	43.8	793.2	926.9	534.7	518.9	405.3	383.4	127.9	100.2	89.5	79.9	913.5
59	921.0	72.7	75.4	74.4	72.0	70.2	48.5	57.7	50.4	44.5	797.8	929.7	546.1	542.6	420.4	400.5	138.8	104.6	89.9	80.5	915.3
60	922.8	72.2	75.7	74.4	72.0	71.9	51.0	58.3	51.0	46.1	802.2	930.2	557.6	566.9	436.0	419.3	151.1	109.7	90.3	81.9	918.3
61	923.1	72.7	75.9	74.3	72.0	71.1	49.9	58.5	51.4	46.2	808.4	925.1	568.0	585.9	451.2	436.7	164.3	115.1	90.9	83.2	918.9
62	923.7	72.8	76.1	74.2	72.0	73.8	49.4	58.2	51.0	44.9	811.2	925.6	578.5	603.2	463.0	452.9	177.6	120.7	91.3	84.4	921.8
63	925.7	74.3	76.5	74.5	72.2	71.2	48.7	57.8	50.3	44.4	815.1	926.4	589.1	616.6	477.8	466.7	189.2	126.5	91.9	85.5	929.0
64	926.9	75.5	77.1	74.9	72.5	70.6	50.0	59.5	51.3	46.2	819.2	925.7	599.6	628.5	490.3	481.1	202.5	132.2	92.5	86.9	933.7
65	926.5	76.0	76.3	74.9	73.0	74.5	50.4	58.8	50.9	45.6	822.9	924.9	609.8	638.7	503.4	490.3	217.2	138.6	92.9	88.4	938.5
66	929.8	80.7	77.2	75.4	73.3	75.2	50.4	58.9	50.2	45.0	825.8	928.1	619.7	648.5	520.2	503.0	230.2	145.9	93.2	89.4	941.2
67	932.2	86.0	79.6	75.7	73.9	75.7	53.4	60.5	50.8	46.5	829.5	928.6	630.0	659.3	536.4	516.7	243.2	154.2	93.9	90.5	947.8
68	935.0	90.0	82.1	76.1	75.0	75.8	56.1	62.3	51.2	47.4	833.0	933.1	640.5	670.1	553.7	531.0	255.7	163.1	94.6	91.3	949.4
69	938.3	92.5	83.9	76.4	76.1	77.6	55.4	64.5	50.2	45.2	837.0	934.5	651.5	680.9	571.9	546.3	268.6	172.0	95.9	92.5	947.3
70	942.0	95.1	85.4	76.9	77.3	81.2	55.5	65.4	51.1	45.0	841.0	939.2	662.6	691.5	590.0	558.3	276.7	180.1	97.4	93.4	944.0
71	943.3	97.7	88.0	79.2	78.9	86.0	55.2	65.4	54.0	46.8	845.3	941.9	673.8	702.5	606.4	573.0	286.3	188.1	99.9	93.8	935.9
72	945.5	100.3	90.7	82.4	82.7	89.9	57.4	66.9	59.0	50.2	849.5	944.9	685.9	713.6	621.3	586.6	294.1	195.0	103.4	94.1	916.4
73	945.7	102.0	92.3	85.3	87.5	89.9	57.4	65.7	59.7	48.4	853.7	943.9	698.0	724.5	639.9	599.8	299.1	200.6	107.2	95.0	878.6
74	949.8	103.8	94.9	87.5	91.3	94.0	57.4	67.2	60.7	51.4	857.2	944.6	714.6	735.3	670.3	620.9	304.9	205.7	111.2	96.0	849.1
75	949.7	105.2	97.2	89.7	93.9	94.0	58.0	68.0	62.2	52.9	857.8	947.3	735.8	746.8	714.2	650.2	322.6	210.4	114.9	97.2	827.2
76	962.3	106.6	99.9	92.4	96.3	96.2	60.0	69.0	62.7	53.2	827.2	951.4	761.7	759.9	746.6	682.6	483.1	218.0	119.1	99.2	828.0
77	955.4	107.7	101.5	94.9	98.7	100.5	61.3	69.2	63.0	53.7	803.0	909.0	799.9	776.4	785.8	740.9	774.3	348.5	124.1	103.3	857.6
78	959.8	109.1	104.4	97.6	101.2	103.0	63.1	69.5	65.3	55.7	819.4	843.1	828.8	789.9	825.4	774.5	826.4	581.5	130.1	109.3	864.1
79	966.2	110.5	104.8	100.0	103.1	104.1	62.7	70.3	66.9	55.1	896.3	875.3	903.1	857.7	893.8	869.9	910.6	846.2	136.7	111.3	923.9
80	962.8	112.4	108.0	102.3	105.1	104.7	65.4	70.5	68.3	56.2	896.1	875.5	899.0	867.6	887.3	877.6	907.9	871.8	144.3	115.2	920.2
81	966.5	114.3	111.0	104.4	106.9	106.6	69.8	71.5	67.1	58.5	897.6	877.6	896.6	876.5	885.6	886.3	909.6	879.1	153.2	118.9	920.1
82	969.4	116.3	113.1	106.3	108.8	110.7	73.5	72.1	67.8	57.5	903.4	879.7	902.1	880.3	887.0	889.1	914.5	884.6	163.2	124.0	924.3
83	968.5	118.7	114.6	108.4	110.3	112.2	77.3	75.1	67.4	58.4	902.7	881.8	900.4	883.0	887.9	890.9	911.3	883.0	174.0	126.5	922.7
84	970.9	122.0	119.7	110.9	112.6	112.1	81.1	79.0	68.8	59.8	909.9	888.1	903.1	886.2	888.6	891.8	914.3	888.9	186.4	131.8	928.1
85	970.1	128.3	124.5	113.2	114.1	114.8	81.8	85.5	66.6	61.3	908.4	889.0	901.7	887.6	889.3	894.2	911.7	888.4	204.9	137.2	928.7
86	972.3	137.0	128.0	115.7	116.5	116.9	82.5	91.3	66.9	60.5	910.0	890.6	902.1	886.7	890.2	894.2	909.7	889.9	237.6	142.7	928.2
87	970.8	162.9	129.5	118.5	118.8	119.4	86.9	97.2	68.3	64.8	909.3	891.5	903.1	889.5	893.0	898.0	909.0	890.5	365.0	150.1	927.4
88	978.6	221.5	135.7	121.9	121.1	122.5	91.8	100.0	50.5	67.0	918.0	903.3	911.4	894.6	901.1	902.5	914.2	901.9	587.7	158.8	933.8
89	977.7	281.5	144.2	127.7	125.3	129.7	102.7	105.5	57.3	73.8	923.6	909.8	916.5	899.6	906.1	907.1	917.9	907.9	734.2	169.4	936.3
90	972.6	354.5	165.8	133.4	133.0	138.1	136.3	109.6	59.1	76.9	924.0	911.5	918.4	901.9	908.1	908.5	917.6	909.9	806.3	178.9	934.6
91	974.9	452.0	218.3	137.2	142.8	163.1	159.9	113.7	61.2	80.5	924.3	913.1	921.1	905.3	910.5	910.4	917.8	913.2	832.5	191.4	933.5
92	977.4	521.8	273.9	147.8	175.9	214.4	177.8	121.1	62.8	82.9	925.3	913.8	923.7	908.0	911.4	911.8	919.0	914.7	845.5	208.1	932.8

Table 3. Temperatures Measured in Assembly S-02, Wood Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
0	33.9	30.1	29.7	28.3	27.8	27.1	25.6	24.6	31.8	29.9	30.4	28.7	28.2	26.9	24.9	24.6	24.2	23.6
1	131.6	31.1	29.7	28.2	27.8	27.0	25.6	24.5	33.8	30.5	30.6	28.9	28.4	27.1	25.1	24.8	24.0	23.8
2	233.1	38.8	29.8	28.3	27.9	27.0	25.6	24.5	49.3	36.6	31.8	29.2	28.2	26.9	24.9	24.6	24.3	23.6
3	332.8	62.0	31.2	28.8	30.1	27.1	25.5	24.5	69.8	54.9	50.1	38.2	28.4	27.0	24.8	24.5	24.3	23.5
4	445.2	79.0	38.3	32.3	33.6	27.9	25.6	24.5	82.4	77.8	77.2	73.2	30.8	27.8	25.1	24.7	24.5	23.7
5	538.8	84.4	49.6	39.7	41.6	31.2	26.0	24.5	85.3	87.4	81.5	82.3	36.6	29.8	25.1	24.7	24.6	23.5
6	572.1	85.2	60.3	47.7	48.8	37.1	26.8	24.7	90.0	88.7	83.2	83.4	45.3	33.7	25.7	25.0	25.3	23.5
7	602.2	87.3	66.6	53.8	58.2	44.6	28.3	25.3	95.5	90.3	84.6	82.7	53.5	40.6	26.8	25.4	27.2	23.5
8	635.1	90.4	71.0	58.4	62.9	51.3	30.7	26.4	101.1	94.5	85.8	83.8	59.1	48.5	28.6	25.8	31.3	23.6
9	666.1	92.6	73.6	62.2	66.6	55.6	33.9	28.1	106.2	99.0	87.0	85.1	64.0	57.6	30.8	27.4	36.4	24.0
10	698.9	94.3	75.7	64.9	69.1	58.9	37.4	30.0	110.8	103.1	87.8	85.8	67.2	61.2	32.9	28.8	40.9	24.2
11	711.6	95.9	76.9	67.3	71.5	61.7	41.0	32.2	115.4	107.3	89.4	86.2	69.5	63.5	35.2	30.4	43.3	24.6
12	723.0	97.9	78.1	69.2	72.8	63.7	44.6	34.4	120.4	111.8	92.1	86.3	71.2	65.7	37.5	32.1	46.8	25.2
13	734.1	102.5	79.0	70.7	74.2	65.4	48.0	36.5	129.3	118.7	96.8	86.1	72.9	66.4	39.7	33.7	50.7	25.9
14	743.8	117.6	79.7	71.8	74.3	66.8	51.1	38.4	138.7	131.1	103.5	85.1	73.4	67.5	41.9	35.2	53.3	26.7
15	753.3	154.3	79.4	72.5	74.4	67.4	53.4	40.4	180.6	158.9	113.3	81.2	73.4	65.9	43.9	36.8	55.7	27.5
16	763.0	186.3	83.1	73.5	77.5	68.6	54.1	42.3	210.3	200.4	126.4	81.8	75.9	67.0	47.1	39.3	60.4	28.5
17	769.2	202.2	86.6	77.3	82.4	72.5	57.7	44.2	228.9	225.3	134.0	87.4	79.3	71.1	51.8	42.9	63.2	29.4
18	776.2	224.7	90.4	81.3	86.3	76.1	59.0	46.2	252.0	245.7	146.0	90.9	82.0	74.6	57.1	47.6	66.3	31.3
19	781.4	248.7	94.9	85.7	87.1	78.7	61.6	48.4	275.6	267.7	154.9	93.0	84.2	78.0	62.6	54.0	67.5	33.6
20	790.1	272.8	99.4	90.0	86.9	80.7	64.0	51.3	299.1	288.0	149.8	94.4	85.6	80.1	66.6	59.1	67.7	35.9
21	801.7	294.7	103.5	94.1	87.6	82.3	66.3	54.8	315.6	304.4	146.3	94.9	86.2	81.5	69.1	63.3	67.9	38.1
22	800.9	315.4	107.3	97.5	88.7	83.6	67.6	57.7	337.1	317.9	146.2	96.4	86.7	82.9	71.8	67.2	69.1	41.4
23	806.8	335.2	110.2	100.7	90.7	84.2	68.8	60.4	356.8	333.3	149.7	98.6	87.7	83.8	73.7	70.0	69.5	45.0
24	812.7	353.3	112.4	102.7	91.5	85.4	69.9	63.0	375.2	346.4	155.4	101.0	87.8	84.4	75.1	71.9	70.0	48.0
25	807.8	371.4	114.0	104.8	92.4	87.2	70.5	64.7	395.3	360.0	163.0	103.6	87.7	84.9	76.5	73.7	70.5	50.8
26	821.7	393.1	115.9	106.2	93.2	89.7	70.8	66.0	417.2	374.6	172.5	106.2	87.7	85.0	77.5	75.2	70.9	53.9
27	827.7	415.0	117.2	107.5	93.9	90.5	71.4	67.1	439.8	390.1	188.5	108.5	87.5	85.5	77.8	76.1	71.4	55.9
28	829.8	437.4	118.5	108.6	94.7	91.4	71.6	67.8	462.3	408.7	220.8	111.0	87.3	85.6	78.1	76.6	71.5	57.8
29	835.5	461.4	119.9	110.1	95.1	92.3	71.5	68.5	485.0	429.6	262.2	113.9	87.5	85.8	78.4	76.9	71.6	59.4
30	838.3	480.8	122.2	112.0	95.8	92.8	71.7	69.1	507.6	449.6	304.7	117.8	88.2	86.0	78.1	76.9	71.6	60.8
31	840.5	500.8	126.8	114.2	96.5	93.8	71.7	69.6	529.6	471.0	349.4	124.0	88.7	86.2	78.3	77.1	71.7	61.9
32	846.5	521.0	135.6	118.3	98.2	94.8	71.7	70.1	551.5	494.2	383.0	135.5	89.8	86.4	78.8	77.4	71.9	62.9
33	850.9	542.8	145.3	125.9	100.8	96.4	71.8	70.5	573.0	515.5	409.4	158.0	91.8	86.3	78.9	77.9	72.2	63.7
34	853.8	568.2	178.3	135.5	105.5	98.9	71.8	70.8	593.9	534.4	439.7	188.6	95.5	86.7	79.1	78.5	72.4	64.5
35	857.1	591.3	215.9	155.2	114.0	103.0	72.0	70.9	612.5	552.2	451.4	218.2	101.3	87.0	79.5	79.1	72.6	65.4
36	860.1	615.8	251.7	188.6	128.9	110.2	72.3	71.1	629.5	567.2	460.8	242.1	110.7	88.6	79.5	79.4	72.5	66.3
37	864.2	649.2	281.9	212.2	150.2	122.8	72.6	71.5	640.5	582.0	461.5	260.6	123.5	92.6	79.1	79.7	71.9	67.0
38	867.1	678.4	310.8	231.0	173.9	139.1	72.9	71.5	653.5	595.3	450.2	273.6	138.4	100.1	79.2	80.2	70.8	67.7
39	870.7	714.1	339.2	249.9	192.7	157.4	75.2	71.6	665.8	605.9	435.6	285.6	155.6	112.9	79.9	80.8	69.8	68.3
40	873.1	748.2	359.8	271.0	203.1	176.2	78.7	72.0	684.3	618.9	431.2	300.8	173.1	126.9	80.7	81.8	69.2	69.0
41	876.9	772.8	375.5	297.9	214.3	192.8	81.4	73.0	709.1	631.0	432.4	315.8	191.9	141.0	81.8	83.1	68.5	69.9
42	879.3	782.7	386.0	324.4	227.5	204.7	83.8	74.7	736.3	636.5	440.1	326.9	207.9	156.2	83.1	84.7	69.7	70.9
43	881.9	792.7	396.3	339.9	241.7	215.1	86.2	77.4	762.5	636.9	455.4	338.5	225.0	170.1	84.4	86.1	70.7	72.0
44	885.0	804.3	406.4	348.4	256.4	227.7	88.5	79.9	787.0	640.2	483.6	348.9	241.1	184.8	85.4	87.1	71.9	73.1
45	887.7	817.4	417.7	357.2	272.0	242.7	90.4	81.5	808.7	651.1	525.6	362.9	256.1	198.4	86.6	88.0	73.1	74.0
46	890.0	827.3	429.7	367.6	289.5	255.3	92.0	82.4	843.0	656.6	572.7	380.6	272.7	213.2	88.3	88.5	74.2	74.8
47	893.0	847.1	439.4	376.4	307.5	267.9	93.4	83.7	893.6	657.2	622.5	398.0	288.7	228.8	89.9	89.2	75.5	75.4
48	896.1	872.3	447.6	379.3	325.3	280.4	94.7	85.3	910.8	662.9	688.7	414.0	307.1	245.3	90.9	90.4	76.6	76.0
49	898.4	868.6	455.4	388.9	342.2	293.6	95.6	86.9	918.4	664.0	735.6	431.2	327.2	261.6	93.0	92.2	77.8	76.6
50	901.0	864.4	463.2	404.6	358.2	307.5	96.4	88.6	923.2	662.9	760.0	445.8	344.4	278.5	95.0	94.8	79.1	77.2
51	903.4	862.5	470.3	417.5	372.9	320.8	97.2	90.3	932.7	666.6	772.8	470.9	365.2	296.3	97.5	98.0	80.2	77.8
52	905.8	868.8	478.5	426.4	387.5	334.4	98.1	92.0	934.1	885.4	780.8	499.6	385.5	314.7	101.3	102.7	81.2	78.4
53	908.0	873.3	487.5	439.7	402.8	353.3	99.2	93.8	932.4	894.9	791.9	519.7	399.6	329.9	104.6	107.9	82.3	79.1
54	909.9	878.2	496.8	451.1	417.0	368.9	100.3	95.4	933.3	888.4	796.6	538.1	414.7	348.2	108.5	113.0	83.5	79.7
55	912.3	882.8	506.6	462.1	431.1	381.5	101.7	96.8	937.1	889.5	804.2	553.6	430.3	365.7	112.3	118.4	85.2	80.3
56	913.3	894.7	519.3	471.9	446.7	394.8	102.7	97.7	937.3	887.4	820.7	568.9	445.7	383.0	116.5	123.8	88.0	80.9
57	917.1	900.1	530.7	485.5	461.9	407.3	103.7	98.8	941.6	894.3	828.5	571.3	461.8	402.4	121.2	129.5	90.3	81.3

Table 3. Temperatures Measured in Assembly S-02, Wood Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
58	918.3	902.6	540.7	500.2	476.0	427.9	105.0	100.0	941.4	901.0	840.2	579.9	480.1	419.7	126.5	135.5	91.6	81.8
59	921.0	906.5	550.0	513.9	488.8	444.6	106.9	101.4	947.0	899.4	849.3	592.7	496.6	437.3	132.4	142.0	92.9	82.4
60	922.8	909.3	560.7	525.9	502.2	462.2	110.3	103.0	946.6	912.3	845.0	613.4	513.9	454.1	139.3	148.6	94.7	83.1
61	923.1	910.4	570.7	537.3	514.9	477.2	115.2	104.4	943.5	921.6	852.5	626.6	530.5	466.5	146.9	156.1	96.6	83.8
62	923.7	913.4	580.7	548.8	528.0	490.5	119.6	105.9	943.5	920.4	861.6	636.4	537.7	479.5	154.0	163.4	99.1	84.4
63	925.7	914.3	589.9	558.8	540.2	502.7	127.7	107.2	946.4	922.7	857.8	640.7	559.1	491.1	160.8	171.2	103.8	85.1
64	926.9	914.9	599.7	567.2	553.2	514.3	143.1	110.2	950.9	929.7	862.3	648.8	576.5	503.2	167.7	177.8	110.4	85.7
65	926.5	914.4	610.8	575.6	566.0	525.1	168.8	113.9	951.0	911.4	868.6	655.1	589.5	513.5	174.6	185.2	120.6	86.2
66	929.8	918.3	622.0	582.6	580.7	535.7	192.6	119.5	952.2	927.2	878.5	661.7	607.6	522.8	181.7	192.4	128.9	86.7
67	932.2	921.7	634.7	590.3	595.8	546.7	208.6	128.5	953.8	934.9	887.5	670.7	626.0	532.4	190.0	200.2	138.1	87.2
68	935.0	925.7	647.2	599.2	610.8	559.3	222.0	135.9	954.0	939.4	898.7	679.7	651.7	547.9	199.6	207.8	145.7	87.8
69	938.3	915.6	661.4	607.9	627.0	572.8	235.1	145.3	952.5	940.0	904.5	690.4	672.2	562.3	210.2	215.7	150.3	88.4
70	942.0	910.2	674.0	616.7	643.1	586.7	247.8	166.2	929.9	945.5	907.6	701.4	701.3	571.8	221.5	223.5	152.5	89.0
71	943.3	907.3	683.7	626.1	658.6	600.2	261.6	200.0	887.0	950.3	910.2	711.2	748.7	582.9	233.8	232.1	151.7	89.8
72	945.5	908.7	692.2	635.7	672.6	613.9	277.2	225.3	844.5	951.3	916.3	719.5	803.8	597.0	246.2	241.2	148.6	90.8
73	945.7	907.7	705.8	645.7	690.0	627.1	293.4	242.7	805.3	948.0	911.9	729.0	848.0	611.8	261.5	251.0	139.8	92.4
74	949.8	908.5	798.5	665.0	780.9	650.9	309.8	257.5	846.5	954.6	913.9	741.3	854.7	636.0	295.8	266.4	133.5	93.9
75	949.7	904.1	822.2	697.6	816.3	689.0	334.1	272.1	835.7	950.2	921.8	752.0	809.1	712.8	343.1	343.1	128.9	95.7
76	962.3	902.0	816.5	730.2	823.4	728.2	371.4	288.6	808.4	899.9	798.4	763.7	806.9	783.6	347.4	347.4	126.5	97.6
77	955.4	821.9	812.9	794.4	807.2	798.0	414.3	308.8	845.1	820.6	845.6	797.3	823.3	845.4	832.8	841.4	129.2	99.4
78	959.8	819.4	829.4	807.2	822.7	810.7	446.6	331.9	850.6	833.9	851.7	816.8	843.4	851.8	844.2	848.1	134.7	101.8
79	966.2	901.8	898.3	897.6	888.6	899.4	480.6	363.2	910.7	906.5	921.2	905.6	913.0	922.7	924.7	919.0	140.5	104.9
80	962.8	900.1	894.6	898.2	882.9	900.3	513.6	395.5	909.3	903.9	918.9	905.8	911.1	919.5	922.1	915.6	148.9	108.6
81	966.5	902.7	893.4	903.1	881.1	905.1	545.2	424.2	909.2	905.1	917.3	906.0	909.7	916.9	920.0	914.4	156.4	113.0
82	969.4	906.0	900.7	906.0	881.6	906.6	574.1	449.9	913.8	908.6	919.7	905.2	915.2	919.1	923.0	917.0	160.3	117.7
83	968.5	905.8	899.8	905.0	883.0	904.4	600.1	475.6	910.5	906.1	915.1	898.8	911.7	915.0	917.6	916.3	167.6	122.6
84	970.9	911.9	905.6	908.0	885.1	908.0	624.9	500.5	917.1	910.5	917.8	902.9	916.2	916.7	921.4	919.2	180.0	127.8
85	970.1	912.7	906.8	910.7	886.7	911.6	650.9	525.6	918.9	911.9	917.7	906.5	915.2	915.7	920.2	918.6	203.9	133.5
86	972.3	912.2	907.4	910.6	887.6	912.2	678.2	551.0	919.8	912.7	917.9	909.9	916.4	915.4	920.6	918.3	245.7	139.5
87	970.8	912.0	908.6	913.3	890.7	915.0	708.1	575.3	918.0	911.0	917.6	911.0	913.9	915.1	918.1	918.1	292.2	145.6
88	978.6	919.4	918.6	919.7	899.4	922.8	736.4	599.4	925.0	917.7	922.6	917.6	921.2	919.4	925.4	923.2	330.0	152.7
89	977.7	922.4	924.3	924.8	905.3	927.5	765.2	624.4	927.7	920.2	925.3	921.0	924.1	922.4	926.6	928.3	365.5	161.4
90	972.6	921.4	926.1	926.2	907.7	928.6	799.1	650.2	927.3	919.2	926.2	922.7	924.5	923.0	927.2	927.9	410.4	179.6
91	974.9	920.1	928.9	927.8	910.0	929.6	832.2	676.3	926.2	918.3	927.3	924.8	924.6	923.5	928.2	928.5	452.5	241.1
92	977.4	919.1	930.2	929.1	911.9	929.9	843.7	705.0	924.4	917.0	927.8	924.5	924.7	923.6	928.2	928.1	491.3	392.9

Table 4. Average Temperatures Measured in Assembly S-02, Wood Stud, 2x2 Gypsum Board Layers, No Insulation

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(10,11,20,21,28,29)	BL/SStd. (Exp.) Av(12,13,30,31)	BL/Cav. (Exp.) Av(22,23)	Mid. SStd. Av(14,15,32,33)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(16,17,34,35)	BL/FL (UnExp.) Av(18,19,26,27,36,37)	UnExp. Av(1,2,3,4,5)
0	33.9	31.2	29.8	29.0	27.6	27.4	24.9	24.4	24.6
1	131.6	32.3	29.9	29.0	27.7	27.4	25.0	24.3	24.6
2	233.1	42.2	30.2	29.0	27.6	27.5	24.9	24.3	24.5
3	332.8	62.2	37.3	30.0	27.7	28.6	24.8	24.3	24.5
4	445.2	80.7	54.2	35.3	29.0	30.8	25.0	24.4	24.5
5	538.8	87.5	62.9	44.7	33.0	36.4	25.2	24.4	24.5
6	572.1	90.4	72.8	54.0	39.3	42.9	25.9	24.7	24.4
7	602.2	92.8	80.0	60.2	46.9	51.4	27.2	25.5	24.5
8	635.1	96.0	83.6	64.7	53.0	57.1	29.4	26.8	24.5
9	666.1	99.2	85.4	67.9	59.0	61.1	32.3	28.7	24.8
10	698.9	102.2	86.1	70.3	62.5	64.0	35.1	30.6	25.1
11	711.6	105.5	86.7	72.1	65.1	66.6	37.8	32.4	25.8
12	723.0	109.4	87.5	73.6	67.2	68.3	40.4	34.4	26.7
13	734.1	115.7	88.7	74.8	68.8	69.8	42.8	36.5	28.0
14	743.8	129.4	90.3	75.8	69.6	70.5	45.1	38.3	29.5
15	753.3	157.8	91.8	76.0	69.4	70.9	47.0	40.2	31.2
16	763.0	187.1	95.4	78.3	71.1	73.1	50.4	42.1	33.1
17	769.2	208.8	99.6	82.0	74.7	77.5	54.2	44.2	35.0
18	776.2	238.3	104.2	85.9	77.9	81.2	58.7	46.5	36.8
19	781.4	260.8	108.2	90.3	80.5	82.9	63.0	48.9	38.8
20	790.1	278.6	108.0	94.7	82.2	83.8	66.1	51.3	41.0
21	801.7	296.6	107.5	98.8	83.6	85.0	68.9	53.6	43.3
22	800.9	315.5	108.3	102.4	84.7	86.2	71.7	56.1	45.6
23	806.8	334.7	110.4	105.5	85.7	87.5	73.7	58.4	48.0
24	812.7	352.6	113.2	107.6	86.2	88.5	75.1	60.4	50.2
25	807.8	371.9	116.6	109.4	86.5	89.8	76.3	62.0	52.3
26	821.7	392.0	120.8	111.0	86.6	91.4	77.2	63.4	54.0
27	827.7	412.0	126.6	112.3	86.8	92.2	77.9	64.7	55.8
28	829.8	432.2	136.6	113.6	87.0	93.1	78.1	65.8	56.9
29	835.5	453.6	149.2	115.0	87.2	93.7	78.3	66.5	57.9
30	838.3	474.0	162.1	117.1	87.5	94.3	78.1	67.2	58.6
31	840.5	497.6	176.1	120.5	88.0	95.2	78.3	67.8	59.3
32	846.5	521.6	188.6	126.9	88.6	96.5	78.7	68.2	59.8
33	850.9	543.9	202.2	135.6	89.5	98.6	79.0	68.8	60.3
34	853.8	566.6	219.4	156.9	91.2	102.2	79.3	69.2	60.7
35	857.1	586.8	231.8	185.5	93.7	108.5	79.7	69.5	60.9
36	860.1	601.2	242.0	220.2	96.3	119.6	79.6	69.9	61.2
37	864.2	619.8	249.3	247.1	105.8	136.5	79.3	70.2	61.4
38	867.1	632.7	254.2	270.9	116.6	156.5	79.2	70.2	61.5
39	870.7	646.5	259.3	294.5	130.5	175.0	79.5	70.6	61.9
40	873.1	663.1	269.5	315.4	145.3	189.7	80.2	71.3	62.3
41	876.9	679.4	281.7	336.7	160.9	203.6	81.0	72.0	63.2
42	879.3	691.9	295.4	355.2	175.6	216.1	82.1	73.4	64.0
43	881.9	703.6	313.8	368.1	189.9	228.4	83.2	74.8	65.5
44	885.0	715.6	335.3	377.4	203.9	242.0	84.1	76.2	66.4
45	887.7	728.9	360.2	387.5	217.4	257.3	85.0	77.3	67.5
46	890.0	743.1	396.4	398.7	231.5	272.4	85.7	78.3	68.6
47	893.0	760.8	412.5	407.9	246.2	287.7	86.7	79.2	69.4
48	896.1	774.9	442.5	413.5	261.2	302.9	87.7	80.2	70.0
49	898.4	784.1	466.6	422.2	277.1	317.9	89.2	81.1	70.4
50	901.0	793.4	483.8	433.9	292.6	332.9	91.0	82.2	71.0
51	903.4	837.0	502.7	443.9	309.5	346.8	93.3	83.2	71.6
52	905.8	849.9	522.2	452.5	326.3	360.9	96.3	84.3	72.1
53	908.0	858.1	539.9	463.6	341.5	378.1	99.6	85.4	72.6
54	909.9	865.7	556.6	474.0	357.6	393.0	103.2	86.5	72.6
55	912.3	874.3	574.1	484.4	373.2	406.3	107.0	87.7	73.0
56	913.3	887.9	592.0	495.6	388.9	420.7	111.4	89.1	73.0
57	917.1	893.4	604.0	508.1	405.1	434.6	116.5	90.3	73.1

Table 4. Average Temperatures Measured in Assembly S-02, Wood Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(10,11,20,21,28,29)	BL/SStd. (Exp.) Av(12,13,30,31)	BL/Cav. (Exp.) Av(22,23)	Mid. SStd. Av(14,15,32,33)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(16,17,34,35)	BL/FL (UnExp.) Av(18,19,26,27,36,37)	UnExp. Av(1,2,3,4,5)
58	918.3	896.5	618.4	520.4	422.1	451.9	122.5	91.3	73.3
59	921.0	899.3	632.7	532.0	438.7	466.7	129.5	92.4	73.0
60	922.8	903.2	645.7	543.3	455.8	482.2	137.2	93.9	73.2
61	923.1	904.3	658.2	554.0	471.2	496.0	145.6	95.7	73.2
62	923.7	906.0	669.9	564.7	483.3	509.2	153.9	97.4	73.8
63	925.7	909.0	676.1	574.3	498.7	521.5	161.9	100.2	73.7
64	926.9	912.3	684.8	583.4	512.8	533.8	170.1	104.8	74.1
65	926.5	910.5	693.1	593.2	524.1	545.5	178.9	111.8	75.0
66	929.8	915.5	702.1	602.3	538.4	558.2	187.5	118.4	76.4
67	932.2	919.4	711.9	612.5	552.9	571.2	196.9	124.5	78.2
68	935.0	922.4	722.3	623.2	571.1	585.1	206.6	129.5	79.8
69	938.3	921.1	731.8	634.7	588.2	599.9	216.1	134.6	81.3
70	942.0	918.3	740.8	645.3	605.3	614.9	225.4	141.1	83.2
71	943.3	911.3	749.4	654.9	627.8	629.4	235.1	149.5	86.0
72	945.5	902.5	758.8	664.0	652.2	643.2	244.1	156.2	89.2
73	945.7	889.5	765.8	675.7	674.9	658.5	253.0	161.7	91.4
74	949.8	893.4	776.3	731.7	695.5	715.9	268.2	167.0	94.3
75	949.7	887.1	764.1	759.9	721.6	752.6	348.5	173.8	96.0
76	962.3	867.8	770.9	773.3	754.9	775.8	529.3	183.7	98.3
77	955.4	842.9	804.6	803.7	798.8	802.6	699.2	196.5	100.7
78	959.8	838.4	821.8	818.3	823.8	816.7	775.1	209.1	103.1
79	966.2	902.4	896.9	897.9	899.8	894.0	900.1	222.9	104.5
80	962.8	900.8	897.8	896.4	898.9	891.6	904.4	237.7	106.5
81	966.5	902.0	899.1	898.2	899.6	893.1	905.8	251.8	108.6
82	969.4	906.0	901.8	903.4	902.6	894.1	909.8	264.9	111.0
83	968.5	904.9	899.3	902.4	901.4	893.7	907.0	277.7	112.8
84	970.9	910.9	902.5	906.8	903.3	896.6	911.0	291.9	115.5
85	970.1	911.6	903.4	908.7	903.6	899.1	909.7	309.3	119.0
86	972.3	912.2	904.2	909.0	904.0	899.9	909.6	332.4	122.8
87	970.8	911.5	905.3	911.0	905.0	902.9	908.9	372.7	129.8
88	978.6	919.5	911.6	919.1	911.1	911.1	916.2	427.5	144.5
89	977.7	923.3	915.6	924.6	914.9	916.4	920.2	470.0	161.7
90	972.6	923.0	917.3	926.2	916.0	918.2	920.6	504.1	185.0
91	974.9	922.6	919.6	928.3	917.3	919.8	921.9	537.7	222.7
92	977.4	922.1	921.0	929.7	917.9	920.9	922.5	581.1	266.8

Table 5. Temperatures Measured in Assembly S-03, Steel Stud, 2x2 Gypsum Board Layers, No Insulation

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	43.0	23.5	24.0	23.2	23.1	24.0	21.1	20.8	20.5	20.4	32.5	30.8	29.9	28.1	28.1	26.6	26.6	25.4	24.4	23.5	32.5
1	119.5	23.5	23.9	23.1	23.0	24.0	21.0	20.8	20.6	20.6	34.5	32.1	30.0	28.0	28.0	26.5	26.7	25.4	24.4	23.5	36.6
2	203.8	23.4	23.9	23.1	23.0	23.9	20.9	20.8	20.5	20.5	84.2	96.4	31.0	28.4	28.0	26.5	26.6	25.3	24.3	23.4	78.8
3	274.1	23.4	23.9	23.1	23.0	23.8	21.0	20.8	24.4	20.4	95.1	96.5	44.7	38.5	29.6	27.4	27.6	25.4	24.3	23.4	87.9
4	328.5	23.4	23.8	23.0	22.9	23.7	21.3	20.9	21.1	21.6	94.5	94.8	65.1	60.8	38.1	32.7	33.1	27.9	24.5	23.5	91.2
5	375.4	23.4	23.8	23.0	22.9	23.9	21.3	20.8	20.9	21.1	95.7	95.6	76.7	72.6	50.8	42.4	43.9	34.6	25.6	23.9	97.6
6	416.3	23.4	23.8	23.0	22.9	23.9	21.5	21.0	21.0	21.2	98.2	99.8	83.5	79.2	62.3	51.9	55.0	43.4	28.2	25.0	109.8
7	450.3	23.5	24.0	23.1	23.0	24.1	21.7	20.9	21.1	21.1	106.4	109.7	86.9	82.5	69.6	59.4	64.3	51.6	33.1	27.5	119.7
8	479.5	23.7	24.2	23.2	23.2	24.5	22.2	21.1	21.3	21.3	115.7	121.2	88.8	83.9	74.5	65.0	70.4	58.8	37.9	31.7	126.0
9	505.1	24.2	24.8	23.5	23.6	25.2	23.0	21.5	21.8	21.8	125.3	137.0	89.7	85.4	77.9	68.9	74.6	63.9	41.5	36.0	139.5
10	528.4	25.1	25.8	24.0	24.2	26.4	24.3	22.2	22.5	22.9	133.5	162.3	90.7	86.4	79.8	71.4	76.3	66.9	44.6	39.2	206.8
11	551.3	26.3	27.4	24.9	25.2	28.1	26.0	23.3	23.7	24.0	148.2	190.3	91.4	87.5	80.5	73.0	77.2	69.2	48.2	42.5	277.6
12	576.2	28.0	29.4	25.9	26.4	30.2	27.5	24.3	24.6	25.2	182.1	222.5	92.7	88.6	83.4	76.0	79.9	72.5	51.7	49.2	321.4
13	598.9	30.0	31.8	27.3	28.0	32.7	30.7	26.5	26.1	27.3	208.7	248.5	96.6	93.3	85.9	78.7	82.6	75.8	54.6	50.9	347.5
14	619.8	32.4	34.6	29.0	29.9	35.6	32.1	28.3	27.3	28.4	232.6	274.9	97.2	94.9	88.0	81.4	84.7	78.3	57.8	54.4	351.0
15	639.6	35.2	37.9	31.0	32.0	38.9	34.7	30.1	28.9	30.9	260.0	297.2	97.6	95.7	89.5	83.7	86.5	80.2	61.4	57.5	371.6
16	842.4	38.4	41.5	33.3	34.4	42.4	36.6	32.0	30.5	32.7	280.8	318.7	98.0	96.2	90.5	86.0	87.1	82.2	63.2	59.8	405.5
17	957.1	41.8	45.3	35.9	37.1	46.0	39.1	34.8	32.5	35.1	295.8	351.1	97.9	96.2	91.2	87.8	87.6	83.6	65.8	61.2	436.5
18	956.5	45.4	49.0	38.7	40.0	49.6	41.4	37.1	34.1	37.3	310.1	348.9	98.7	96.2	91.6	88.9	87.4	84.7	67.7	62.5	449.9
19	950.6	48.7	52.2	41.7	43.0	52.7	43.3	39.4	36.1	40.0	329.0	351.0	102.0	96.1	92.1	89.9	87.3	85.2	69.0	64.2	460.7
20	941.5	51.7	54.9	44.7	46.0	55.3	44.3	41.2	37.6	42.0	347.8	359.7	107.3	96.2	93.8	90.9	87.5	85.8	70.3	66.3	470.7
21	935.7	54.3	57.1	47.6	48.8	57.4	44.6	41.8	38.7	41.7	366.6	371.3	113.0	96.7	96.4	91.8	87.4	86.2	71.3	67.7	481.3
22	924.0	56.3	58.7	50.3	51.2	58.9	43.6	41.1	37.3	40.7	385.8	390.8	118.0	98.8	98.3	92.6	87.5	86.4	72.1	69.4	489.3
23	923.7	58.6	60.5	52.6	53.4	60.5	44.6	42.5	39.9	43.2	403.2	410.6	122.0	104.0	99.9	93.7	87.7	86.6	72.6	70.7	496.6
24	901.1	58.9	60.8	54.7	55.1	60.7	46.6	45.4	41.9	45.6	420.0	424.8	124.8	113.2	102.0	95.5	87.8	86.7	73.2	71.6	505.8
25	900.6	59.8	61.5	56.6	56.6	61.4	46.4	45.3	42.9	45.8	434.8	434.1	127.2	118.1	103.9	97.5	88.1	87.4	73.8	72.9	518.7
26	896.6	60.8	62.2	58.1	57.9	62.1	47.2	46.6	44.3	46.6	448.7	443.0	129.1	121.1	105.6	99.3	88.4	87.5	74.3	73.8	536.2
27	902.3	61.5	62.7	59.4	58.9	62.7	46.8	45.8	44.1	46.3	462.5	453.2	130.9	123.5	107.0	100.8	88.7	87.9	74.8	74.6	555.2
28	909.3	62.4	63.2	60.5	59.9	63.2	47.2	45.5	44.3	46.1	476.1	462.0	132.6	125.9	108.5	102.2	89.6	88.3	75.8	75.7	571.3
29	896.0	63.0	63.6	61.5	60.5	63.6	46.7	45.2	43.3	45.8	489.6	466.7	132.1	128.3	110.5	103.9	89.6	88.6	73.8	76.6	583.8
30	901.3	65.5	65.1	62.4	61.7	64.7	47.1	46.0	44.9	46.6	502.6	478.2	137.6	132.4	113.2	106.4	89.7	88.7	76.9	77.6	593.2
31	901.6	62.8	63.6	63.2	61.4	63.9	47.0	46.0	44.6	45.8	516.4	486.6	142.3	136.5	118.1	110.7	91.2	89.0	77.0	77.9	600.4
32	901.0	63.2	64.1	64.2	61.9	64.1	47.0	46.9	45.8	47.1	530.9	494.9	148.2	141.0	125.8	116.1	95.8	91.7	77.8	78.2	611.0
33	902.7	63.8	64.6	65.0	62.2	64.2	47.2	47.0	45.7	46.7	546.9	503.9	163.4	148.0	135.4	122.7	102.3	95.0	78.9	78.5	622.7
34	902.5	64.3	65.1	65.8	62.5	64.4	47.0	47.2	45.9	45.6	563.7	514.4	185.1	164.7	147.0	131.4	109.0	99.7	79.6	79.2	634.2
35	907.7	64.2	65.4	66.4	62.6	64.5	47.0	48.0	45.8	46.0	582.3	527.0	214.5	186.5	160.8	143.0	117.3	105.7	80.3	80.5	646.1
36	904.6	65.2	66.5	67.1	63.1	64.8	47.4	48.7	46.3	46.2	600.5	541.1	240.1	220.3	177.3	157.7	128.1	114.6	80.6	81.1	657.4
37	910.5	65.8	67.0	67.8	63.6	65.4	48.2	50.2	47.1	47.3	617.8	557.6	263.2	246.7	194.1	174.3	141.7	126.8	79.8	80.7	667.6
38	912.9	66.9	67.9	68.9	64.1	66.2	48.6	50.6	46.9	46.4	633.7	574.3	284.2	269.4	209.2	190.9	156.4	140.4	79.9	81.0	676.1
39	915.1	67.4	68.2	69.7	64.8	66.9	50.4	52.4	47.5	48.9	648.3	590.1	302.9	289.5	224.9	205.7	171.7	154.9	80.8	81.4	683.2
40	916.9	67.8	68.9	70.6	66.1	68.1	50.6	52.4	48.8	49.6	661.4	604.4	320.5	306.0	240.2	217.5	183.7	166.3	82.7	82.6	690.6
41	905.5	70.5	70.6	71.4	66.0	67.9	51.3	52.7	49.2	50.7	674.3	617.2	335.6	319.8	252.9	228.4	194.1	174.9	85.7	84.6	696.4
42	926.1	71.1	71.1	71.9	66.2	68.1	52.5	53.7	50.3	51.4	686.5	628.5	350.5	332.0	264.0	237.8	205.0	181.9	88.9	87.1	698.7
43	920.1	69.2	70.4	72.3	67.0	69.0	52.7	54.2	51.6	52.5	698.3	639.1	363.2	342.4	274.8	246.4	214.1	189.1	92.0	89.8	695.6
44	917.5	68.2	70.1	72.8	68.7	70.9	53.2	53.4	51.5	52.4	709.4	648.3	375.0	351.1	283.9	253.1	223.3	196.3	94.9	93.3	700.4
45	922.0	70.4	71.5	73.1	68.2	70.2	53.2	53.5	52.3	53.0	720.3	658.5	383.4	359.6	292.8	261.6	232.6	203.7	97.1	94.1	704.9
46	925.7	70.6	72.0	73.4	68.2	70.5	53.6	53.3	52.5	52.9	730.2	667.5	393.5	367.1	300.4	268.4	241.9	210.3	101.3	95.9	709.8
47	926.9	69.2	71.2	73.6	69.2	71.4	53.5	53.8	52.6	53.2	740.0	676.6	401.6	374.7	308.1	274.2	250.5	216.4	104.4	97.4	715.0
48	929.4	69.7	71.5	73.9	70.6	72.3	54.5	54.6	53.5	55.1	749.3	685.5	410.3	382.2	315.4	279.7	258.3	222.3	107.5	98.5	719.5
49	932.7	70.3	71.9	74.1	71.0	72.4	55.4	55.5	55.1	55.2	757.8	693.9	419.8	389.5	324.7	285.7	267.5	228.3	110.7	99.9	723.4
50	936.3	70.5	72.1	74.3	70.8	72.3	56.2	56.2	55.5	55.9	766.1	702.0	428.9	396.4	333.0	291.4	277.2	234.5	113.8	101.1	728.1
51	918.5	70.4	72.1	74.4	70.3	72.6	55.9	55.5	55.3	55.8	773.0	709.4	437.9	402.7	341.8	296.9	287.1	240.4	116.5	102.1	735.2
52	912.9	70.4	72.2	74.6	70.5	72.7	55.7	54.7	54.2	54.6	778.2	715.3	446.1	408.9	349.8	303.0	296.7	247.0	119.2	103.2	739.6
53	911.7	69.7	71.7	74.5	71.2	72.9	55.6	54.7	54.6	54.7	782.9	720.1	453.7	415.1	357.0	309.0	305.2	253.3	121.8	104.5	741.8
54	912.9	69.6	71.8	74.7	71.4	72.8	55.6	55.0	55.3	55.3	787.9	724.6	461.2	421.2	364.2	315.2	314.7	260.0	124.5	105.9	743.6
55	916.1	69.7	72.0	74.8	71.3	72.7	56.6	55.5	55.1	55.9	793.1	729.0	468.0	426.8	370.0	321.0	323.3	266.3	127.5	107.5	745.5
56	915.7	70.2	72.3	74.9	72.2	73.0	55.2	54.0	54.5	54.1	798.5	733.4	474.2	432.0	376.4	326.6	331.3	272.7	130.3	108.6	748.5
57	919.4	70.0	72.0	74.9	71.9	73															

Table 5. Temperatures Measured in Assembly S-03, Steel Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
58	921.9	71.2	72.9	74.9	70.5	72.3	56.3	54.7	54.1	54.3	809.2	742.0	486.2	442.1	388.3	337.8	347.1	286.0	137.7	111.7	754.5
59	923.0	71.3	72.6	74.7	69.6	72.8	55.0	54.4	54.3	53.6	813.6	746.2	491.7	447.1	394.1	343.0	354.5	292.3	141.3	113.2	758.3
60	923.1	72.6	73.4	74.6	70.2	73.5	55.6	55.2	54.7	55.0	818.8	750.2	496.9	452.3	399.4	348.4	362.3	298.9	145.5	114.9	762.3
61	926.7	73.9	74.1	74.6	71.8	75.3	55.5	55.2	55.1	54.9	825.5	754.2	502.4	457.5	404.5	353.8	369.9	305.6	150.4	116.9	766.1
62	926.9	75.5	75.1	74.7	71.4	76.3	55.1	54.9	53.7	54.2	834.9	758.7	508.3	462.7	410.0	359.1	377.7	312.3	154.3	118.8	770.4
63	926.0	77.2	76.0	74.8	71.3	77.9	55.5	55.2	54.3	55.2	843.1	763.2	515.0	467.9	417.9	365.3	386.7	319.5	159.3	121.4	775.0
64	928.4	79.2	77.1	74.8	72.1	79.3	54.6	54.8	52.9	54.0	847.2	766.9	522.4	473.1	423.7	370.8	395.0	326.4	163.4	123.9	778.1
65	928.6	83.0	78.4	75.0	73.2	80.7	55.4	56.3	54.4	56.1	854.0	770.4	529.7	477.6	429.3	376.0	402.9	333.2	167.9	127.0	780.8
66	930.3	87.6	79.9	75.2	75.8	83.2	54.9	55.9	53.1	55.1	857.5	774.1	537.1	481.9	435.6	381.1	410.3	339.4	171.9	130.1	780.8
67	934.0	91.3	81.4	75.3	76.7	86.9	54.8	55.5	52.8	54.6	860.3	777.8	544.0	486.1	442.0	385.8	417.3	345.4	176.1	133.3	779.4
68	936.3	93.8	82.9	75.6	76.5	91.0	55.7	55.8	52.6	55.7	863.2	782.1	551.4	490.2	446.6	390.5	424.8	351.5	181.4	136.7	778.4
69	939.9	96.1	85.9	76.1	79.1	94.5	58.5	57.4	53.0	56.1	864.9	786.6	558.7	493.5	454.8	394.1	431.4	357.0	187.8	139.6	777.5
70	940.9	98.1	89.1	76.7	79.6	95.9	59.7	58.9	52.2	56.3	866.5	790.4	565.9	497.4	460.1	398.6	437.9	363.1	193.6	142.4	777.4
71	945.4	99.5	91.5	77.4	81.2	98.5	61.0	60.3	51.7	57.9	866.8	794.5	572.9	501.7	466.5	403.8	444.0	369.4	198.2	145.8	777.6
72	949.2	101.3	93.8	79.1	83.1	99.8	61.1	60.4	51.4	59.0	867.5	798.3	579.3	506.3	472.4	408.9	450.7	375.8	202.8	149.8	778.4
73	946.5	102.3	95.2	82.0	85.3	100.9	61.8	62.1	52.3	60.5	867.9	803.7	585.7	510.8	478.0	414.3	457.6	382.5	209.0	155.5	779.3
74	950.0	103.2	96.6	85.0	88.9	102.2	61.8	61.5	52.4	62.4	868.3	806.9	591.0	515.4	483.0	419.3	463.4	388.6	215.5	160.7	780.4
75	952.5	104.0	98.2	87.6	93.2	103.6	62.9	62.5	54.9	63.9	869.5	810.0	596.7	519.4	487.1	424.2	466.9	394.3	223.4	165.8	781.6
76	958.8	104.4	99.3	89.8	96.1	104.7	62.7	62.1	56.0	62.4	871.6	814.0	600.6	523.5	490.8	428.8	471.8	400.1	232.1	170.7	782.9
77	959.1	104.7	100.3	91.4	97.9	105.2	65.0	63.2	59.1	65.5	874.4	817.8	606.3	527.5	494.1	433.8	476.0	406.1	239.9	175.3	784.6
78	962.6	105.2	101.3	93.1	98.3	105.2	66.8	63.9	59.2	65.8	876.4	820.9	616.9	531.8	497.9	438.3	479.9	411.5	247.8	179.5	785.5
79	960.0	105.4	101.6	94.6	100.0	106.1	69.6	64.6	60.5	67.9	878.1	824.8	630.8	536.2	501.8	443.8	484.0	417.9	256.5	184.2	788.3
80	959.4	106.2	102.6	96.2	100.3	106.0	73.4	65.6	60.8	69.5	879.0	826.4	636.1	541.2	507.1	449.8	488.3	424.1	265.4	189.2	789.9
81	962.3	106.8	103.3	97.6	102.6	107.0	75.6	66.6	62.9	70.3	880.9	828.1	640.4	546.1	512.1	455.2	492.5	429.7	274.4	194.7	791.2
82	962.6	107.2	103.7	98.7	103.2	107.4	75.5	67.1	62.2	70.6	884.6	831.9	645.1	550.7	516.2	480.5	497.4	435.7	283.7	200.7	792.7
83	964.2	107.9	104.4	99.7	102.7	107.6	76.8	67.6	63.4	71.5	890.2	856.6	648.6	555.5	521.2	466.3	501.7	436.4	292.6	207.2	794.2
84	964.7	108.6	104.5	100.5	103.2	108.4	78.4	69.7	65.0	72.9	890.9	871.6	653.1	561.5	525.4	471.7	505.3	440.9	301.7	213.5	795.7
85	965.0	109.6	104.9	101.2	104.4	109.8	78.1	69.3	67.8	72.3	891.3	888.3	657.0	568.2	529.1	477.9	510.5	446.8	310.5	219.7	797.2
86	968.5	110.5	105.0	101.8	105.3	111.3	80.5	72.1	70.1	74.4	891.7	904.2	659.8	575.4	532.5	483.8	514.4	452.8	318.7	226.1	799.0
87	968.9	111.7	105.5	102.3	104.7	111.9	80.2	72.1	70.7	73.8	891.3	914.9	663.8	582.9	535.2	489.4	519.1	458.9	326.4	233.3	801.1
88	969.5	112.8	105.9	102.8	105.9	113.8	81.2	73.3	70.8	75.1	891.8	921.7	666.9	590.7	538.6	494.9	524.3	464.9	334.5	240.5	802.8
89	973.2	114.2	106.9	103.4	105.9	114.7	82.1	74.5	73.2	75.6	893.1	922.0	670.4	599.5	542.8	501.0	528.4	471.7	342.5	247.9	805.1
90	972.8	115.3	107.2	103.7	106.3	115.9	81.4	74.7	73.0	75.1	894.5	921.8	672.5	608.0	546.2	506.5	532.1	477.0	350.4	255.4	807.0
91	975.6	116.9	108.7	104.4	107.1	117.4	83.6	76.0	75.3	77.7	896.5	922.7	674.0	616.7	550.0	511.8	535.1	484.2	358.2	263.0	809.4
92	977.2	118.1	109.0	104.9	107.8	118.9	85.3	77.9	75.7	79.6	897.3	926.4	674.0	625.4	553.6	517.6	538.5	488.9	366.1	271.1	811.7
93	978.4	119.7	110.3	105.4	108.4	120.0	86.3	77.4	77.0	78.9	900.0	943.1	675.5	633.1	557.4	522.0	541.7	495.2	373.2	279.0	814.1
94	979.2	121.1	111.2	106.0	109.5	121.4	88.0	78.8	76.7	80.3	901.0	955.6	676.4	641.0	560.5	526.9	545.0	501.0	379.7	287.4	816.0
95	979.9	122.7	112.0	106.6	110.8	123.1	88.0	78.5	76.6	81.1	902.1	959.7	677.5	650.0	564.1	531.8	548.9	506.8	386.1	295.9	818.3
96	981.0	125.1	113.5	107.4	112.1	125.5	89.9	80.9	78.1	82.4	904.4	962.5	678.6	658.0	567.5	536.9	553.2	512.3	392.6	304.7	819.9
97	984.5	128.1	116.1	108.2	113.3	128.5	91.5	81.2	78.8	83.2	905.4	961.9	680.3	664.9	570.5	541.7	557.2	517.7	399.0	314.2	821.9
98	995.4	131.9	115.8	109.1	114.6	132.9	93.2	83.8	81.0	86.4	907.9	966.0	680.9	670.7	573.6	545.5	561.1	522.1	405.9	323.4	823.7
99	975.0	135.4	116.8	109.7	116.0	137.1	92.5	83.2	80.5	84.3	907.9	966.9	681.6	676.3	577.2	549.2	565.1	525.7	413.2	331.9	825.1
100	986.6	140.8	118.8	110.7	117.2	143.3	95.7	86.2	82.2	88.1	910.2	967.9	682.2	679.1	579.6	552.2	569.3	528.6	419.6	339.2	826.4
101	988.7	150.8	120.2	111.6	118.5	153.9	96.5	86.0	83.3	87.8	911.2	969.9	683.0	682.2	582.9	555.8	573.5	531.7	425.7	346.9	827.7
102	988.5	162.1	122.4	112.6	120.0	171.4	98.2	88.0	84.5	89.9	912.5	970.9	683.2	683.9	586.3	559.2	578.0	535.1	431.7	353.8	828.9
103	991.9	184.7	125.1	113.7	121.4	194.8	100.0	89.6	85.2	90.5	914.0	973.0	683.1	686.0	590.2	562.7	582.5	538.4	437.8	360.5	830.2
104	993.3	205.2	128.1	114.7	122.8	215.9	101.3	89.3	85.2	89.5	915.0	974.4	684.2	687.7	594.0	566.0	587.5	541.4	444.3	366.8	831.6
105	990.8	224.6	130.5	115.2	124.6	236.3	102.1	92.0	86.7	93.7	915.5	973.0	684.6	689.8	597.4	569.3	592.1	544.9	451.1	372.9	833.5

Table 5. Temperatures Measured in Assembly S-03, Steel Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
0	43.0	31.1	29.8	28.8	27.7	26.3	24.8	23.7	32.2	30.3	29.0	28.0	27.4	25.9	26.7	25.7	24.3	23.3
1	119.5	34.8	29.8	28.8	28.0	26.2	24.8	23.6	43.9	39.4	29.8	27.7	27.4	25.8	26.7	25.6	24.2	23.3
2	203.8	79.0	31.4	29.3	31.0	29.3	24.8	23.6	82.9	79.6	71.7	70.7	29.0	27.1	26.9	25.3	24.1	23.2
3	274.1	86.0	40.3	36.9	37.5	35.8	25.1	23.9	88.9	86.6	82.4	80.5	37.1	33.6	29.4	27.5	24.2	23.3
4	328.5	89.1	54.8	49.2	46.7	42.6	26.3	24.9	92.6	90.1	87.1	85.3	46.7	44.3	35.0	33.7	24.3	23.4
5	375.4	91.4	65.1	59.5	57.5	49.8	27.8	26.4	101.6	96.0	89.8	88.4	56.5	54.3	44.6	42.4	25.1	24.2
6	416.3	97.2	72.6	67.3	65.4	56.5	30.0	28.6	111.9	106.2	91.3	90.6	65.2	63.0	54.4	50.6	26.6	25.7
7	450.3	102.6	77.8	72.0	71.5	62.5	34.3	31.6	120.2	114.7	92.1	91.8	72.6	69.9	62.6	57.6	29.2	28.0
8	479.5	107.5	81.3	75.0	76.1	66.8	39.5	35.4	127.6	122.9	92.3	92.2	78.9	75.9	68.3	64.1	32.6	30.8
9	505.1	115.6	83.7	77.7	78.7	69.2	45.5	39.6	142.0	136.4	92.2	91.9	83.1	78.8	72.2	68.3	36.9	34.3
10	528.4	147.4	84.9	79.2	80.1	69.7	51.1	43.6	211.6	201.2	87.9	87.8	84.2	78.5	74.7	70.4	41.5	37.8
11	551.3	228.2	86.2	80.3	82.1	71.1	55.5	46.8	264.9	260.1	91.9	90.4	84.2	78.3	76.7	71.4	45.2	40.8
12	576.2	284.6	89.9	85.4	85.3	74.9	58.8	49.7	297.2	300.1	93.8	95.8	86.8	81.0	80.4	74.5	49.5	43.6
13	598.9	311.5	92.4	88.5	88.3	76.7	62.4	52.6	324.8	329.7	94.3	98.3	88.7	82.8	83.5	76.8	52.0	46.0
14	619.8	315.5	94.4	90.1	89.8	78.9	65.9	55.7	355.8	360.5	96.0	99.9	90.4	84.7	85.1	78.8	55.8	48.3
15	639.6	335.8	98.2	92.4	91.0	81.0	69.2	59.3	381.8	391.2	100.3	102.3	91.8	86.5	86.2	80.6	59.4	51.2
16	842.4	362.8	102.6	97.1	92.3	82.9	71.9	61.4	401.6	421.4	105.9	105.7	93.4	88.7	86.7	82.0	62.2	54.0
17	957.1	390.1	106.9	102.9	93.7	84.5	73.7	64.1	419.8	445.2	111.4	110.7	94.9	91.2	86.9	83.2	64.6	56.4
18	956.5	415.8	110.8	108.0	95.5	85.6	74.9	66.3	439.2	464.5	116.7	116.7	96.8	94.0	86.8	84.1	66.4	58.6
19	950.6	434.7	113.5	111.6	96.1	85.9	75.4	68.3	455.0	487.9	122.7	122.7	99.1	96.2	86.5	84.7	67.9	60.5
20	941.5	452.3	115.4	114.3	97.0	86.0	75.6	69.9	469.1	519.1	128.8	130.8	101.7	98.7	86.3	85.3	69.1	62.2
21	935.7	469.2	117.2	116.6	97.5	86.4	75.8	71.1	488.3	562.1	137.0	147.4	104.2	101.2	86.2	86.1	69.9	63.6
22	924.0	486.8	119.0	118.3	98.6	87.1	75.9	71.8	514.5	664.8	152.7	172.9	106.7	104.8	86.2	86.8	70.6	64.9
23	923.7	508.5	120.4	120.2	99.8	89.2	76.0	72.5	543.1	766.5	182.2	186.1	110.4	109.0	86.3	87.9	71.1	65.9
24	901.1	532.2	122.3	122.2	100.5	90.1	76.3	73.0	567.9	829.7	203.0	214.1	114.7	112.9	86.5	89.0	71.5	66.8
25	900.6	552.3	124.5	124.0	102.2	91.1	76.5	73.6	585.9	853.5	215.2	254.5	119.1	118.1	87.1	90.2	72.0	67.6
26	896.6	568.4	127.3	126.3	103.4	91.8	76.5	74.1	600.7	844.9	230.4	306.7	124.3	124.8	88.9	92.0	72.5	68.5
27	902.3	579.3	131.1	129.8	104.7	92.6	76.4	74.6	611.0	838.7	248.0	379.1	131.4	132.7	90.8	94.4	72.9	69.4
28	909.3	587.6	137.8	134.0	108.2	94.0	76.8	74.8	622.0	840.5	266.5	440.1	140.1	141.3	93.3	97.8	73.2	70.2
29	896.0	595.9	146.0	138.7	112.9	96.1	76.8	75.1	637.2	839.8	286.4	455.0	148.8	149.0	97.0	102.7	74.3	71.0
30	901.3	603.4	162.2	151.2	119.3	99.3	76.4	75.1	647.0	837.6	308.4	458.1	161.1	156.9	103.5	108.0	75.1	72.7
31	901.6	611.1	183.7	176.2	130.2	105.0	76.3	75.4	657.2	830.5	332.3	462.1	172.7	164.1	114.2	114.8	76.0	73.7
32	901.0	622.4	210.4	204.2	146.2	114.5	76.6	75.7	668.7	822.0	352.0	488.1	185.2	171.6	129.6	122.2	77.2	75.0
33	902.7	632.6	233.8	225.3	165.2	126.7	77.3	76.1	677.4	814.7	370.3	489.0	197.9	178.8	145.7	130.0	78.2	76.3
34	902.5	643.8	254.2	242.7	184.3	142.4	77.7	76.5	684.9	810.7	387.4	490.7	209.8	185.8	160.5	137.5	79.4	77.4
35	907.7	654.2	272.6	258.6	203.1	158.5	77.8	76.9	692.0	806.9	399.6	482.9	221.3	193.2	169.1	144.5	81.1	78.7
36	904.6	664.8	290.6	272.6	226.2	171.8	79.2	77.3	697.8	800.8	401.2	472.7	232.8	200.6	177.5	150.5	83.3	80.3
37	910.5	674.4	306.7	284.7	243.6	181.8	81.2	77.7	703.0	792.5	406.1	464.1	243.6	208.0	189.7	155.5	85.4	82.3
38	912.9	682.6	321.6	295.0	263.1	189.2	82.8	80.1	706.9	784.6	408.3	459.0	252.8	214.5	201.0	160.2	87.6	84.7
39	915.1	689.0	336.0	304.7	276.5	199.3	85.0	82.2	708.7	776.9	410.1	455.3	259.6	221.2	208.8	166.7	89.4	87.0
40	916.9	694.7	347.9	313.1	291.7	211.2	87.9	85.2	710.8	770.7	413.2	448.7	264.4	230.0	216.5	175.2	91.0	89.0
41	905.5	700.5	360.1	321.5	307.5	222.3	90.5	87.6	712.2	764.7	416.7	441.1	270.7	237.4	226.3	184.5	91.7	90.7
42	926.1	704.7	374.6	329.9	317.5	233.4	92.5	90.2	711.5	758.8	422.3	432.4	278.1	244.9	237.8	195.1	93.6	92.1
43	920.1	708.3	386.5	337.0	322.9	244.0	94.4	92.2	709.4	755.5	428.5	425.7	286.7	252.3	248.3	203.9	94.6	93.3
44	917.5	714.3	396.1	344.0	330.0	254.8	95.7	94.9	708.8	752.2	433.4	431.1	294.1	258.6	258.4	211.5	95.5	94.2
45	922.0	711.0	401.7	349.8	341.9	264.2	97.0	95.3	709.5	750.9	440.2	438.7	301.5	264.8	268.0	218.4	95.7	95.1
46	925.7	710.2	406.2	355.7	349.1	274.4	97.9	94.9	709.2	750.3	444.2	449.0	308.6	270.6	277.5	225.7	97.2	96.6
47	926.9	711.4	411.3	361.0	356.2	283.8	98.7	97.0	712.5	753.0	442.3	460.0	314.3	276.9	286.5	233.1	98.0	96.8
48	929.4	712.0	416.8	366.7	362.2	292.2	99.5	97.6	714.6	755.1	440.2	463.2	320.1	282.7	294.9	239.7	98.7	97.5
49	932.7	713.5	423.2	372.5	369.7	300.2	100.6	98.2	716.2	757.1	441.1	465.5	325.0	288.3	302.7	245.9	99.5	98.4
50	936.3	717.2	430.3	378.1	379.7	308.9	101.5	98.8	718.5	759.2	444.3	468.4	330.3	293.9	310.5	252.1	100.2	99.2
51	918.5	723.7	438.6	384.4	387.4	317.1	102.9	99.1	723.0	755.8	448.5	471.3	336.6	299.1	319.3	258.0	100.9	99.9
52	912.9	727.7	447.2	391.0	399.3	326.4	104.2	99.9	724.4	752.2	453.7	473.7	343.8	304.5	327.9	264.3	102.0	100.7
53	911.7	730.3	453.9	397.1	407.6	335.1	105.4	100.8	724.0	749.9	458.3	473.8	350.1	310.2	336.3	270.5	102.8	101.4
54	912.9	732.9	460.9	403.0	416.5	343.7	107.2	101.7	723.2	749.3	462.2	475.1	356.0	315.8	344.1	277.2	103.6	102.2
55	916.1	735.8	467.3	408.3	425.2	352.3	109.0	102.8	721.8	750.1	466.5	476.1	363.2	321.4	353.5	283.8	104.4	102.9
56	915.7	739.3	473.3	414.3	433.2	360.1	110.7	103.9	720.0	750.3	471.0	477.0	370.4	326.5	363.0	290.0	105.3	103.6
57	919.4	742.0	479.2	420.1	441.9	368.1	112.5	105.0	718.4	751.3	475.5	477.5	377.9	331.7	373.2	296.4	106.2	104.3

Table 5. Temperatures Measured in Assembly S-03, Steel Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
58	921.9	743.9	486.4	426.2	451.3	376.1	114.4	106.3	717.3	751.9	479.9	478.4	385.2	336.9	383.9	302.9	107.2	105.0
59	923.0	744.3	492.2	432.0	458.8	383.6	117.4	107.5	716.8	753.5	483.3	480.1	392.0	342.2	393.2	309.6	108.2	105.6
60	923.1	744.6	497.9	437.9	466.2	390.9	121.0	108.5	716.5	755.5	487.0	482.7	397.9	347.2	401.5	316.0	109.3	106.4
61	926.7	745.0	504.3	443.9	474.1	397.9	125.5	109.5	716.3	758.5	490.7	485.3	404.1	351.8	409.4	321.9	110.4	107.2
62	926.9	746.0	510.2	450.1	480.9	405.4	131.2	110.5	716.4	759.6	494.5	487.3	409.7	356.7	416.7	328.2	111.6	108.1
63	926.0	746.8	516.4	456.8	489.1	412.7	136.2	111.8	716.5	762.0	498.3	490.5	414.3	361.5	423.3	334.0	112.8	109.0
64	928.4	747.8	522.7	462.3	496.6	419.5	143.7	113.3	716.1	762.6	501.7	491.9	419.9	366.1	431.0	340.3	114.0	109.9
65	928.6	748.7	529.8	468.1	504.0	426.0	150.9	115.2	715.7	764.0	505.2	494.1	425.6	370.8	438.7	346.4	115.3	110.8
66	930.3	749.9	536.5	473.4	511.1	432.9	166.0	117.6	715.4	765.5	508.8	496.1	432.1	375.6	446.8	353.0	116.7	111.8
67	934.0	751.3	542.5	478.8	518.2	438.9	184.2	121.0	715.2	767.5	512.1	498.1	437.3	380.2	453.5	359.0	118.1	112.8
68	936.3	753.2	549.0	484.1	525.4	445.2	197.6	125.3	715.3	769.6	515.1	500.4	441.8	384.6	460.1	364.3	119.6	113.8
69	939.9	755.5	555.4	489.7	532.3	453.4	207.2	129.1	715.6	772.5	518.7	502.8	447.8	389.4	468.6	370.1	121.2	114.8
70	940.9	758.3	561.0	494.2	538.6	459.1	215.8	132.7	716.2	774.8	522.8	505.1	454.1	393.9	475.9	375.2	123.0	115.9
71	945.4	761.6	566.4	498.7	544.2	464.5	229.5	140.5	716.8	777.7	526.6	507.9	459.1	398.2	481.7	379.1	125.0	117.1
72	949.2	765.3	571.3	503.0	549.3	470.6	242.8	148.9	717.5	779.7	530.1	510.5	463.7	402.4	487.3	381.9	127.4	118.2
73	946.5	769.2	577.9	509.0	556.4	478.5	254.6	161.6	718.4	784.2	535.3	514.9	469.3	407.3	495.6	374.9	130.1	119.5
74	950.0	773.7	581.9	513.6	560.2	485.2	264.6	175.6	719.2	785.7	541.2	517.3	474.9	412.1	501.4	371.5	133.3	120.9
75	952.5	778.6	585.4	517.5	563.8	490.5	273.5	187.3	719.9	787.5	545.9	519.5	479.3	416.1	506.5	374.9	137.0	122.6
76	958.8	784.5	589.3	522.1	568.1	496.2	281.6	194.6	720.8	791.8	550.4	522.2	483.2	420.3	511.7	379.9	140.9	124.4
77	959.1	791.2	591.9	525.8	571.0	500.4	289.2	197.6	722.1	794.0
78	962.6	799.1	595.4	529.9	574.8	505.0	296.8	200.4	723.4	796.4	558.2	527.7	489.5	427.6	519.0	388.4	149.2	128.8
79	960.0	808.0	600.0	534.9	579.5	510.2	304.2	203.1	724.5	798.4	562.5	530.4	491.1	431.1	520.5	395.0	154.1	131.5
80	959.4	815.9	603.3	538.9	583.7	514.1	311.6	206.8	725.3	799.8	565.8	532.6	493.5	433.8	522.1	404.2	159.4	134.4
81	962.3	838.9	606.0	543.3	586.5	518.3	319.7	211.3	725.7	797.4	568.8	534.5	495.8	436.7	524.1	402.1	164.1	137.7
82	962.6	879.6	610.8	551.1	592.4	525.5	327.0	216.1	726.3	797.1	572.3	536.0	498.7	440.4	527.7	404.7	168.5	141.2
83	964.2	911.2	613.3	559.1	595.6	531.9	335.0	221.6	726.9	799.9	575.1	535.9	501.6	444.1	530.4	409.2	172.9	144.7
84	964.7	917.7	617.6	569.3	600.0	540.4	341.8	227.2	727.0	803.7	579.0	538.5	505.2	449.3	534.7	415.9	177.5	148.2
85	955.0	920.1	622.1	578.1	605.2	548.3	345.4	233.5	727.3	807.4	583.1	542.1	508.7	454.3	536.9	422.9	182.1	151.7
86	968.5	922.5	625.0	585.6	608.1	555.1	345.7	241.7	727.6	811.0	587.2	545.9	512.6	459.7	541.2	430.7	186.7	155.5
87	968.9	922.3	628.0	592.8	612.8	561.7	347.5	250.8	728.2	814.9	591.9	549.8	515.8	464.7	545.3	438.3	191.0	159.3
88	969.5	921.9	632.1	599.2	616.0	567.7	352.0	260.5	728.8	817.1	596.0	554.1	519.4	470.0	547.9	445.2	195.1	163.1
89	973.2	923.1	635.3	603.6	620.0	572.5	354.7	270.8	729.9	824.6	599.8	558.4	522.7	473.9	550.9	452.2	199.3	166.7
90	972.8	923.8	640.6	607.2	623.1	576.0	358.8	280.6	731.0	825.8	602.9	562.1	525.6	477.3	552.3	448.2	203.1	170.6
91	975.6	925.3	642.8	610.4	624.9	579.1	363.2	290.5	732.4	830.8	606.3	565.7	528.7	480.7	555.3	446.6	207.0	174.9
92	977.2	924.5	645.9	614.4	627.6	583.4	369.1	300.5	733.5	830.4	609.7	569.3	531.1	484.2	557.3	448.2	210.5	179.1
93	978.4	926.9	649.8	618.2	630.7	586.7	375.1	310.9	735.0	834.2	613.0	572.0	534.4	487.2	561.3	450.3	214.1	183.4
94	979.2	925.5	654.1	624.7	634.3	590.6	383.6	321.6	736.6	836.7	616.4	575.0	537.2	490.3	563.5	452.6	217.6	187.6
95	979.9	927.7	656.5	633.0	636.6	593.7	392.2	331.8	737.9	839.3	619.8	578.1	540.4	493.7	567.4	455.5	221.2	191.6
96	981.0	930.9	659.1	640.8	641.2	596.8	399.0	341.3	739.2	842.9	622.7	581.1	542.5	496.9	569.7	457.6	224.8	195.5
97	984.5	932.5	660.2	632.0	642.0	599.2	406.7	350.4	740.8	844.4	625.8	585.6	545.3	501.2	572.3	460.7	228.3	199.6
98	995.4	935.8	658.2	629.3	644.8	602.5	414.6	359.5	743.0	848.2	628.7	587.9	548.0	503.2	575.3	462.8	231.9	202.9
99	975.0	935.6	658.9	632.2	646.4	606.5	423.1	367.8	743.7	851.9	633.5	592.1	551.2	507.1	579.1	466.5	235.7	206.3
100	986.6	938.3	659.7	634.7	648.8	609.4	430.2	375.0	746.3	853.2	635.3	595.2	554.0	510.6	580.6	469.3	239.4	209.7
101	988.7	940.5	661.6	637.7	650.8	612.9	437.7	382.0	747.4	856.2	638.6	598.9	556.8	514.0	583.1	472.3	243.2	212.9
102	988.5	940.9	664.2	640.7	653.6	616.5	444.5	388.2	749.3	858.6	641.4	601.9	559.9	517.2	585.4	475.0	247.1	216.4
103	991.9	943.3	666.4	643.7	656.1	620.0	451.3	393.7	751.0	861.3	644.6	604.6	562.6	520.1	587.5	477.6	250.8	219.7
104	993.3	943.7	669.1	646.7	658.3	623.3	458.1	398.9	751.6	863.9	648.1	608.0	565.2	523.0	589.8	480.2	254.7	223.0
105	990.8	945.4	672.2	649.8	661.8	627.2	464.6	404.2	754.1	865.6	650.7	610.8	568.1	526.3	592.2	483.0	258.6	226.4

Table 6. Average Temperatures Measured in Assembly S-03, Steel Stud, 2x2 Gypsum Board Layers, No Insulation

Legend: BL - Base Layer, Cav. - Cavity, Std. - Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(10,11,20,21,28,29)	BL/Cav. (Exp.) Av(22,23)	BL/Std. (Exp.) Av(12,13,30,31)	Mid Std. Av(14,15,32,33)	BL/Cav. (UnExp.) Av(24,25)	BL/Std. (UnExp.) Av(16,17,34,35)	BL/FL (UnExp.) Av(18,19,26,27,36,37)	UnExp. Av(1,2,3,4,5)
0	43.0	31.6	29.3	28.8	27.0	27.0	26.1	24.0	23.5
1	119.5	36.9	29.3	28.9	26.9	27.1	26.1	24.0	23.5
2	203.8	83.5	30.4	50.4	27.7	30.1	26.0	23.9	23.5
3	274.1	90.2	38.6	61.5	31.9	36.6	27.5	24.0	23.4
4	326.5	92.1	52.0	74.6	40.5	44.6	32.5	24.5	23.4
5	375.4	96.3	62.3	81.9	51.0	53.6	41.4	25.5	23.4
6	416.3	103.8	70.0	86.1	60.6	61.0	50.8	27.4	23.4
7	450.3	112.2	74.9	88.3	67.9	67.0	59.0	30.6	23.5
8	479.5	120.1	78.2	89.3	73.5	71.4	65.4	34.6	23.8
9	505.1	132.6	80.7	89.8	77.2	74.0	69.7	39.0	24.3
10	528.4	177.1	82.0	88.2	78.5	74.9	72.1	43.0	25.1
11	551.3	228.2	83.2	90.3	79.0	76.6	73.6	46.5	26.4
12	576.2	268.0	87.7	92.8	81.8	80.6	76.9	50.4	28.0
13	598.9	295.1	90.4	95.6	84.0	82.5	79.7	53.1	30.0
14	619.8	315.0	92.2	97.0	86.1	84.4	81.7	56.3	32.3
15	639.6	339.6	95.3	99.0	87.9	86.0	83.4	59.7	35.0
16	842.4	365.1	99.9	101.4	89.7	87.6	84.5	62.1	38.0
17	957.1	389.7	104.9	104.0	91.3	89.1	85.3	64.3	41.2
18	956.5	404.7	109.4	107.1	92.8	90.6	85.8	66.1	44.6
19	950.6	419.7	112.5	110.9	94.3	91.0	86.0	67.6	47.7
20	941.5	436.5	114.9	115.8	96.3	91.5	86.2	68.9	50.5
21	935.7	456.5	116.9	123.5	98.4	91.9	86.5	69.9	53.0
22	924.0	488.7	118.7	135.6	100.6	92.9	86.7	70.8	55.1
23	923.7	521.4	120.3	148.6	103.2	94.5	87.1	71.5	57.1
24	901.1	546.7	122.2	163.8	106.3	95.3	87.5	72.0	58.0
25	900.6	563.2	124.3	178.8	109.7	96.7	88.2	72.7	59.2
26	896.6	573.6	126.8	196.8	113.5	97.6	89.2	73.3	60.2
27	902.3	583.3	130.5	220.4	118.0	98.6	90.4	73.8	61.1
28	909.3	593.3	135.9	241.3	123.0	101.1	92.3	74.4	61.8
29	896.0	602.2	143.3	250.5	128.0	104.5	94.5	74.6	62.5
30	901.3	610.3	156.7	259.1	134.4	109.3	97.5	75.6	63.9
31	901.6	617.0	179.9	268.3	141.4	117.6	102.3	76.1	63.0
32	901.0	625.0	207.3	282.3	149.7	130.4	109.8	76.7	63.5
33	902.7	633.0	229.6	292.7	158.7	146.0	118.3	77.5	63.9
34	902.5	641.9	248.4	307.0	168.5	163.4	126.7	78.3	64.4
35	907.7	651.4	265.6	320.9	179.6	180.8	134.2	79.2	64.6
36	904.6	660.4	281.6	333.6	192.1	199.0	142.7	80.3	65.3
37	910.5	668.8	295.7	345.0	205.0	212.7	153.4	81.2	65.9
38	912.9	676.4	308.3	355.2	216.8	226.1	164.5	82.7	66.8
39	915.1	682.7	320.3	364.4	227.8	237.9	175.5	84.3	67.4
40	916.9	688.8	330.5	372.1	238.0	251.5	185.4	86.4	68.3
41	905.5	694.2	340.8	378.3	247.4	264.9	194.9	88.5	69.3
42	926.1	698.1	352.2	384.3	256.2	275.4	204.9	90.7	69.7
43	920.1	701.0	361.8	389.9	265.1	283.4	213.9	92.7	69.6
44	917.5	705.6	370.0	397.6	272.4	292.4	222.4	94.7	70.1
45	922.0	709.2	375.7	405.5	280.1	303.0	230.7	95.7	70.7
46	925.7	712.8	380.9	413.4	287.0	311.7	238.9	97.3	70.9
47	926.9	718.1	386.2	419.7	293.4	320.0	246.6	98.7	70.9
48	929.4	722.7	391.8	424.0	299.5	327.2	253.8	99.9	71.6
49	932.7	727.0	397.8	429.0	305.9	335.0	261.1	101.2	72.0
50	936.3	731.8	404.2	434.5	312.1	344.3	268.6	102.4	72.0
51	918.5	736.7	411.5	440.1	318.6	352.2	275.2	103.6	72.0
52	912.9	739.6	419.1	445.6	325.3	362.9	284.0	104.9	72.1
53	911.7	741.5	425.5	450.2	331.6	371.3	291.3	106.1	72.0
54	912.9	743.6	431.9	454.9	337.8	380.1	299.0	107.5	72.0
55	916.1	745.9	437.8	459.4	343.9	388.8	306.7	109.0	72.1
56	915.7	748.3	443.8	463.5	350.0	396.7	314.2	110.4	72.5
57	919.4	750.8	449.7	467.6	356.0	405.0	322.0	112.0	72.4

Table 6. Average Temperatures Measured in Assembly S-03, Steel Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Legend: BL - Base Layer, Cav. - Cavity, Std. - Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(10,11,20,21,28,29)	BL/Cav. (Exp.) Av(22,23)	BL/SSStd. (Exp.) Av(12,13,30,31)	Mid Std. Av(14,15,32,33)	BL/Cav. (UnExp.) Av(24,25)	BL/SSStd. (UnExp.) Av(16,17,34,35)	BL/FL (UnExp.) Av(18,19,26,27,36,37)	UnExp. Av(1,2,3,4,5)
58	921.9	753.0	456.3	471.6	362.1	413.7	330.0	113.7	72.4
59	923.0	755.4	462.1	475.6	367.8	421.2	337.4	115.5	72.2
60	923.1	758.0	467.9	479.7	373.2	428.5	344.6	117.6	72.9
61	926.7	760.9	474.1	484.0	378.6	436.0	351.7	120.0	74.0
62	926.9	764.3	480.1	488.2	383.9	443.1	358.7	122.4	74.6
63	926.0	767.8	486.6	492.9	389.7	450.9	365.9	125.1	75.5
64	928.4	769.8	492.5	497.3	395.1	458.1	373.2	128.0	76.5
65	928.6	772.3	498.9	501.7	400.4	465.0	380.3	131.2	78.0
66	930.3	773.9	504.9	506.0	406.1	472.0	387.4	135.7	80.3
67	934.0	775.3	510.7	510.1	411.3	478.5	393.8	140.9	82.3
68	936.3	777.0	516.5	514.3	416.4	485.3	400.2	145.7	84.0
69	939.9	778.8	522.6	518.4	421.5	492.8	406.8	149.9	86.3
70	940.9	780.6	522.6	522.8	426.7	498.9	413.0	153.9	87.9
71	945.4	782.5	532.5	527.2	431.9	504.3	418.6	159.4	89.6
72	949.2	784.4	537.1	531.6	436.8	510.0	423.9	165.0	91.4
73	946.5	787.1	543.4	536.7	442.2	517.4	427.6	171.7	93.1
74	950.0	789.1	547.7	541.2	447.3	522.7	431.2	178.4	95.2
75	952.5	791.2	551.5	545.1	451.7	527.2	435.6	184.9	97.3
76	958.8	794.3	555.7	549.2	455.8	532.1	440.9	190.7	98.9
77	959.1	797.4	558.9	566.9	463.9	535.7	441.0	225.5	99.9
78	962.6	800.5	562.6	558.7	463.3	539.9	449.7	200.4	100.6
79	960.0	803.7	567.5	565.0	466.9	544.8	454.4	205.6	101.6
80	959.4	806.1	571.1	568.9	471.0	548.9	459.7	211.1	102.3
81	962.3	810.4	574.6	572.5	474.9	552.4	462.1	217.0	103.5
82	962.6	818.7	580.9	576.0	478.9	559.0	466.4	222.8	104.0
83	964.2	829.8	586.2	578.8	483.3	563.8	469.4	229.0	104.5
84	964.7	834.4	593.5	583.0	487.9	570.2	474.2	235.0	105.0
85	965.0	838.6	600.1	587.6	492.5	576.8	479.3	240.5	106.0
86	968.5	842.7	605.3	592.1	497.1	581.6	484.8	245.7	106.8
87	968.9	845.4	610.4	597.1	501.3	587.2	490.4	251.4	107.2
88	969.5	847.4	615.6	601.9	505.7	591.8	495.6	257.6	108.2
89	973.2	849.6	619.5	607.0	510.1	596.2	500.8	263.6	109.0
90	972.8	850.7	623.9	611.4	513.9	599.6	502.4	269.8	109.7
91	975.6	852.8	626.6	615.7	517.8	602.0	505.3	276.1	110.9
92	977.2	853.9	630.1	619.6	521.7	605.5	508.2	282.7	111.7
93	978.4	858.9	634.0	623.4	525.3	608.7	512.1	289.3	112.8
94	979.2	861.9	639.4	627.2	528.7	612.4	515.5	296.2	113.9
95	979.9	864.2	644.8	631.4	532.5	615.2	519.6	303.1	115.1
96	981.0	866.6	650.0	635.1	536.0	619.0	523.2	309.7	116.7
97	984.5	867.8	646.1	639.1	539.7	620.6	527.0	316.4	118.8
98	995.4	870.8	643.8	642.0	542.6	623.7	530.3	323.0	120.9
99	975.0	871.8	645.6	645.9	546.2	626.4	534.1	329.7	123.0
100	986.6	873.7	647.2	648.0	549.1	629.1	536.9	335.5	126.1
101	988.7	875.5	649.6	650.7	552.4	631.9	540.1	341.4	131.0
102	988.5	876.9	652.4	652.6	555.6	635.1	543.4	346.9	137.7
103	991.9	878.8	655.1	654.6	558.9	638.0	546.5	352.3	147.9
104	993.3	880.0	657.9	657.0	562.1	640.8	549.7	357.7	157.4
105	990.8	881.2	661.0	659.0	565.3	644.5	553.1	363.0	166.3

Table 7. Temperatures Measured in Assembly S-32, Steel Stud, 2x2 Gypsum Board Layers, Glass Fibre Insulation

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	46.8	26.2	26.7	26.3	26.3	26.7	25.9	25.7	25.5	25.8	34.0	32.1	36.9	35.1	31.2	29.8	33.4	32.0	36.5	34.5	30.8
1	111.8	26.2	26.6	26.3	26.2	26.7	25.7	25.6	25.4	25.6	34.0	32.1	37.0	35.1	31.3	29.8	33.4	31.9	36.6	34.4	30.8
2	225.1	26.2	26.7	26.3	26.3	26.7	25.8	25.7	25.5	25.6	34.0	32.1	37.1	35.1	31.3	29.8	33.4	31.9	39.9	36.0	30.8
3	330.6	26.2	26.7	26.3	26.3	26.8	25.7	25.6	25.4	25.6	34.2	32.2	38.2	36.0	31.3	29.9	34.8	32.9	55.9	59.2	30.9
4	437.0	26.2	26.7	26.3	26.2	26.7	25.9	25.8	25.7	25.8	34.9	32.6	43.1	39.8	31.5	29.9	38.6	38.2	61.5	79.8	31.8
5	535.1	26.2	26.7	26.3	26.3	26.7	25.8	25.7	25.6	25.7	39.1	34.3	58.7	53.3	33.3	30.1	45.1	45.5	66.5	82.2	34.4
6	568.9	26.2	26.7	26.4	26.3	26.8	25.8	25.7	25.6	25.7	49.9	40.1	74.9	72.3	40.2	30.9	51.6	50.6	73.0	80.6	38.2
7	600.5	26.2	26.7	26.4	26.3	26.8	25.8	25.7	25.6	25.8	62.1	50.2	84.3	83.4	51.1	33.3	57.9	54.5	78.2	81.2	42.3
8	631.4	26.2	26.8	26.4	26.3	27.0	25.8	25.7	25.6	25.7	69.9	59.5	87.9	88.6	59.6	37.4	63.5	57.9	82.3	83.9	46.6
9	664.7	26.3	26.8	26.4	26.3	27.1	25.9	25.8	25.6	25.8	73.8	65.5	89.0	90.5	64.7	41.9	68.2	60.8	85.6	86.3	50.8
10	698.1	26.4	27.0	26.5	26.4	27.6	26.1	25.8	25.7	25.9	76.3	69.3	90.0	91.4	68.3	46.0	72.3	63.6	88.1	88.8	54.9
11	712.2	26.5	27.3	26.6	26.5	28.4	26.2	26.0	25.8	26.0	78.1	71.8	90.8	91.9	70.8	49.4	75.4	65.8	89.4	89.6	58.8
12	720.5	26.8	27.7	26.9	26.7	29.5	26.6	26.2	26.1	26.3	79.5	73.6	91.4	92.3	72.6	52.4	77.7	67.8	90.1	90.3	62.3
13	731.7	27.2	28.2	27.2	27.1	30.9	26.6	26.3	26.1	26.3	80.7	75.0	92.0	92.6	73.9	55.0	79.1	69.4	90.4	90.0	65.1
14	743.6	27.6	28.9	27.5	27.5	32.5	26.9	26.5	26.3	26.5	81.2	75.9	92.1	92.6	74.5	57.0	79.4	70.4	89.8	89.4	66.2
15	754.0	28.2	29.8	28.0	28.0	34.1	27.2	26.7	26.6	26.8	81.5	76.5	91.5	92.5	74.5	58.8	78.5	71.0	88.3	86.8	66.3
16	762.3	28.8	30.9	28.6	28.8	35.8	27.7	27.1	27.0	27.1	82.4	77.3	93.4	91.7	75.2	61.0	79.5	71.8	91.8	88.3	66.6
17	769.4	29.6	32.0	29.2	29.6	37.4	27.9	27.3	27.1	27.2	86.0	79.6	96.2	94.2	80.2	63.8	84.8	79.3	95.5	93.6	69.0
18	773.6	30.4	33.2	29.9	30.5	38.9	28.5	27.8	27.7	27.8	88.9	83.6	97.2	96.6	84.7	68.3	88.7	85.0	95.6	93.6	72.8
19	782.4	31.3	34.5	30.7	31.4	40.6	29.1	28.1	28.0	28.0	90.2	86.4	97.5	97.2	86.5	73.3	90.6	87.9	96.7	94.4	75.7
20	788.1	32.3	36.1	31.5	32.5	42.5	29.2	28.3	28.2	28.1	90.9	88.1	97.6	97.5	87.4	77.3	91.7	89.7	97.7	95.0	77.5
21	795.4	33.7	38.0	32.5	33.8	44.7	29.7	28.9	28.5	28.5	91.4	89.0	97.7	97.9	87.8	79.8	92.3	91.2	100.5	95.9	79.0
22	800.7	35.2	40.2	33.6	35.4	46.9	30.3	29.4	29.1	28.8	91.8	89.6	97.7	98.5	88.0	81.3	92.4	92.0	105.0	97.5	80.0
23	805.5	37.0	42.7	35.0	37.2	48.9	31.6	31.1	30.1	30.0	92.1	90.0	98.3	99.5	88.2	82.3	92.1	92.3	108.7	101.7	80.6
24	811.7	38.9	45.3	36.6	39.3	50.8	32.9	32.3	31.0	30.7	92.4	90.2	98.3	101.9	88.1	82.8	92.2	91.9	112.8	105.9	81.1
25	813.9	40.9	47.7	38.3	41.4	52.6	32.4	31.8	30.9	30.5	92.7	90.4	99.8	105.1	87.9	83.2	92.2	92.0	116.1	111.9	81.3
26	821.0	42.8	50.0	40.2	43.5	54.1	33.8	33.2	31.9	31.5	92.9	90.2	105.2	108.8	87.4	83.1	92.1	92.4	119.3	116.4	81.6
27	823.8	44.7	51.9	42.1	45.6	55.2	33.8	34.1	32.0	31.7	93.4	89.9	114.6	112.9	86.9	82.9	91.9	93.2	122.4	120.3	81.7
28	828.9	46.2	53.5	43.8	47.4	56.0	34.9	35.2	33.0	32.8	95.1	89.7	121.4	116.9	86.6	82.8	93.7	94.6	126.0	123.8	81.6
29	833.5	47.6	54.8	45.6	49.0	56.7	34.3	34.8	32.5	32.2	97.8	90.1	126.3	121.0	86.5	82.7	96.5	96.2	132.1	127.6	81.7
30	838.0	48.9	55.7	47.1	50.4	57.1	36.2	36.9	34.0	33.8	101.6	91.0	130.3	124.5	86.3	82.7	100.3	99.7	154.8	133.7	81.9
31	842.0	49.9	56.4	48.5	51.5	57.4	33.7	34.5	32.1	32.3	103.9	92.8	133.7	128.0	86.2	82.6	108.3	102.9	166.5	147.5	82.1
32	845.6	50.5	56.8	49.7	52.3	57.7	35.0	36.1	32.8	33.3	105.9	95.0	136.6	131.7	86.0	82.4	121.7	108.1	232.8	166.8	82.5
33	849.3	51.2	57.0	50.8	53.0	57.8	34.8	35.8	33.0	33.0	108.1	98.2	139.1	135.9	85.9	82.3	135.8	115.1	291.7	199.6	82.8
34	852.5	51.6	57.1	51.7	53.6	57.9	35.1	36.4	33.1	33.7	110.8	101.3	145.1	139.9	85.7	82.3	153.8	125.2	346.1	236.6	82.9
35	857.2	52.1	57.0	52.5	54.1	58.0	35.4	36.9	33.2	33.8	113.8	104.7	155.3	143.8	84.6	82.6	177.5	139.1	404.9	267.3	84.6
36	861.5	52.4	56.6	53.1	54.5	57.9	36.3	37.7	33.5	34.1	117.5	108.1	172.0	151.1	81.7	82.6	207.1	155.2	441.8	295.2	92.7
37	862.2	52.6	56.2	53.4	54.8	57.7	36.8	38.0	34.3	35.3	125.6	111.4	213.5	167.8	80.6	81.6	231.9	173.9	453.1	323.1	110.1
38	866.7	52.6	55.9	53.7	55.0	57.3	37.1	38.3	34.7	35.7	142.3	116.0	258.2	193.9	80.4	81.8	256.3	195.0	475.4	352.0	123.0
39	870.6	52.3	55.7	53.7	54.9	56.8	35.4	35.9	33.2	34.7	166.9	124.8	308.4	222.9	105.5	83.2	285.0	214.4	500.5	377.8	140.0
40	872.6	52.1	55.6	53.6	54.7	56.4	36.3	37.2	33.7	34.2	197.8	139.0	370.9	252.8	128.0	85.7	312.5	232.5	520.0	397.9	154.0
41	876.5	51.8	55.6	53.6	54.4	56.5	38.1	37.3	33.9	34.6	237.7	156.2	430.8	296.7	162.3	89.2	337.4	249.7	545.4	416.6	166.5
42	878.3	51.6	56.0	53.6	54.1	57.4	38.8	35.6	33.1	33.5	288.2	176.2	480.9	346.2	209.5	95.1	364.5	265.9	576.2	434.0	178.2
43	881.2	52.3	56.8	53.6	53.7	59.2	42.8	37.5	33.9	34.9	348.2	199.2	539.5	388.9	258.2	102.8	395.4	281.3	611.8	449.9	191.5
44	882.9	53.7	58.1	53.7	53.5	61.8	41.5	35.6	32.5	33.8	400.0	224.6	606.8	427.0	298.3	112.6	436.6	297.5	648.9	465.7	209.0
45	886.8	56.9	59.7	54.2	53.7	64.4	43.5	36.6	33.1	34.4	456.9	252.0	670.0	466.4	341.1	125.1	532.0	347.1	698.8	510.6	266.9
46	890.1	62.7	61.7	54.8	54.2	66.7	48.7	39.9	35.7	37.5	530.4	281.2	719.6	503.5	421.3	141.8	609.3	378.9	734.1	539.3	320.4
47	891.8	68.2	64.1	55.7	55.3	68.6	48.7	40.6	35.4	38.2	629.3	311.0	756.4	539.1	507.7	166.1	660.6	439.5	761.6	580.3	398.0
48	895.1	71.2	67.2	56.7	56.6	70.1	45.2	39.6	34.3	36.8	680.5	345.5	784.0	588.0	559.4	224.2	711.5	509.0	783.2	621.0	482.5
49	896.8	72.6	70.7	58.0	58.3	71.2	50.2	42.3	36.4	41.0	708.9	377.0	801.1	651.0	601.9	356.1	738.3	548.7	793.0	647.5	537.1
50	898.5	73.2	73.6	59.4	60.6	72.0	49.8	44.0	37.2	42.2	725.6	407.1	803.5	682.2	620.7	342.7	751.4	572.4	792.8	663.2	567.5
51	902.8	73.7	75.4	61.2	63.5	72.6	51.4	47.0	40.1	45.7	740.2	438.8	801.3	706.4	642.6	293.9	756.0	571.1	791.2	672.8	581.5
52	904.6	74.4	76.2	63.4	66.8	73.3	49.7	47.6	41.4	47.5	752.5	478.2	804.9	728.5	661.2	307.8	760.3	556.9	797.9	666.5	562.8
53	906.4	74.3	76.5	66.0	70.1	73.5	55.2	51.9	44.4	50.7	764.4	522.2	811.1	747.2	678.9	331.1	758.8	509.3	797.3	651.0	560.0
54	908.0	74.5	76.9	68.8	72.2	73.4	55.5	52.2	44.3	47.5	773.5	575.0	817.0	770.0	695.9	375.9	755.7	481.7	801.7	645.2	567.5
55	910.5	74.7	77.0	71.9	73.3	74.7	56.6	53.7	45.7	47.8	777.9	628.8	823.9	779.5	707.4	429.4	756.1	472.9	805.5	653.9	598.7
56	912.7	75.0	77.1	76.0	73.5	78.2	59.6	55.2	46.7	48.8	780.4	667.1	830.6	784.0	717.5	488.7	757.5	482.9	799.9	674.3	614.9
57	915.4	75.9	77.0	78.3	73.3	81.1	60.0	55.3	47.3	49.2	781.5	697.3</									

Table 7. Temperatures Measured in Assembly S-32, Steel Stud, 2x2 Gypsum Board Layers, Glass Fibre Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
58	917.9	77.9	76.5	79.3	73.4	83.7	60.7	56.2	48.8	50.9	783.1	717.1	843.6	808.3	728.3	597.4	760.6	527.0	796.5	707.8	650.8
59	919.3	81.3	78.2	79.8	73.6	87.8	61.4	55.3	47.8	51.3	785.5	730.5	848.0	813.5	733.6	637.7	764.3	555.7	797.5	724.3	671.0
60	922.5	82.8	80.2	79.9	73.6	92.1	61.2	55.2	48.0	48.8	786.7	743.7	853.4	820.7	736.5	623.4	767.8	591.8	794.1	738.5	685.8
61	924.0	83.8	81.7	79.9	73.8	96.4	62.7	55.1	48.6	55.2	791.0	758.9	859.7	828.6	745.3	640.6	771.4	629.2	793.9	751.0	695.4
62	926.0	87.2	83.8	79.9	73.8	100.1	63.8	55.6	48.4	55.3	793.9	779.7	865.0	833.8	751.7	665.9	775.1	663.8	795.0	760.8	703.8
63	926.9	91.7	86.5	79.8	73.5	103.4	62.0	55.1	44.8	55.2	797.4	800.7	869.8	852.1	758.2	692.0	779.9	693.1	789.6	770.2	711.2
64	928.5	96.2	89.9	79.5	74.1	106.7	66.7	58.2	46.1	57.3	803.4	824.3	894.2	875.4	766.5	724.9	814.3	717.5	790.5	777.8	716.6
65	931.9	100.4	94.1	79.6	78.2	109.9	67.8	58.2	48.1	56.7	810.8	841.2	904.0	891.2	776.0	758.0	793.4	737.5	789.5	784.4	722.9
66	933.9	104.1	97.9	80.1	82.7	113.0	72.7	60.3	53.4	57.1	814.1	845.0	906.8	894.1	779.8	776.2	797.1	752.4	786.7	791.6	728.7
67	935.4	107.6	101.4	81.8	84.5	115.9	75.8	60.8	55.1	58.1	816.2	848.1	914.8	887.0	783.0	784.8	804.2	765.4	784.0	799.6	733.7
68	937.0	110.7	104.4	83.4	87.7	119.0	72.3	59.1	52.3	53.9	816.1	850.1	928.4	888.3	785.6	790.3	853.3	779.4	780.2	806.2	735.9
69	938.6	113.7	107.4	84.4	92.2	122.2	73.8	58.9	52.2	57.1	816.6	853.7	932.0	904.7	788.8	796.3	847.1	792.5	786.8	813.0	741.8
70	940.1	116.7	110.3	85.0	96.7	126.3	80.8	59.5	53.1	61.1	820.8	857.9	929.5	909.1	795.5	796.4	839.3	805.1	786.8	818.2	754.6
71	942.8	119.7	113.4	85.2	101.1	132.6	88.7	61.4	55.5	65.1	823.2	862.0	934.9	916.8	799.8	807.5	881.6	848.2	816.9	850.4	772.9
72	943.9	123.8	116.1	86.1	105.3	141.0	91.4	62.6	54.6	65.4	822.8	864.4	935.9	916.9	802.7	815.3	845.5	863.7	819.9	870.4	916.0
73	945.7	129.7	119.1	87.5	109.2	179.1	100.8	63.2	52.2	65.8	822.8	867.4	938.8	916.5	806.3	819.4	882.8	870.5	822.9	882.2	902.2
74	946.8	139.4	122.6	90.4	112.8	231.9	119.3	65.9	53.0	67.6	824.2	869.4	941.8	917.1	811.4	827.5	890.0	878.9	824.5	902.4	910.4
75	948.2	165.9	127.1	94.6	116.1	292.5	131.7	67.3	51.2	71.2	824.3	883.9	944.4	904.6	814.5	830.8	897.3	882.5	829.4	914.1	922.4
76	950.8	256.2	133.0	99.4	119.4	385.4	130.6	66.3	51.1	67.2	825.3	889.8	949.4	922.6	815.5	837.5	913.1	887.5	826.1	901.8	930.1
77	951.8	339.2	143.7	104.2	122.6	474.7	159.5	75.4	53.8	75.4	825.6	894.6	949.5	908.8	818.9	838.7	910.3	891.0	830.6	903.4	923.9
78	952.5	439.2	165.1	108.7	126.5	542.3	178.6	81.3	58.3	89.5	825.4	895.5	936.0	915.1	820.4	842.3	901.5	892.3	831.3	902.3	920.4

Table 7. Temperatures Measured in Assembly S-32, Steel Stud, 2x2 Gypsum Board Layers, Glass Fibre Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
0	46.8	29.6	39.4	37.2	28.4	27.6	40.4	38.2	27.7	26.8	42.5	40.1	26.7	26.2	40.0	37.1	27.1	26.6
1	111.8	29.6	39.5	37.2	28.4	27.6	40.5	38.3	27.8	26.8	43.0	40.4	26.7	26.2	40.5	37.5	27.0	26.6
2	225.1	29.6	39.6	37.2	28.3	27.6	49.1	44.8	27.7	26.8	64.3	51.4	26.7	26.1	61.1	48.6	27.0	26.6
3	330.6	29.7	47.6	39.3	28.2	27.6	69.5	62.5	27.8	26.8	81.3	72.8	26.7	26.2	80.9	70.9	27.1	26.6
4	437.0	30.2	70.2	69.8	28.4	27.7	89.4	87.3	27.8	26.8	84.6	85.1	26.7	26.2	84.3	83.9	27.1	26.7
5	535.1	32.0	79.4	81.3	29.2	27.9	93.9	97.2	27.9	26.8	87.8	86.9	26.7	26.2	86.3	85.8	27.2	26.8
6	568.9	34.7	84.5	85.6	32.2	29.2	96.0	96.0	28.1	26.9	92.6	89.2	26.8	26.3	91.0	88.1	27.4	27.0
7	600.5	37.3	87.7	88.2	36.3	32.9	99.1	98.6	29.0	26.9	99.0	93.0	27.1	26.4	97.6	92.0	27.8	27.4
8	631.4	39.8	89.4	89.6	46.0	39.6	103.6	102.6	31.0	27.1	105.1	98.3	27.8	26.7	104.2	96.0	28.5	28.0
9	664.7	42.1	90.5	90.3	52.4	46.2	106.8	106.9	34.1	27.6	110.0	102.4	29.0	27.3	110.0	99.6	29.6	28.9
10	698.1	44.3	91.5	90.6	57.1	52.1	109.9	109.1	37.8	28.3	114.3	106.0	30.8	28.3	115.0	103.6	31.1	30.1
11	712.2	46.4	92.7	90.9	60.6	59.4	114.7	111.6	41.6	29.3	119.2	110.1	33.1	29.9	120.2	109.2	33.1	31.6
12	720.5	48.4	94.6	91.3	62.5	64.6	120.5	115.2	45.3	30.6	126.7	115.2	35.5	32.0	124.7	113.8	35.3	33.2
13	731.7	50.3	95.9	91.5	63.5	65.1	126.6	118.6	48.6	32.2	145.0	120.5	38.0	34.7	131.6	121.3	37.7	34.8
14	743.6	51.7	95.8	90.0	62.5	62.5	133.9	124.1	51.4	33.9	199.4	145.6	40.2	37.4	156.0	134.4	40.2	36.4
15	754.0	52.8	101.6	94.5	61.6	61.2	151.3	135.0	53.6	35.7	245.9	196.8	42.1	39.6	208.9	174.5	42.5	37.9
16	762.3	53.8	112.1	109.2	63.0	61.6	190.1	157.1	55.2	37.5	265.6	238.1	43.5	41.1	244.3	208.1	44.4	39.3
17	769.4	56.1	120.2	124.8	70.7	66.9	219.6	187.2	56.8	39.4	293.8	259.3	44.9	42.5	265.5	225.4	46.4	40.3
18	773.6	59.6	124.4	134.2	74.7	71.3	245.6	205.6	59.9	41.5	324.8	281.5	47.3	44.2	285.4	246.2	49.2	41.4
19	782.4	63.1	127.5	135.7	76.9	74.9	265.1	235.5	63.8	44.2	355.3	305.4	50.4	46.8	308.0	268.7	53.2	43.4
20	788.1	65.8	129.3	135.4	77.9	76.8	284.7	262.3	67.0	47.8	381.8	329.5	53.4	49.8	320.8	288.1	57.4	46.1
21	795.4	68.3	132.0	136.6	78.8	78.2	307.1	291.3	69.3	51.7	406.5	351.7	55.9	52.7	328.7	308.6	61.2	49.3
22	800.7	70.4	135.1	139.7	79.6	79.2	329.4	319.0	71.0	55.3	422.6	374.3	58.1	55.3	335.3	330.7	64.3	52.5
23	805.5	72.1	140.2	146.0	80.5	79.7	353.1	346.1	72.3	58.3	437.3	394.7	59.8	57.5	342.2	345.9	66.6	55.5
24	811.7	73.2	143.2	152.9	80.5	80.0	378.9	375.6	73.3	60.8	455.4	415.0	61.5	59.3	351.9	360.3	68.3	58.5
25	813.9	74.1	144.6	152.6	79.6	79.7	400.8	400.6	74.1	62.8	473.6	439.8	62.6	60.8	364.2	377.6	69.6	61.0
26	821.0	74.8	146.9	149.7	78.7	79.4	421.5	419.3	74.5	64.3	490.2	463.6	63.3	61.9	378.9	392.0	70.7	62.9
27	823.8	75.4	153.1	152.2	78.2	79.3	436.4	435.7	74.6	65.4	508.2	484.8	63.6	62.6	397.7	412.9	71.4	64.2
28	828.9	75.8	164.2	156.7	78.2	79.2	448.3	453.3	74.6	66.2	523.6	502.4	63.8	63.0	418.4	436.2	71.8	65.3
29	833.5	76.1	179.8	164.3	77.4	79.0	468.1	470.0	74.6	66.8	538.4	517.9	64.0	63.4	445.3	460.4	72.1	66.3
30	838.0	76.4	196.9	176.5	76.4	78.9	487.1	485.9	74.6	67.3	552.0	530.7	64.1	63.6	485.3	484.8	72.2	67.1
31	842.0	76.7	217.6	190.4	76.4	78.9	503.8	500.4	74.5	67.7	566.2	544.0	64.2	63.7	555.1	511.6	71.9	67.7
32	845.6	77.0	242.0	207.5	76.5	78.9	519.0	514.5	74.4	68.0	580.2	556.3	64.2	63.7	596.2	535.1	71.5	68.1
33	849.3	77.7	276.6	228.2	76.2	78.7	532.4	528.9	74.2	68.1	594.1	568.0	64.1	63.7	643.3	554.6	71.0	68.4
34	852.5	79.0	320.5	257.3	75.0	77.8	546.4	543.8	74.1	68.2	612.2	582.0	63.8	63.6	710.8	572.9	70.1	68.4
35	857.2	81.5	371.4	293.2	74.4	75.5	566.9	559.9	73.7	68.4	638.4	598.4	63.3	63.3	759.9	592.3	68.9	68.1
36	861.5	85.5	436.5	334.9	78.2	73.7	601.8	576.1	72.3	68.5	686.8	615.9	62.7	62.5	751.4	610.5	68.0	67.2
37	862.2	91.0	571.3	386.6	122.7	76.0	639.7	589.6	70.4	68.2	744.3	636.5	62.5	61.6	767.1	630.4	67.6	66.0
38	866.7	97.5	675.1	430.2	181.2	76.1	676.8	603.8	69.1	67.6	791.0	658.4	63.7	61.3	793.9	647.4	67.6	65.3
39	870.6	104.8	750.4	456.8	341.9	81.9	717.1	644.0	68.9	67.2	813.8	684.3	68.1	60.8	815.9	663.3	67.5	65.2
40	872.6	112.5	758.1	480.4	438.4	97.4	795.0	813.1	70.2	67.1	826.6	718.0	78.4	60.2	821.6	673.4	68.2	64.9
41	876.5	120.8	754.7	507.5	491.4	113.2	840.4	843.1	72.6	66.8	840.5	745.4	81.1	60.2	827.8	685.8	70.9	64.7
42	878.3	129.3	736.7	533.7	529.9	127.9	869.0	870.6	76.7	66.7	860.3	789.5	82.2	60.7	832.4	697.9	73.6	65.0
43	881.2	137.9	734.0	560.9	567.0	142.9	873.1	878.9	81.0	67.2	867.0	811.5	85.4	61.7	835.4	710.6	76.3	65.7
44	882.9	146.7	739.1	588.8	614.4	158.6	872.7	885.3	83.2	68.5	875.7	821.8	90.2	63.1	837.1	725.6	78.7	66.7
45	886.8	207.8	749.8	617.7	677.7	174.7	876.8	887.4	84.9	70.4	889.7	834.1	94.7	64.9	842.0	736.5	81.0	67.9
46	890.1	258.1	786.4	656.8	750.8	192.2	879.1	889.8	86.4	72.7	892.1	840.9	100.1	66.8	850.2	746.0	83.1	69.0
47	891.8	326.3	792.7	700.3	770.0	208.3	882.2	886.6	87.8	75.0	895.2	844.1	108.0	68.8	877.4	755.1	86.8	70.2
48	895.1	367.7	807.3	733.7	784.4	238.8	884.8	887.7	89.8	77.4	896.0	829.6	117.0	71.0	880.6	762.6	90.2	71.6
49	896.8	419.1	818.9	764.5	800.1	270.5	885.8	888.1	92.4	80.2	894.9	830.3	130.0	75.2	880.9	770.7	93.2	73.0
50	898.5	419.9	826.4	784.2	808.9	317.3	893.2	887.0	95.3	83.1	899.0	833.4	165.8	80.8	882.5	778.6	97.2	74.8
51	902.8	395.3	831.9	776.7	811.9	354.9	898.8	890.2	100.9	85.1	902.9	834.1	227.3	84.3	884.7	782.4	100.4	77.4
52	904.6	340.0	838.4	771.6	812.7	423.2	898.8	889.9	110.1	87.2	898.5	835.6	279.9	86.8	875.9	786.0	103.5	80.0
53	906.4	294.1	841.6	774.5	833.4	442.9	899.7	890.0	118.7	88.9	898.3	837.5	315.0	88.6	857.4	791.0	106.8	82.3
54	908.0	283.7	841.6	777.5	836.0	470.1	901.3	890.4	151.9	89.9	901.8	841.9	343.9	90.1	852.3	796.6	111.6	83.8
55	910.5	288.3	840.5	791.7	833.0	497.1	904.0	891.9	197.1	90.6	905.9	845.3	364.7	91.1	853.3	799.6	119.3	86.9
56	912.7	296.1	843.4	802.8	828.9	522.1	906.8	894.6	225.9	90.8	906.8	846.8	381.2	91.5	854.3	799.4	127.5	91.0
57	915.4	311.3	846.0	808.6	832.0	592.1	909.7	904.5	254.7	91.4	907.6	848.3	394.8	92.5	854.2	797.2	157.9	92.7

Table 7. Temperatures Measured in Assembly S-32, Steel Stud, 2x2 Gypsum Board Layers, Glass Fibre Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
58	917.9	331.8	850.3	813.4	838.9	660.1	915.0	911.2	283.0	93.8	907.9	849.7	410.8	95.1	855.2	797.5	204.9	93.5
59	919.3	358.4	851.7	827.3	844.4	728.7	915.1	912.3	316.3	97.3	905.0	852.9	425.8	97.6	863.0	809.7	234.3	94.1
60	922.5	392.7	863.4	843.3	854.1	794.3	917.4	915.1	344.6	103.4	908.1	864.6	439.2	99.7	867.0	808.9	261.0	95.2
61	924.0	426.8	869.6	855.3	862.4	840.4	918.1	915.1	367.7	109.9	909.2	874.9	457.3	105.1	867.9	809.2	285.3	96.5
62	926.0	459.1	871.4	865.9	863.9	855.1	918.9	916.5	389.2	118.3	914.2	885.1	474.5	115.9	873.2	814.2	308.1	98.6
63	926.9	488.7	866.7	879.9	865.3	835.5	919.5	912.4	416.8	130.7	911.9	897.5	488.3	128.8	874.6	820.6	334.3	101.7
64	928.5	521.2	870.4	884.4	866.1	840.7	924.5	919.8	441.8	184.0	913.4	911.8	508.7	186.4	878.2	822.5	364.9	105.2
65	931.9	547.2	875.4	887.8	878.9	869.7	927.4	928.4	469.3	229.1	916.9	855.4	530.1	253.1	882.3	826.8	392.0	109.1
66	933.9	567.0	877.8	885.0	882.1	881.0	930.9	930.1	497.7	259.2	917.1	858.9	550.1	306.2	887.5	853.4	421.0	114.5
67	935.4	586.8	881.8	884.9	884.6	886.2	933.6	932.4	524.1	289.3	911.4	864.2	570.4	348.9	891.6	856.0	451.4	121.4
68	937.0	607.1	900.8	884.5	888.3	901.0	937.8	936.3	543.9	321.5	886.4	867.6	591.4	374.8	896.6	861.7	480.9	129.3
69	938.6	636.5	910.1	884.1	892.3	915.5	940.9	904.5	560.6	351.8	915.0	871.1	612.6	400.2	897.2	867.0	507.6	137.9
70	940.1	673.7	917.1	885.1	898.0	930.7	950.1	915.4	576.4	379.4	925.7	878.6	633.5	423.0	919.0	872.7	531.0	162.6
71	942.8	708.6	935.5	892.5	928.0	930.9	951.8	895.7	593.9	408.8	942.4	881.6	654.1	447.1	921.9	879.9	548.6	226.8
72	943.9	728.8	926.3	894.5	904.9	929.0	954.1	892.0	611.9	440.5	942.7	883.9	685.9	469.4	924.1	882.5	566.8	261.3
73	945.7	741.8	929.2	896.4	905.3	927.7	956.9	890.1	631.7	471.8	944.7	886.4	735.2	491.8	925.8	884.6	585.0	296.6
74	946.8	751.2	925.6	895.3	909.5	926.4	957.9	891.8	654.9	501.6	944.4	889.2	761.5	512.0	927.0	887.1	605.7	332.3
75	948.2	759.9	927.9	895.4	925.6	931.6	958.9	892.9	675.3	529.3	948.7	890.5	771.0	530.9	930.5	888.8	632.6	353.3
76	950.8	769.8	921.8	893.3	931.0	933.5	959.1	895.9	694.6	553.3	951.4	893.0	818.9	549.8	933.0	891.4	662.9	350.6
77	951.8	779.7	922.2	891.2	926.0	917.0	962.2	896.7	722.9	575.9	953.7	894.0	829.1	568.3	934.5	892.5	693.7	333.0
78	952.5	787.1	913.9	889.5	908.6	914.3	943.4	891.9	751.8	596.7	914.3	892.9	801.3	590.2	911.4	890.3	706.8	330.3

Table 8. Average Temperatures Measured in Assembly S-32, Steel Stud, 2x2 Gypsum Board Layers, Glass Fibre Insulation

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(26,27,30,31,34,35)	BL/SStd. (Exp.) Av(12,13,18,19)	BL/Cav. (Exp.) Av(22,23)	Mid. SStd. Av(10,11,16,17)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(14,15,20,21)	BL/FL (UnExp.) Av(28,29,32,33,36,37)	UnExp. Av(1,2,3,4,5)
0	46.8	39.7	35.8	38.3	32.8	28.0	30.4	26.9	26.4
1	111.8	40.0	35.8	38.3	32.8	28.0	30.4	26.9	26.4
2	225.1	53.2	37.0	38.4	32.8	27.9	30.4	26.8	26.4
3	330.6	73.0	47.3	43.5	33.5	27.9	30.5	26.9	26.4
4	437.0	85.8	56.1	70.0	36.1	28.0	30.9	26.9	26.4
5	535.1	89.6	65.2	80.3	41.0	28.6	32.5	26.9	26.4
6	568.9	92.1	75.2	85.1	48.0	30.7	36.0	27.1	26.5
7	600.5	96.5	81.8	87.9	56.2	35.6	41.0	27.4	26.5
8	631.4	101.6	85.5	89.5	62.7	42.8	45.8	28.2	26.5
9	664.7	106.0	87.9	90.4	67.1	49.3	49.9	29.4	26.6
10	698.1	109.6	89.5	91.0	70.4	54.6	53.4	31.1	26.8
11	712.2	114.0	90.4	91.8	72.8	60.0	56.4	33.1	27.1
12	720.5	119.4	91.0	93.0	74.6	63.6	58.9	35.3	27.5
13	731.7	127.3	91.3	93.7	76.1	64.3	61.1	37.7	28.1
14	743.6	148.9	91.0	92.9	76.7	62.5	62.3	39.9	28.8
15	754.0	185.4	89.8	98.0	76.9	61.4	63.1	41.9	29.6
16	762.3	217.2	91.3	110.6	77.7	62.3	64.1	43.5	30.6
17	769.4	241.8	94.9	122.5	82.4	68.8	67.3	45.0	31.5
18	773.6	264.9	95.7	129.3	86.5	73.0	71.3	47.2	32.6
19	782.4	289.7	96.4	131.6	88.8	75.9	74.6	50.3	33.7
20	788.1	311.2	96.9	132.3	90.1	77.3	77.0	53.6	35.0
21	795.4	332.3	98.0	134.3	90.9	78.5	78.7	56.7	36.5
22	800.7	351.9	99.7	137.4	91.5	79.4	79.9	59.4	38.3
23	805.5	369.9	102.0	143.1	91.6	80.1	80.8	61.7	40.2
24	811.7	389.5	104.7	148.1	91.7	80.2	81.3	63.6	42.2
25	813.9	409.4	108.2	148.6	91.8	79.7	81.6	65.2	44.2
26	821.0	427.6	112.4	148.3	91.9	79.1	81.7	66.3	46.1
27	823.8	446.0	117.5	152.7	92.1	78.8	81.7	67.0	47.9
28	828.9	463.7	122.0	160.5	93.3	78.7	81.7	67.5	49.4
29	833.5	483.4	126.8	172.0	95.2	78.2	81.7	67.9	50.7
30	838.0	504.3	135.8	186.7	98.2	77.6	81.8	68.1	51.9
31	842.0	530.2	148.9	204.0	102.0	77.6	81.9	68.3	52.7
32	845.6	550.2	167.0	224.7	107.7	77.7	82.0	68.3	53.4
33	849.3	570.2	191.6	252.4	114.3	77.5	82.2	68.3	54.0
34	852.5	594.7	216.9	288.9	122.8	76.4	82.5	68.0	54.4
35	857.2	619.3	242.8	332.3	133.8	75.0	83.3	67.6	54.8
36	861.5	640.4	265.0	385.7	147.0	75.9	85.6	66.9	54.9
37	862.2	667.9	289.4	478.9	160.7	99.4	90.8	66.1	54.9
38	866.7	695.2	319.9	552.7	177.4	128.6	98.2	65.8	54.9
39	870.6	723.1	352.4	603.6	197.8	211.9	108.4	66.3	54.7
40	872.6	774.6	385.4	619.2	220.5	267.9	120.1	68.2	54.5
41	876.5	797.2	422.4	631.1	245.2	302.3	134.7	69.4	54.4
42	878.3	819.9	459.3	635.2	273.7	328.9	153.0	70.8	54.5
43	881.2	829.4	497.5	647.4	305.5	354.9	172.6	72.9	55.1
44	882.9	836.4	537.1	663.9	339.7	386.5	191.7	75.1	56.2
45	886.8	844.4	586.5	683.8	397.0	426.2	235.2	77.3	57.8
46	890.1	849.7	624.2	721.6	449.9	471.5	285.4	79.7	60.0
47	891.8	857.1	659.4	746.5	510.1	489.2	349.5	82.8	62.4
48	895.1	856.9	694.0	770.5	561.6	511.6	408.5	86.2	64.4
49	896.8	858.4	723.1	791.7	593.2	535.3	478.5	90.7	66.1
50	898.5	862.3	735.4	805.3	614.1	563.1	487.7	99.5	67.8
51	902.8	865.5	742.9	804.3	628.5	583.4	478.3	112.6	69.3
52	904.6	864.1	750.0	805.0	637.0	617.9	467.9	124.6	70.8
53	906.4	862.3	751.7	808.0	638.7	638.2	466.0	133.4	72.1
54	908.0	864.1	758.5	809.5	646.5	653.0	480.8	145.2	73.2
55	910.5	866.7	765.7	816.1	658.9	665.0	505.9	158.3	74.3
56	912.7	868.1	772.2	823.1	671.9	675.5	529.3	168.0	76.0
57	915.4	870.3	780.9	827.3	685.1	712.0	553.8	180.7	77.1

Table 8. Average Temperatures Measured in Assembly S-32, Steel Stud, 2x2 Gypsum Board Layers, Glass Fibre Insulation (Cont..)

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(26,27,30,31,34,35)	BL/SStd. (Exp.) Av(12,13,18,19)	BL/Cav. (Exp.) Av(22,23)	Mid. SStd. Av(10,11,16,17)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(14,15,20,21)	BL/FL (UnExp.) Av(28,29,32,33,36,37)	UnExp. Av(1,2,3,4,5)
58	917.9	872.7	789.0	831.8	697.0	749.5	577.1	196.8	78.1
59	919.3	876.3	795.8	839.5	709.0	766.5	600.2	210.9	80.1
60	922.5	880.2	801.7	853.3	722.5	824.2	609.6	223.8	81.8
61	924.0	882.4	808.3	862.5	737.6	851.4	627.0	237.0	83.1
62	926.0	887.0	813.7	868.7	753.1	859.5	645.1	250.8	84.9
63	926.9	889.4	820.4	873.3	767.8	850.4	662.5	266.8	87.0
64	928.5	895.0	834.5	877.4	789.9	853.4	682.3	298.5	89.3
65	931.9	889.5	842.3	881.6	795.7	874.3	701.0	330.4	92.4
66	933.9	896.3	844.8	881.4	802.2	881.6	712.9	358.1	95.5
67	935.4	898.2	846.4	883.3	808.4	885.4	722.1	384.3	98.3
68	937.0	897.7	850.8	892.7	824.7	894.7	729.7	407.0	101.0
69	938.6	899.3	859.1	897.1	827.5	903.9	740.9	428.5	104.0
70	940.1	910.3	860.9	901.1	830.8	914.4	755.1	454.3	107.0
71	942.6	912.2	879.7	914.0	853.8	929.4	772.2	479.9	110.4
72	943.9	913.2	885.8	910.4	849.1	916.9	815.7	506.0	114.5
73	945.7	914.8	890.1	912.8	860.9	916.5	817.4	535.3	124.9
74	946.8	916.2	896.5	910.4	865.6	917.9	825.1	561.3	139.4
75	948.2	918.4	898.1	911.6	872.0	928.6	831.9	582.1	163.2
76	950.8	920.6	900.0	907.5	878.9	932.2	838.2	605.0	198.7
77	951.8	922.3	898.1	906.7	880.4	921.5	840.3	620.5	236.9
78	952.5	907.4	896.2	901.7	878.7	911.5	842.5	629.5	276.4

Table 9. Temperatures Measured in Assembly S-33, Steel Stud, 2x2 Gypsum Board Layers, Mineral Fibre Insulation

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	33.3	25.9	26.4	26.1	26.0	26.2	25.8	25.9	25.8	25.9	30.4	29.7	32.3	31.1	28.9	28.2	30.4	29.6	32.0	31.1	28.8
1	118.0	25.9	26.4	26.1	26.0	26.2	25.7	25.7	25.7	25.8	30.4	29.6	32.3	31.1	28.9	28.2	30.3	29.6	32.0	31.0	28.8
2	120.7	25.9	26.4	26.1	26.0	26.2	25.6	25.7	25.6	25.7	30.4	29.7	32.3	31.1	29.0	28.2	30.3	29.6	32.3	31.2	28.8
3	129.7	25.9	26.4	26.1	26.0	26.2	25.7	25.8	25.7	25.8	30.5	29.7	32.9	31.6	28.9	28.2	30.5	29.7	33.8	32.0	28.8
4	254.6	25.9	26.4	26.1	26.0	26.2	25.8	25.9	25.8	25.9	30.6	29.9	34.1	32.5	29.0	28.3	31.3	30.0	52.7	40.5	28.8
5	359.7	25.9	26.4	26.1	26.0	26.0	25.7	25.8	25.8	25.8	31.1	30.3	37.0	34.8	29.1	28.3	35.5	32.1	73.9	67.9	29.1
6	455.4	26.0	26.4	26.1	26.0	26.1	25.7	25.8	25.8	25.8	32.3	31.3	46.7	42.5	29.2	28.4	43.9	37.1	79.6	80.6	30.4
7	544.9	25.9	26.4	26.1	26.0	26.1	25.8	25.9	25.8	25.9	36.0	34.3	63.5	58.7	29.7	28.8	53.3	44.4	82.5	82.4	34.1
8	577.3	26.0	26.4	26.1	26.0	26.1	25.7	25.8	25.7	25.9	42.2	40.6	75.4	73.4	31.1	29.7	64.6	52.3	85.1	84.5	40.1
9	609.5	26.0	26.4	26.1	26.0	26.0	25.8	25.9	25.8	25.9	49.0	48.2	81.3	80.7	33.6	31.6	75.8	60.5	87.0	86.7	49.3
10	640.8	26.0	26.5	26.1	26.1	26.3	25.8	25.9	25.8	25.9	55.0	54.6	84.2	84.0	37.2	34.4	82.4	69.9	88.3	88.2	59.8
11	673.9	26.0	26.6	26.1	26.1	26.3	25.8	25.8	25.8	25.9	59.9	59.4	85.9	85.7	41.4	37.8	85.9	77.4	89.3	89.1	67.7
12	704.7	26.1	26.8	26.2	26.2	26.4	26.0	26.0	26.0	26.2	64.1	63.1	86.7	86.7	45.8	41.1	87.6	83.0	89.8	90.0	73.1
13	714.8	26.2	27.6	26.3	26.3	26.6	26.0	26.1	26.0	26.2	67.4	65.9	87.7	87.6	50.1	44.2	88.4	85.8	90.6	90.8	76.4
14	724.1	26.5	29.1	26.4	26.5	26.9	26.1	26.2	26.0	26.3	70.3	68.2	88.7	88.5	53.9	47.1	88.6	87.0	92.2	91.7	78.4
15	735.6	26.7	31.1	26.6	26.7	27.3	26.3	26.3	26.3	26.5	72.8	70.1	89.5	89.4	57.3	49.7	87.9	88.0	94.9	93.2	79.5
16	745.9	27.1	33.8	26.9	27.1	27.8	26.2	26.3	26.2	26.5	74.9	71.9	90.0	90.2	60.2	52.2	84.6	86.2	96.6	93.4	78.7
17	756.6	27.6	36.7	27.3	27.6	28.5	26.6	26.8	26.6	27.0	76.4	73.4	90.4	89.9	62.7	54.6	85.3	83.4	106.9	99.2	77.3
18	764.3	28.2	39.5	27.9	28.2	29.3	26.7	27.0	26.6	26.9	78.9	75.6	93.8	92.6	65.4	57.1	87.9	87.2	120.9	114.9	79.1
19	770.5	28.9	42.1	28.6	28.8	30.2	27.3	27.5	27.0	27.4	82.7	79.5	95.0	94.6	69.4	59.9	89.2	86.7	136.6	129.6	81.6
20	776.7	29.7	44.6	29.5	29.6	31.2	27.9	28.1	27.3	27.9	85.9	82.9	95.7	95.3	73.9	63.5	90.2	89.5	153.4	147.2	83.1
21	784.5	30.6	47.0	30.5	30.5	32.2	27.9	28.2	27.2	27.7	87.8	85.5	95.9	95.7	77.7	67.1	90.8	90.9	158.4	161.6	83.9
22	791.6	31.7	49.4	31.8	31.4	33.5	28.8	29.4	27.9	28.5	88.8	87.5	96.2	95.9	80.2	70.6	92.4	92.9	165.8	161.0	84.2
23	797.0	33.1	51.5	33.3	32.5	35.3	28.6	29.2	28.0	28.2	89.3	88.8	96.6	96.1	81.7	73.5	95.8	95.6	171.2	163.6	84.6
24	801.0	34.6	53.5	35.2	33.8	37.1	30.0	30.7	28.9	29.3	89.6	89.5	96.7	96.4	82.6	75.7	104.1	98.0	178.5	172.1	85.0
25	808.0	36.4	55.3	37.2	35.3	39.2	30.4	31.5	29.5	29.6	89.6	89.8	97.1	97.0	83.1	77.1	111.2	101.4	186.4	186.0	85.4
26	812.5	38.4	56.9	39.4	37.1	41.5	31.6	32.9	30.5	30.7	89.6	89.9	97.9	97.9	83.4	78.2	115.6	105.9	193.3	194.1	85.6
27	816.7	40.4	58.2	41.6	38.9	43.6	33.4	35.4	32.9	32.4	89.5	89.9	101.1	103.1	83.4	78.9	119.2	112.8	202.3	202.4	86.0
28	822.0	42.3	59.3	43.8	40.8	45.7	33.9	35.6	33.0	32.7	89.3	89.6	97.2	109.2	83.3	79.1	123.1	117.7	213.8	209.9	86.5
29	825.4	44.2	60.2	45.8	42.7	47.5	33.8	35.4	32.5	32.2	89.1	89.5	102.1	114.8	83.0	79.1	127.7	121.5	228.7	221.0	86.9
30	830.7	45.8	60.9	47.5	44.4	49.3	35.6	37.4	34.0	33.7	89.2	89.3	115.9	119.7	82.7	78.9	132.5	126.8	246.4	236.0	87.1
31	835.4	47.2	61.2	49.1	46.0	50.4	33.7	36.1	32.7	32.3	89.9	89.5	122.4	123.7	82.6	78.9	138.7	132.0	269.4	255.4	87.4
32	838.8	48.5	61.5	50.3	47.2	51.4	36.3	38.4	35.4	35.0	91.0	90.0	126.4	127.4	82.6	78.9	147.6	138.2	292.9	281.7	88.1
33	841.6	49.7	61.7	51.4	48.5	52.3	35.1	37.0	33.0	33.9	92.6	91.0	130.2	130.4	82.6	78.9	157.7	145.5	313.5	304.4	89.3
34	846.9	50.6	61.6	52.3	49.5	52.9	35.7	38.0	33.9	33.4	94.7	93.7	133.7	133.6	82.4	79.0	168.3	154.1	333.0	324.4	92.0
35	850.8	51.4	61.5	53.0	50.4	53.4	36.9	39.3	35.8	35.8	97.6	96.5	136.8	137.5	82.4	79.2	182.3	164.5	370.1	346.6	95.9
36	853.8	52.1	61.3	53.6	51.0	53.8	35.1	38.0	33.5	33.5	99.4	100.2	141.1	141.1	82.2	79.3	202.3	177.6	403.3	370.7	101.1
37	857.7	52.5	61.0	54.0	51.5	54.0	35.3	37.3	33.8	33.7	103.4	103.4	150.3	145.8	81.9	79.5	219.7	193.6	408.0	389.8	108.5
38	861.1	52.8	60.5	54.3	51.8	54.2	33.7	36.1	33.0	33.0	107.0	106.8	170.3	161.3	81.1	79.6	239.9	209.9	419.9	405.8	116.7
39	864.4	53.0	60.0	54.5	52.2	54.3	33.9	36.2	32.9	33.0	111.9	110.8	207.0	187.3	80.1	78.9	265.7	224.9	437.8	424.2	126.0
40	867.0	53.0	59.5	54.6	52.5	54.2	34.3	34.9	32.7	33.2	119.8	117.1	241.9	217.9	79.1	78.7	309.3	240.1	467.2	443.6	137.2
41	870.6	52.9	59.1	54.6	52.4	54.0	34.2	35.9	33.1	33.3	131.2	126.1	275.0	249.0	78.9	79.0	367.6	255.2	499.8	462.3	151.8
42	873.8	52.8	58.7	54.4	52.3	53.7	35.4	37.1	33.7	33.8	145.3	137.6	313.1	276.2	78.6	80.1	418.0	271.0	528.7	480.5	168.2
43	876.7	52.4	58.6	54.2	52.1	53.4	34.5	36.1	32.8	33.3	160.7	150.3	343.8	299.2	79.3	80.9	465.1	287.3	560.3	498.1	188.4
44	879.4	52.1	58.8	53.9	51.9	53.0	34.8	36.3	33.6	33.9	176.7	163.2	370.1	322.1	81.8	82.2	503.2	303.7	593.1	514.9	210.7
45	882.0	51.8	59.6	53.7	51.9	52.6	35.9	37.5	34.6	34.5	192.9	176.2	392.4	344.7	86.5	84.1	533.9	320.3	620.7	531.4	231.0
46	885.0	51.6	60.8	53.4	51.6	52.3	35.0	36.5	33.3	33.7	209.3	189.4	416.8	365.6	86.7	86.8	556.0	336.3	646.1	550.1	249.9
47	887.9	51.5	62.3	53.2	51.5	51.9	34.8	37.0	33.3	33.4	226.2	202.6	439.6	384.8	107.1	93.2	572.7	351.4	669.8	568.6	267.0
48	889.6	51.6	63.9	53.1	51.1	51.6	33.6	35.5	31.9	32.2	243.5	216.3	460.8	404.6	116.6	100.1	588.0	366.2	692.6	590.7	277.7
49	892.1	52.0	65.5	53.1	50.6	51.4	33.1	34.9	31.7	31.8	260.9	230.1	479.7	422.9	126.6	107.1	602.5	380.8	715.8	609.7	292.4
50	896.0	52.7	67.1	53.3	50.5	51.4	34.9	36.5	33.2	33.4	278.2	244.1	498.6	440.5	136.7	114.6	615.7	395.2	741.0	626.2	306.9
51	898.0	53.9	68.4	53.6	50.3	51.6	33.6	34.6	31.7	32.2	295.8	258.2	519.2	457.2	146.8	122.2	628.3	409.0	766.9	642.0	320.7
52	900.8	55.2	69.5	54.1	50.1	52.0	35.4	36.3	32.9	33.5	313.6	272.2	547.2	473.6	156.6	129.9	641.0	422.0	786.9	657.0	334.5
53	903.1	56.4	70.5	54.8	50.0	52.6	33.5	34.7	30.7	31.9	332.3	286.0	591.5	490.6	166.8	137.8	653.2	433.9	796.2	675.2	347.8
54	905.0	58.0	71.5	55.5	50.3	53.5	35.6	36.1	31.3	33.4	355.2	299.4	662.1	507.2	178.8	145.5	665.5	445.0	801.9	686.7	360.9
55	907.2	60.1	72.4	56.5	50.7	54.6	37.8	38.0	33.3	36.0	382.6	312.5	698.9	523.5	193.1	152.8	678.0	455.7	806.4	696.4	373.0
56	909.7	62.1	73.1	57.5	51.1	55.6	40.0	40.6	34.0	36.4	410.2	325.3	728.2	541.8	208.3	159.8	691.0	465.4	811.1	704.4	384.2
57	912.1	64.3	73.8	58.3	51.9	56.8	41.5	41.8	34.7	38.0	436.3	338.6	763.3								

Table 9. Temperatures Measured in Assembly S-33, Steel Stud, 2x2 Gypsum Board Layers, Mineral Fibre Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
58	913.9	86.0	74.5	59.2	52.7	58.4	42.1	42.6	36.1	38.2	463.2	351.9	786.6	591.1	250.8	173.5	718.8	483.4	820.8	715.6	414.3
59	915.4	87.5	74.9	59.9	53.6	60.7	41.6	42.3	33.8	36.5	493.4	365.9	807.0	630.0	267.8	180.6	731.2	491.7	825.1	723.5	435.4
60	918.2	88.4	75.3	60.8	54.3	63.4	39.7	40.1	33.1	35.7	528.6	381.4	839.3	651.1	301.7	188.2	744.1	500.6	826.7	730.5	460.9
61	920.4	89.1	75.6	62.0	55.2	66.1	42.7	43.3	34.7	38.4	574.0	397.1	855.8	682.7	350.2	196.3	760.2	508.8	823.1	738.7	495.4
62	922.8	89.8	76.0	63.6	55.9	68.4	42.1	42.6	34.3	37.3	637.4	414.9	852.5	732.4	378.6	204.9	773.3	516.8	815.7	746.8	500.1
63	923.6	70.2	76.3	65.2	56.5	69.8	44.2	45.8	35.6	39.3	688.4	437.5	856.5	794.1	363.8	215.1	781.1	525.9	811.1	760.5	494.2
64	926.8	70.6	76.8	66.8	57.2	71.0	45.8	48.0	37.0	41.3	717.4	468.6	866.5	859.2	386.1	228.6	790.5	538.4	827.1	787.3	481.8
65	929.2	71.1	77.2	68.1	58.0	71.6	44.6	45.6	36.8	42.3	731.5	507.0	872.4	876.4	412.1	248.4	796.6	556.5	844.1	805.1	486.0
66	930.7	71.6	77.9	69.5	59.8	72.2	46.7	48.4	37.7	44.0	744.7	535.7	876.9	892.2	436.8	276.5	800.8	580.7	863.3	817.9	505.3
67	932.3	72.2	78.9	70.7	62.5	72.4	46.4	48.1	38.5	42.2	757.2	561.5	883.1	897.9	462.5	308.9	805.7	613.4	875.1	814.5	529.4
68	934.1	72.8	80.2	72.0	65.3	72.6	48.2	50.3	40.0	46.2	768.7	598.1	888.4	904.0	481.0	344.4	809.5	676.2	882.3	817.1	551.0
69	935.9	72.8	81.7	73.0	67.6	72.5	49.3	51.9	41.6	47.1	778.9	653.9	891.3	906.8	498.0	385.4	813.9	684.8	889.8	821.9	564.6
70	937.7	72.9	83.4	74.2	69.4	72.7	45.7	47.9	35.9	42.7	798.9	704.0	892.0	899.5	515.3	424.3	819.5	703.1	893.9	822.6	567.7
71	938.7	72.6	84.8	74.9	70.4	72.5	47.3	49.6	39.5	43.6	806.1	733.4	892.0	889.3	530.5	456.0	827.9	697.3	894.6	825.8	567.1
72	941.9	72.6	86.5	75.6	71.5	72.7	42.9	45.5	33.4	39.6	810.2	747.5	893.6	882.7	543.9	482.2	835.0	687.5	894.8	828.0	568.7
73	942.8	72.3	87.8	75.8	71.9	72.6	45.4	48.6	37.5	42.3	813.8	758.4	894.5	874.6	554.3	505.8	842.7	681.1	896.3	830.7	568.8
74	944.1	72.4	89.3	75.9	72.2	72.7	45.9	49.5	38.1	42.2	816.1	766.1	895.0	886.7	563.4	520.6	847.2	675.3	901.3	834.9	566.8
75	946.2	72.6	90.7	75.9	72.1	72.9	44.9	48.2	37.5	41.8	817.9	771.7	896.0	881.2	572.1	525.3	851.1	672.4	907.1	839.6	568.8
76	947.4	73.3	92.4	75.9	72.1	75.8	46.5	49.3	36.4	44.9	819.9	776.8	897.1	857.4	580.5	520.9	855.0	674.4	894.8	846.3	571.5
77	949.4	74.3	94.1	75.9	72.1	79.9	46.1	50.6	37.3	43.2	821.2	803.1	897.8	853.5	589.0	518.8	859.5	680.0	899.6	851.5	577.8
78	950.7	75.4	95.7	75.9	72.1	83.7	47.5	51.2	39.5	44.0	821.3	817.8	898.3	853.2	600.1	531.7	863.9	688.6	891.6	857.4	587.1
79	952.3	76.4	97.4	76.1	72.3	87.7	48.3	51.0	39.1	44.6	818.6	821.9	898.9	855.0	611.0	546.6	868.6	698.1	897.4	862.2	596.6
80	955.0	78.0	99.1	76.2	72.4	91.6	47.5	51.2	40.4	44.9	813.9	823.7	901.1	860.5	621.9	564.1	874.2	707.9	898.7	865.5	605.6
81	956.5	82.2	100.8	76.3	72.2	95.2	48.7	51.4	42.4	45.0	819.8	826.8	901.8	864.7	632.0	580.9	878.2	717.2	899.3	866.8	614.0
82	958.3	87.3	102.7	76.5	73.1	98.5	54.4	57.2	46.4	48.1	816.6	823.5	902.5	871.4	640.8	594.3	882.1	726.4	902.9	870.7	622.5
83	959.7	91.6	104.5	76.9	73.6	101.4	53.8	55.0	42.9	47.1	818.5	823.6	904.4	877.9	650.3	609.8	886.1	734.7	903.7	889.1	629.2
84	961.5	94.5	106.4	77.3	74.0	104.0	54.7	57.3	41.5	49.0	820.1	823.4	905.8	888.1	659.3	625.1	888.6	746.2	912.8	870.3	635.4
85	962.8	97.1	108.2	77.7	74.9	106.3	57.7	57.8	47.5	52.1	822.1	824.6	909.6	897.7	669.0	639.3	890.7	759.3	916.6	867.3	641.5
86	964.4	99.4	110.0	78.4	76.6	108.6	56.8	57.8	42.7	50.9	824.0	827.2	909.5	906.9	678.1	652.1	893.8	772.1	920.4	865.9	647.7
87	966.2	101.2	111.8	79.7	78.4	110.8	58.0	59.6	45.6	52.9	825.9	842.7	909.7	916.4	681.7	665.2	897.4	784.2	919.5	865.6	652.7
88	967.1	102.9	113.7	81.6	80.2	113.2	60.0	59.5	46.7	54.7	828.2	852.0	911.5	924.9	689.5	676.7	900.8	792.9	925.5	862.6	656.2
89	968.0	104.5	115.8	82.5	84.0	115.6	59.4	59.7	45.2	55.0	830.4	852.6	912.8	930.9	697.4	688.9	903.8	799.1	929.4	859.8	659.8
90	969.8	106.0	118.1	83.5	87.3	118.0	59.3	58.9	43.0	51.9	832.5	859.6	914.2	937.2	705.1	700.3	906.0	803.8	932.8	857.2	662.8
91	971.6	107.5	120.4	84.7	89.4	120.5	60.8	59.7	45.6	55.1	834.5	864.2	916.2	943.0	712.9	709.9	909.0	807.0	937.9	853.4	667.0
92	972.8	109.3	123.0	86.4	92.8	123.2	66.7	61.8	49.7	54.9	837.9	862.9	921.0	947.9	719.3	717.4	912.7	810.1	941.5	851.1	671.4
93	974.8	111.0	125.5	88.9	94.5	126.4	63.8	61.4	48.0	54.0	838.4	869.1	919.2	951.0	725.6	724.6	919.3	814.0	956.9	849.6	677.0
94	976.3	113.0	127.4	91.0	97.4	130.5	65.0	61.4	46.6	52.5	840.1	869.3	921.7	955.0	731.8	732.0	923.3	816.0	958.6	845.7	683.3
95	975.5	115.1	128.5	93.6	101.9	136.6	69.8	63.7	49.7	54.5	842.1	867.3	919.9	954.6	737.8	739.9	923.7	817.9	958.0	843.3	689.7
96	977.5	117.4	129.3	96.0	104.4	148.4	70.0	64.3	49.2	56.6	844.2	872.5	923.1	958.1	744.1	746.7	926.6	819.3	961.5	841.9	695.7
97	979.3	119.8	130.8	98.3	105.9	179.7	69.9	64.9	51.0	57.4	845.9	869.6	923.5	960.9	750.6	753.7	931.3	821.3	965.1	841.3	703.7
98	980.1	122.5	134.1	100.5	106.6	218.7	64.7	61.8	47.8	54.7	848.4	868.2	926.3	960.7	756.9	760.0	935.1	822.0	967.6	841.0	712.9
99	981.1	125.4	140.6	102.6	109.0	256.7	75.3	74.0	53.1	59.7	852.1	870.6	932.3	962.5	763.6	765.9	938.4	823.0	970.0	841.0	721.6
100	983.5	128.8	151.4	104.7	109.6	300.8	77.5	76.1	54.6	60.6	855.2	872.8	936.5	964.0	769.8	770.8	942.4	824.4	973.6	841.0	729.1
101	983.7	133.1	167.7	106.7	112.2	368.1	75.4	78.5	54.6	58.9	857.0	874.4	936.0	964.7	776.0	776.2	945.0	826.8	973.8	842.5	736.3
102	986.6	142.7	189.9	109.0	116.1	441.2	82.2	80.1	63.8	65.2	859.7	876.2	940.1	967.7	781.7	781.3	950.4	827.8	978.5	844.2	742.8
103	987.7	167.7	216.9	111.2	118.4	491.1	83.9	82.2	65.7	62.8	863.1	877.7	943.0	969.3	787.0	786.7	953.1	828.9	981.6	845.5	749.1
104	988.4	210.4	246.7	113.6	120.3	536.8	89.9	82.0	63.4	62.6	866.6	864.8	945.4	970.2	792.3	791.2	955.4	830.8	982.8	847.2	754.4
105	989.1	250.5	278.3	116.3	122.8	579.4	106.7	87.1	70.2	67.2	870.3	866.9	948.0	971.8	796.8	795.4	956.8	832.4	972.2	849.0	759.5

Table 9. Temperatures Measured in Assembly S-33, Steel Stud, 2x2 Gypsum Board Layers, Mineral Fibre Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
0	33.3	28.2	34.6	33.4	27.1	27.1	33.7	32.4	27.0	26.7	35.0	33.7	26.0	26.0	32.8	31.6	27.3	26.8
1	118.0	28.2	34.6	33.4	27.1	27.0	34.1	32.5	26.9	26.7	35.7	34.1	26.0	26.0	33.6	32.1	27.3	26.8
2	120.7	28.2	34.7	33.4	27.1	27.1	44.2	38.6	27.0	26.7	46.7	39.7	26.0	26.0	44.9	38.1	27.3	26.8
3	129.7	28.2	35.6	33.8	27.1	27.1	49.6	43.6	27.0	26.7	49.4	43.5	26.1	26.0	47.3	41.8	27.3	26.9
4	254.6	28.2	38.0	35.4	27.1	27.1	66.0	52.4	27.0	26.7	72.1	58.3	26.1	26.0	72.3	59.5	27.3	26.8
5	359.7	28.4	45.8	46.8	27.1	27.1	88.3	76.3	27.0	26.7	83.1	76.0	26.1	26.0	81.3	76.7	27.3	26.8
6	455.4	28.9	59.2	61.9	27.4	27.3	94.7	89.5	27.0	26.7	86.0	84.6	26.1	26.0	84.0	83.4	27.3	26.8
7	544.9	30.3	68.7	70.0	27.8	27.7	96.7	94.3	27.0	26.8	90.8	87.5	26.1	26.0	88.2	86.3	27.5	26.9
8	577.3	32.8	75.8	77.2	28.7	28.8	99.4	95.0	27.1	26.8	96.9	91.0	26.2	26.1	93.3	91.5	27.8	27.1
9	609.5	36.5	80.9	81.7	30.8	31.6	106.0	97.2	27.3	26.9	103.2	95.9	26.3	26.3	98.1	97.0	28.7	27.4
10	640.8	41.9	84.4	84.0	34.2	36.5	110.0	99.6	27.6	27.2	108.9	101.6	26.6	26.6	102.6	101.9	30.2	28.0
11	673.9	48.8	86.9	85.4	38.7	41.5	113.1	102.2	28.3	27.6	113.9	106.3	27.0	27.2	107.7	106.3	33.0	28.9
12	704.7	56.3	88.5	86.2	43.2	45.7	117.4	104.4	29.3	28.3	119.1	110.6	27.7	28.3	113.3	111.1	36.8	30.2
13	714.8	63.5	89.4	86.8	47.5	49.0	124.5	108.2	30.6	29.4	125.5	115.3	28.8	29.7	120.0	116.7	41.1	32.2
14	724.1	68.7	89.8	87.1	51.1	51.6	134.4	114.7	32.2	30.6	134.8	121.3	30.2	31.5	128.2	123.4	45.3	34.6
15	735.6	73.3	89.3	87.2	54.2	53.9	149.0	125.6	34.1	32.1	162.2	130.6	32.0	33.4	143.0	130.5	49.1	37.4
16	745.9	75.6	87.3	87.1	56.4	56.0	171.2	144.2	36.2	33.7	216.0	159.8	33.9	35.4	188.2	159.9	52.3	40.8
17	756.6	74.2	90.6	86.1	57.9	58.0	209.8	179.4	38.4	35.5	248.6	204.1	35.9	37.4	219.0	200.5	54.3	44.1
18	764.3	75.5	92.8	90.4	60.8	60.2	236.5	203.0	40.9	37.3	280.8	238.2	37.8	39.5	238.8	228.0	55.9	46.5
19	770.5	78.8	95.1	92.6	64.6	64.4	260.3	227.4	43.7	39.4	314.3	273.9	39.7	41.6	263.0	247.5	57.8	48.6
20	776.7	81.1	99.8	94.5	68.3	69.4	281.6	247.1	47.5	41.9	344.5	304.3	42.0	44.3	289.6	275.1	60.1	51.2
21	784.5	82.9	104.9	98.3	70.9	73.4	301.5	266.8	52.3	44.9	373.4	329.6	44.6	47.6	315.1	299.5	62.2	53.8
22	791.6	83.7	109.9	105.7	72.5	75.7	324.1	287.2	57.4	48.4	393.5	348.7	47.4	51.2	352.2	324.8	63.9	56.1
23	797.0	84.4	115.0	112.0	73.7	77.1	345.9	308.9	61.7	52.0	412.5	365.4	50.2	54.6	379.6	350.5	65.3	58.1
24	801.0	84.8	120.2	116.8	74.5	78.1	369.2	335.8	64.8	55.2	429.0	382.6	52.6	57.4	400.1	373.1	66.5	59.8
25	808.0	85.2	124.7	121.3	75.0	78.8	396.6	363.5	67.0	58.0	442.7	396.5	54.7	59.7	417.2	392.4	67.6	61.2
26	812.5	85.4	127.3	125.3	75.1	79.2	406.0	389.0	68.3	60.4	460.2	408.6	56.4	61.6	435.9	412.2	68.5	62.4
27	816.7	84.9	131.8	127.9	75.1	79.2	412.5	412.2	69.1	62.4	478.1	427.9	57.7	63.0	454.6	433.7	69.3	63.4
28	822.0	84.9	142.0	130.3	75.0	78.9	428.6	428.5	69.4	63.8	495.8	446.3	58.8	63.9	473.9	455.1	69.9	64.3
29	825.4	85.2	150.6	133.6	75.0	78.7	446.9	441.4	69.5	64.8	512.7	466.9	59.6	64.5	493.2	477.7	70.5	64.9
30	830.7	84.9	159.4	138.6	74.8	78.5	469.3	453.7	69.4	65.5	526.6	484.5	60.2	64.9	512.7	499.3	70.8	65.4
31	835.4	85.1	169.8	143.4	74.7	78.4	490.1	465.5	69.3	66.1	541.0	502.2	60.8	65.1	533.2	522.6	71.2	65.7
32	838.8	85.4	184.5	148.6	74.7	78.2	506.9	478.5	69.2	66.6	554.6	518.7	61.0	65.3	554.2	544.5	71.3	65.9
33	841.6	85.3	208.0	157.5	74.6	78.1	522.2	491.9	69.1	67.1	568.9	534.2	61.3	65.4	574.9	565.8	71.5	66.2
34	846.9	86.0	236.5	173.3	74.4	78.0	538.9	505.8	69.0	67.5	581.0	548.4	61.6	65.4	592.9	584.8	71.6	66.5
35	850.8	87.6	266.6	195.2	73.7	77.9	556.4	519.7	68.9	67.8	594.5	562.2	61.7	65.5	609.4	604.0	71.8	66.8
36	853.8	90.3	303.6	227.7	72.1	77.2	574.3	532.9	68.7	68.0	610.3	575.8	61.5	65.5	628.7	623.8	72.0	67.1
37	857.7	96.3	339.7	267.7	70.9	75.6	592.3	546.2	68.5	68.1	627.6	591.1	61.0	65.1	647.2	642.4	72.2	67.5
38	861.1	103.1	380.6	308.2	71.0	74.0	611.6	580.7	68.1	68.1	646.7	607.9	60.3	64.2	660.2	665.2	72.5	68.0
39	864.4	109.6	422.1	349.7	69.6	73.7	631.1	577.7	67.4	67.7	668.6	626.0	59.8	63.3	674.9	684.7	72.8	68.4
40	867.0	116.7	453.3	392.1	68.0	73.5	649.3	595.7	66.4	67.1	684.8	646.6	59.1	62.7	696.9	704.0	73.2	68.9
41	870.6	123.6	480.4	425.8	67.0	72.5	668.5	613.8	65.5	66.5	692.6	665.5	58.2	62.1	718.2	725.0	74.2	69.6
42	873.8	130.7	504.4	451.8	68.0	73.4	692.9	631.3	64.5	66.2	791.2	683.6	57.3	61.3	735.9	741.1	77.7	70.3
43	876.7	138.0	527.2	475.4	73.8	80.4	707.3	648.3	63.4	66.0	818.3	701.9	56.5	60.4	749.9	753.0	81.3	71.3
44	879.4	145.1	552.1	498.5	81.3	90.6	724.7	665.6	62.4	65.5	865.4	721.3	56.0	59.6	764.8	770.7	83.8	72.8
45	882.0	151.7	577.2	520.4	89.1	101.0	742.2	682.7	61.5	64.9	709.6	735.6	56.1	59.0	779.2	775.8	85.9	74.6
46	885.0	157.8	605.2	540.3	97.7	112.4	764.7	700.0	61.0	64.5	857.2	749.8	56.4	58.6	793.4	788.4	87.6	76.5
47	887.9	163.9	634.9	558.5	107.7	124.5	784.9	717.2	60.7	63.9	879.9	762.3	57.3	58.8	809.7	791.8	88.9	78.3
48	889.6	170.6	655.6	575.4	119.2	137.3	798.8	733.2	60.7	63.2	700.0	776.5	58.5	59.5	817.0	797.2	89.8	79.7
49	892.1	177.9	672.4	591.2	132.4	150.2	813.5	747.5	61.0	62.7	711.9	791.0	60.1	60.6	819.8	800.5	90.6	80.8
50	896.0	185.9	698.2	606.7	148.2	163.2	830.8	761.5	61.7	62.5	722.5	804.9	62.0	62.0	823.7	800.0	91.3	81.9
51	898.0	193.5	704.7	621.7	165.5	176.1	846.5	775.7	62.9	62.6	731.9	818.4	63.9	63.4	827.9	800.0	92.0	83.1
52	900.8	200.7	724.6	636.0	182.8	188.9	858.0	789.2	64.2	63.2	741.9	825.0	65.7	64.7	831.6	800.2	92.5	84.1
53	903.1	207.7	747.6	649.4	196.2	201.2	866.3	800.5	65.7	64.0	753.7	830.5	67.1	65.7	835.4	800.1	93.0	85.0
54	905.0	214.8	779.0	663.3	207.6	213.8	869.8	816.1	67.2	65.1	771.2	843.6	69.0	66.5	837.8	799.7	93.9	85.9
55	907.2	221.9	823.1	680.3	225.6	226.7	882.7	827.8	68.9	66.3	798.3	851.2	71.7	67.5	843.0	799.6	95.0	86.9
56	909.7	229.1	838.7	700.2	255.0	240.4	882.3	844.7	70.9	67.6	820.0	862.4	73.4	68.9	848.7	799.7	96.0	87.8
57	912.1	236.3	828.1	724.8	330.2	255.4	881.4	852.7	74.2	68.9	797.4	869.8	75.9	70.3	854.7	799.4	98.5	88.8

Table 9. Temperatures Measured in Assembly S-33, Steel Stud, 2x2 Gypsum Board Layers, Mineral Fibre Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
58	913.9	242.9	842.0	750.7	348.7	276.2	878.7	859.9	77.5	70.3	776.1	875.7	77.6	71.9	854.4	799.5	101.3	89.7
59	915.4	250.7	849.3	775.3	298.2	303.5	879.2	861.2	80.5	71.7	770.1	881.9	79.0	73.0	860.2	801.5	105.0	90.7
60	918.2	255.6	852.3	800.0	305.9	340.5	884.4	859.0	83.1	73.1	772.5	883.9	80.5	74.1	869.8	802.9	109.3	91.7
61	920.4	261.8	854.6	823.9	352.3	411.0	889.0	854.4	85.4	74.7	765.3	887.8	81.6	75.0	869.1	803.6	113.4	92.8
62	922.6	268.0	866.6	859.4	387.3	589.1	893.7	871.3	87.0	76.3	766.2	892.0	82.6	75.6	864.3	804.9	117.0	93.8
63	923.6	275.2	870.2	892.9	370.8	623.5	903.0	891.2	89.2	78.0	767.8	897.1	83.5	76.4	870.0	808.6	120.3	94.8
64	926.8	288.5	880.3	903.8	367.6	584.3	910.2	915.7	92.1	80.3	777.3	908.9	84.8	78.0	886.4	812.7	123.9	96.0
65	929.2	319.5	892.9	908.3	383.3	577.6	916.1	920.8	94.3	83.1	788.4	913.6	86.1	81.2	888.5	814.0	128.4	97.2
66	930.7	377.7	904.8	913.0	407.7	600.1	918.7	923.0	96.6	86.2	803.2	905.7	87.3	85.4	888.6	814.2	133.7	98.5
67	932.3	475.4	908.4	904.6	435.7	653.1	921.6	922.4	98.7	89.1	794.1	902.4	88.3	87.3	889.5	807.0	139.6	99.8
68	934.1	449.6	914.2	907.5	463.9	735.7	924.5	921.4	100.9	91.5	808.3	886.3	89.0	88.3	890.7	812.1	148.2	101.1
69	935.9	519.0	916.2	908.7	495.3	787.0	925.1	918.2	103.5	93.9	809.9	882.2	89.7	89.5	893.3	810.5	160.2	102.6
70	937.7	523.9	917.1	915.0	526.6	803.9	925.0	910.6	106.2	96.3	747.4	879.0	91.0	90.9	895.3	811.8	170.3	104.0
71	938.7	505.4	907.6	916.9	555.1	815.7	910.8	905.0	109.6	98.3	692.9	869.0	94.9	92.4	901.1	808.2	179.5	105.4
72	941.9	478.5	912.5	914.8	580.0	812.1	911.9	898.7	114.3	100.1	665.0	857.0	99.7	96.1	909.1	803.6	188.3	106.8
73	942.8	463.0	917.6	912.6	600.5	814.8	910.1	889.6	120.2	101.9	633.3	845.5	104.4	104.5	919.3	799.5	196.8	108.0
74	944.1	448.1	920.4	911.2	615.3	824.0	909.2	882.5	126.3	104.3	963.7	837.1	109.3	118.8	934.4	796.8	205.4	109.4
75	946.2	435.9	924.9	909.8	627.1	824.1	911.0	880.2	140.3	107.2	***	831.4	115.4	131.4	942.1	795.5	213.4	110.9
76	947.4	428.2	927.1	909.2	641.1	833.5	912.6	881.2	164.1	110.3	***	829.6	123.3	155.6	945.4	795.5	221.1	112.6
77	949.4	420.4	929.5	909.0	658.0	834.2	915.2	881.5	186.9	113.5	***	829.3	132.6	204.7	949.2	796.0	228.7	114.4
78	950.7	418.2	932.2	909.0	677.4	843.6	918.9	884.9	207.0	116.9	***	830.7	156.9	249.2	952.2	798.0	236.5	116.5
79	952.3	423.7	935.5	908.5	698.1	860.8	927.9	889.5	227.6	120.8	***	834.3	197.1	280.8	956.0	801.3	244.5	118.9
80	955.0	432.4	939.7	909.3	721.6	860.0	934.1	895.7	247.8	125.3	***	838.0	228.4	299.4	957.3	804.8	252.1	121.5
81	956.5	439.6	943.2	909.9	742.0	868.6	941.2	897.4	268.9	131.0	***	840.9	252.2	316.8	959.1	807.1	260.0	124.3
82	958.3	447.9	949.8	910.8	761.4	871.7	942.5	899.5	289.4	139.6	***	842.6	277.0	339.9	955.1	808.5	268.0	127.6
83	959.7	455.5	959.3	909.8	772.3	866.6	943.7	901.0	312.5	158.2	***	843.7	300.1	362.0	965.7	809.5	275.6	131.5
84	961.5	465.1	965.8	905.7	783.6	870.9	939.8	902.7	332.3	183.0	***	845.2	323.8	380.6	972.1	812.1	282.5	135.2
85	962.8	474.0	968.3	906.5	787.3	874.3	942.4	903.3	350.3	203.6	***	849.0	352.8	395.3	974.3	814.9	289.4	137.6
86	964.4	485.0	968.9	907.3	788.9	876.2	939.6	905.5	367.3	222.7	***	853.4	378.0	404.2	976.6	819.5	296.2	141.4
87	966.2	496.7	970.6	908.4	790.4	879.0	937.1	910.1	387.2	241.4	***	858.2	382.7	424.3	979.5	824.6	303.4	150.0
88	967.1	505.9	972.9	909.1	788.7	884.3	941.5	913.2	407.4	260.1	***	861.7	396.2	445.5	975.6	830.9	311.0	158.5
89	968.0	517.3	970.2	909.7	788.7	884.8	942.2	918.3	426.1	279.4	***	868.5	406.5	461.1	967.0	838.1	317.5	167.5
90	969.8	525.2	975.1	910.4	790.4	884.0	942.5	923.3	443.0	298.9	***	877.0	414.1	476.7	966.0	840.8	324.4	178.3
91	971.6	534.1	970.8	911.3	793.2	885.6	942.9	930.6	459.8	320.1	***	879.5	428.4	491.6	968.3	843.3	331.5	184.9
92	972.8	541.5	970.4	911.5	797.5	886.1	944.8	936.0	476.3	342.4	***	883.8	444.9	508.4	958.4	845.6	338.6	192.0
93	974.8	544.4	971.1	912.3	804.1	888.7	949.9	940.7	493.0	363.1	1314.6	889.2	456.7	526.9	950.1	848.2	345.6	200.0
94	976.3	552.2	970.7	912.9	809.8	889.6	951.6	946.3	509.2	382.8	1257.9	893.4	468.1	545.0	952.6	850.6	353.0	208.8
95	975.5	563.2	970.3	913.5	817.3	888.8	952.0	950.6	524.5	402.4	1216.3	898.3	480.8	560.8	946.8	852.7	361.2	218.0
96	977.5	571.5	975.1	915.0	823.1	892.2	953.8	956.5	539.6	420.8	1222.6	899.4	496.5	576.5	954.9	854.9	369.2	226.3
97	979.3	578.3	977.9	916.5	830.0	892.7	956.2	962.1	554.6	438.6	***	902.8	512.3	590.5	971.8	857.1	376.5	234.0
98	980.1	586.2	980.6	917.7	836.2	893.1	956.0	964.0	570.0	455.6	***	906.4	528.5	603.2	982.6	858.9	383.8	241.9
99	981.1	592.0	990.0	917.7	842.2	897.8	953.8	967.7	586.3	472.9	***	911.8	544.1	615.2	974.4	860.9	392.6	250.1
100	983.5	597.8	992.3	916.1	849.9	896.5	957.3	967.2	602.3	488.5	***	911.8	562.6	627.3	976.5	863.0	401.9	257.7
101	983.7	606.2	992.6	915.2	859.1	899.1	960.9	969.3	616.7	503.8	***	911.7	581.1	640.9	990.4	865.3	413.0	265.3
102	986.6	613.1	996.3	916.4	864.9	901.8	968.0	972.5	624.7	518.3	***	912.9	598.2	653.6	980.2	867.7	425.3	272.9
103	987.7	616.6	997.0	916.3	871.9	903.9	970.9	974.4	634.3	532.3	***	904.8	614.9	666.7	974.2	869.9	439.0	280.9
104	988.4	622.4	999.4	916.4	880.1	905.2	972.3	971.7	648.5	546.6	***	896.6	626.3	679.5	974.0	872.6	452.6	289.3
105	989.1	627.5	995.6	916.5	888.7	906.8	970.4	936.4	664.4	560.3	***	900.0	642.4	690.3	971.7	875.2	470.0	298.2

Table 10. Average Temperatures Measured in Assembly S-33, Steel Stud, 2x2 Gypsum Board Layers, Mineral Fibre Insulation

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(26,27,30,31,34,35)	BL/SStd. (Exp.) Av(12,13,18,19)	BL/Cav. (Exp.) Av(22,23)	Mld. SStd. Av(10,11,16,17)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(14,15,20,21)	BL/FL (UnExp.) Av(28,29,32,33,36,37)	UnExp. Av(1,2,3,4,5)
0	33.3	33.2	31.6	34.0	30.0	27.1	28.5	26.6	26.1
1	118.0	33.7	31.6	34.0	30.0	27.1	28.5	26.6	26.1
2	120.7	42.0	31.7	34.0	30.0	27.1	28.5	26.6	26.1
3	129.7	45.9	32.5	34.7	30.1	27.1	28.5	26.7	26.1
4	254.6	63.4	40.0	36.7	30.5	27.1	28.6	26.6	26.1
5	359.7	80.3	53.4	46.3	32.2	27.1	28.7	26.6	26.1
6	455.4	87.0	62.3	60.6	36.1	27.3	29.2	26.6	26.1
7	544.9	90.6	71.8	69.3	42.0	27.7	30.7	26.7	26.1
8	577.3	94.5	79.6	76.5	49.9	28.7	33.4	26.9	26.1
9	609.5	99.6	83.9	81.3	58.4	31.2	37.7	27.2	26.1
10	640.8	104.1	86.2	84.2	65.5	35.4	43.3	27.7	26.2
11	673.9	108.3	87.5	86.1	70.7	40.1	48.9	28.7	26.2
12	704.7	112.7	88.3	87.4	74.4	44.5	54.1	30.1	26.3
13	714.8	118.4	89.2	88.1	76.9	48.2	58.6	32.0	26.6
14	724.1	126.1	90.3	88.4	78.5	51.4	62.0	34.1	27.1
15	735.6	140.2	91.8	88.3	79.7	54.1	65.0	36.4	27.7
16	745.9	173.2	92.5	87.2	79.4	56.2	66.7	38.7	28.5
17	756.6	210.2	96.6	88.4	79.6	57.9	67.2	40.9	29.5
18	764.3	237.5	105.5	91.6	82.4	60.5	69.3	43.0	30.6
19	770.5	264.4	114.0	93.9	85.0	64.5	72.4	45.2	31.7
20	776.7	290.4	122.9	97.2	87.2	68.8	75.4	47.8	32.9
21	784.5	314.2	127.9	101.6	88.8	72.1	77.9	50.9	34.2
22	791.6	338.4	129.7	107.8	90.4	74.1	79.7	54.1	35.6
23	797.0	360.5	131.9	113.5	92.4	75.4	81.1	57.0	37.1
24	801.0	381.6	135.9	118.5	95.3	76.3	82.0	59.4	38.8
25	808.0	401.5	141.6	123.0	98.0	76.9	82.7	61.4	40.7
26	812.5	418.6	146.1	126.3	100.2	77.2	83.2	62.9	42.7
27	816.7	436.5	152.2	129.9	102.8	77.1	83.3	64.1	44.5
28	822.0	454.7	157.5	136.1	104.9	77.0	83.5	65.0	46.4
29	825.4	473.1	166.7	142.1	106.9	76.8	83.5	65.6	48.1
30	830.7	491.0	179.5	149.0	109.4	76.7	83.4	66.0	49.6
31	835.4	509.1	192.7	156.6	112.5	76.6	83.5	66.4	50.8
32	838.8	526.2	207.1	166.5	116.7	76.4	83.7	66.6	51.8
33	841.6	542.9	219.6	182.7	121.7	76.3	84.0	66.8	52.7
34	846.9	558.6	231.2	204.9	127.7	76.2	84.8	66.9	53.4
35	850.8	574.4	247.7	230.9	135.2	75.8	86.3	67.1	53.9
36	853.8	591.0	264.1	265.6	144.9	74.7	88.3	67.1	54.4
37	857.7	607.8	273.5	303.7	155.0	73.3	91.6	67.1	54.6
38	861.1	625.4	289.3	344.4	165.9	72.5	95.1	66.9	54.7
39	864.4	643.9	314.1	385.9	178.3	71.7	98.6	66.6	54.8
40	867.0	689.4	342.7	422.7	196.6	70.8	102.9	66.2	54.8
41	870.6	720.6	371.5	453.1	220.0	69.7	108.3	66.0	54.6
42	873.8	712.7	399.6	478.1	243.0	70.7	114.4	66.2	54.4
43	876.7	696.5	425.4	501.3	265.8	77.1	121.7	66.5	54.1
44	879.4	718.7	450.1	525.3	286.7	85.9	130.0	66.7	53.9
45	882.0	737.5	472.3	548.8	305.8	95.1	138.3	67.0	53.9
46	885.0	742.2	494.7	572.8	322.7	105.1	147.8	67.5	53.9
47	887.9	757.6	515.7	596.7	338.2	116.1	157.8	68.0	54.1
48	889.6	770.4	537.2	615.5	353.5	128.3	166.2	68.6	54.3
49	892.1	780.7	557.0	631.8	368.6	141.3	176.0	69.3	54.5
50	896.0	790.6	576.6	647.4	383.3	155.7	186.0	70.3	55.0
51	898.0	800.1	596.3	663.2	397.8	170.8	195.8	71.3	55.6
52	900.8	807.6	616.1	680.3	412.2	185.8	205.4	72.4	56.2
53	903.1	814.4	638.4	698.5	426.4	198.7	215.0	73.4	56.9
54	905.0	823.0	664.5	721.2	441.3	210.7	225.0	74.6	57.8
55	907.2	833.8	681.3	751.7	457.2	226.2	235.2	76.1	58.9
56	909.7	842.9	696.4	769.5	473.0	247.7	245.4	77.4	59.9
57	912.1	842.6	713.5	776.5	488.5	292.8	255.8	79.4	61.0

Table 10. Average Temperatures Measured in Assembly S-33, Steel Stud, 2x2 Gypsum Board Layers, Mineral Fibre Insulation (Cont.)

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(26,27,30,31,34,35)	BL/SStd. (Exp.) Av(12,13,18,19)	BL/Cav. (Exp.) Av(22,23)	Mid. SStd. Av(10,11,16,17)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(14,15,20,21)	BL/FL (UnExp.) Av(28,29,32,33,36,37)	UnExp. Av(1,2,3,4,5)
58	913.9	840.7	728.5	796.3	504.3	312.5	270.3	81.4	62.1
59	915.4	842.3	746.4	812.3	520.5	300.8	283.6	83.3	63.3
60	918.2	845.4	761.9	826.1	538.7	323.2	301.6	85.3	64.5
61	920.4	844.8	775.1	839.3	560.0	381.6	325.9	87.2	65.6
62	922.8	848.7	786.9	863.0	585.6	488.2	337.9	88.7	66.7
63	923.6	856.3	805.6	881.5	608.2	497.2	337.1	90.4	67.6
64	926.8	868.5	835.0	892.0	628.7	476.0	346.3	92.5	68.5
65	929.2	873.6	849.5	900.6	647.9	480.5	366.5	95.1	69.2
66	930.7	875.6	862.6	908.9	665.5	503.9	399.1	97.9	70.2
67	932.3	872.8	867.7	906.5	684.4	544.4	444.1	100.4	71.3
68	934.1	873.9	873.0	910.9	713.1	599.8	456.5	103.2	72.5
69	935.9	873.2	877.5	912.4	732.9	641.2	491.8	106.6	73.5
70	937.7	861.5	877.0	916.1	756.4	665.2	507.8	109.8	74.5
71	936.7	847.9	875.4	912.3	766.2	685.4	514.7	113.4	75.0
72	941.9	840.9	874.8	913.7	770.1	696.1	518.3	117.5	75.8
73	942.8	832.9	874.0	915.1	774.0	707.7	522.9	122.6	76.1
74	944.1	867.3	874.5	915.8	776.2	719.7	524.7	128.9	76.5
75	946.2	872.1	876.0	917.3	778.3	725.6	525.5	136.4	76.9
76	947.4	872.9	873.9	918.2	781.5	737.3	525.3	147.8	77.9
77	949.4	874.2	873.1	919.2	791.0	746.1	526.5	163.5	79.3
78	950.7	877.0	875.1	920.6	797.9	760.5	534.3	180.5	80.6
79	952.3	881.8	878.4	922.0	801.8	779.5	544.5	198.3	82.0
80	955.0	886.0	881.5	924.5	804.9	790.8	556.0	212.4	83.5
81	956.5	889.1	883.1	926.5	810.5	805.3	566.6	225.6	85.3
82	958.3	889.6	886.9	930.3	812.1	816.5	576.4	240.3	87.6
83	959.7	892.7	888.8	934.6	815.7	819.4	586.2	256.7	89.6
84	961.5	894.4	894.2	935.7	819.6	827.2	596.2	272.9	91.2
85	962.8	896.8	897.8	937.4	824.2	830.8	606.0	288.2	92.8
86	964.4	898.9	900.7	938.1	829.3	832.6	615.7	301.6	94.6
87	966.2	901.9	902.8	939.5	837.5	834.7	624.1	314.8	96.4
88	967.1	904.6	906.1	941.0	843.5	836.5	632.1	329.8	98.3
89	968.0	906.8	908.2	940.0	846.5	836.7	640.8	343.0	100.5
90	969.8	909.9	910.4	942.7	850.5	837.2	648.3	355.9	102.6
91	971.6	912.5	912.6	941.0	853.7	839.4	656.0	369.4	104.5
92	972.8	913.7	915.4	941.0	855.9	841.8	662.4	383.8	106.9
93	974.8	982.1	919.2	941.7	860.2	846.4	667.9	397.5	109.3
94	976.3	975.4	920.3	941.8	862.2	849.7	674.8	411.1	111.9
95	975.5	969.4	918.9	941.9	862.7	853.1	682.7	424.6	115.1
96	977.5	973.7	921.1	945.1	865.7	857.7	689.5	438.1	119.1
97	979.3	930.0	922.7	947.2	867.0	861.3	696.6	451.1	126.9
98	980.1	933.6	923.9	949.2	868.4	864.6	704.0	463.8	136.5
99	981.1	933.7	926.5	953.8	871.0	870.0	710.8	476.9	146.9
100	983.5	935.2	928.8	954.2	873.7	873.2	716.9	490.1	159.1
101	983.7	939.5	929.2	953.9	875.8	879.1	723.7	503.5	177.5
102	986.6	940.3	932.6	956.4	878.5	883.4	729.7	515.5	199.8
103	987.7	938.9	934.9	956.7	880.7	887.9	734.9	528.0	221.1
104	988.4	937.4	936.4	957.9	879.4	892.6	740.1	540.5	245.5
105	989.1	930.7	935.2	956.0	881.6	897.7	744.8	554.3	269.5

Table 11. Temperatures Measured in Assembly S-34, Steel Stud, 2x2 Gypsum Board Layers, Cellulosic Fibre Insulation

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	45.4	25.2	25.7	25.4	25.1	25.7	24.2	24.2	24.4	27.5	32.3	31.0	35.3	37.1	29.1	29.0	32.0	30.9	34.7	32.9	29.7
1	111.6	25.2	25.7	25.3	25.1	25.7	23.8	24.1	24.1	24.3	32.3	30.9	35.2	37.0	29.1	28.9	32.0	30.9	34.7	32.8	29.7
2	224.8	25.2	25.7	25.3	25.1	25.6	23.8	24.0	24.0	24.0	32.3	30.9	35.3	37.1	29.1	28.9	32.0	30.9	38.2	33.5	29.7
3	326.2	25.1	25.7	25.3	25.1	25.6	23.6	23.7	23.7	23.8	32.4	31.0	36.9	37.9	29.1	28.9	34.1	31.9	71.4	52.4	29.7
4	429.0	25.1	25.7	25.2	25.1	25.6	23.7	23.9	23.9	23.8	32.8	31.4	43.4	42.6	29.1	28.9	46.9	40.6	83.3	79.1	30.6
5	535.7	25.1	25.6	25.2	25.0	25.6	23.8	24.0	23.9	23.9	34.5	32.4	59.8	55.0	29.1	29.0	63.3	52.9	85.9	82.3	33.3
6	569.4	25.1	25.6	25.2	25.0	25.6	23.6	23.8	23.7	23.8	38.7	35.2	73.9	68.0	29.2	29.3	73.4	59.0	88.3	84.6	37.3
7	600.1	25.1	25.6	25.2	25.0	25.5	23.5	23.7	23.5	23.6	44.6	40.1	81.4	75.3	29.7	29.9	81.2	64.9	89.6	86.5	41.9
8	632.0	25.1	25.6	25.2	25.0	25.5	23.4	23.6	23.6	23.5	50.2	45.3	85.0	79.9	30.6	31.0	85.7	70.8	90.4	88.0	47.0
9	664.9	25.0	25.7	25.2	25.0	25.5	23.5	23.6	23.6	23.6	55.0	50.0	86.9	82.6	31.9	32.6	88.2	76.5	90.9	89.4	52.4
10	698.3	25.0	25.8	25.2	25.0	25.5	23.4	23.6	23.6	23.5	59.0	53.9	88.2	84.3	33.6	34.5	89.5	81.1	91.6	90.2	57.5
11	711.4	25.0	26.1	25.3	25.0	25.5	23.6	23.8	23.8	23.7	62.5	57.4	89.4	85.5	35.6	36.7	90.3	84.2	92.1	90.7	62.2
12	720.7	25.0	26.7	25.3	25.0	25.5	23.7	23.9	23.9	23.8	65.7	60.5	90.4	86.4	37.9	39.1	90.5	86.0	92.7	90.6	66.5
13	731.8	25.1	27.6	25.5	25.0	25.6	23.5	23.7	23.8	23.7	68.7	63.3	91.3	87.1	40.3	41.6	89.8	86.6	92.4	90.3	69.6
14	743.8	25.1	28.9	25.7	25.0	25.6	23.4	23.6	23.5	23.4	71.0	65.8	91.7	87.7	42.8	44.1	86.3	85.7	89.5	88.8	71.0
15	754.0	25.1	30.6	26.2	25.0	25.7	23.5	23.7	23.8	23.7	73.0	68.0	91.6	88.2	45.6	46.8	84.7	82.8	88.9	83.7	71.6
16	762.3	25.2	32.4	26.7	25.1	25.9	23.6	23.9	24.0	23.9	76.0	70.5	94.4	87.7	49.3	49.9	89.0	83.0	117.0	88.4	72.8
17	769.5	25.3	34.3	27.5	25.2	26.1	23.7	23.9	24.1	23.9	80.5	72.8	96.1	91.3	53.5	52.7	90.6	86.9	119.3	92.7	75.3
18	773.7	25.4	36.2	28.3	25.3	26.4	23.8	24.0	24.2	24.0	84.4	75.8	97.2	94.5	58.5	55.5	91.3	88.8	116.0	95.0	76.9
19	781.5	25.6	38.1	29.3	25.5	26.8	24.0	24.0	24.3	24.1	87.4	79.0	97.6	96.5	64.0	58.7	92.2	89.7	114.3	97.0	78.0
20	790.0	25.9	39.9	30.3	25.7	27.3	23.9	24.1	24.3	24.1	89.7	82.3	98.0	97.8	69.8	62.6	92.6	90.9	114.6	99.4	79.1
21	794.0	26.2	41.7	31.3	25.9	27.6	24.1	24.2	24.5	24.4	91.3	85.1	98.3	98.9	74.8	66.8	92.6	91.8	115.9	100.5	80.0
22	801.6	26.7	43.5	32.4	26.3	28.5	24.5	24.7	24.9	24.9	92.3	87.4	98.7	99.7	78.8	70.8	92.7	92.2	117.9	102.6	80.6
23	805.8	27.2	45.1	33.6	26.7	29.4	25.0	25.2	25.6	25.6	92.9	88.9	99.9	100.4	81.5	74.3	92.8	92.1	120.6	105.3	81.0
24	810.0	28.0	46.8	34.9	27.3	30.5	25.2	25.4	25.6	25.7	93.3	90.0	102.4	101.3	83.4	77.2	93.1	92.0	123.8	108.0	81.4
25	815.4	28.8	48.3	36.3	28.0	31.9	26.6	27.0	27.1	27.2	93.3	90.5	105.7	101.9	84.7	79.5	93.3	91.9	127.5	110.5	81.8
26	819.4	29.9	49.8	37.8	28.9	33.5	27.2	27.4	27.1	27.5	93.0	90.7	109.6	102.4	85.3	80.9	93.4	91.8	131.1	113.0	82.1
27	824.7	31.1	51.1	39.4	30.0	35.3	27.8	28.1	28.1	28.6	92.7	90.6	113.4	103.3	85.5	81.8	93.7	91.6	135.9	115.4	82.2
28	829.4	32.4	52.2	40.9	31.2	37.2	27.6	28.3	28.6	28.8	92.6	90.6	116.9	104.4	85.6	82.3	94.0	91.3	142.6	117.6	82.3
29	833.7	33.8	53.2	42.3	32.6	39.3	28.9	29.7	29.7	30.5	92.7	90.7	120.3	105.7	85.6	82.7	94.5	90.6	154.6	121.1	82.4
30	838.5	35.2	54.1	43.8	34.1	41.3	30.2	31.3	30.4	31.6	92.9	90.9	123.6	107.1	85.6	83.1	95.7	90.3	172.9	125.5	82.5
31	840.9	36.7	54.7	45.3	35.6	43.3	30.7	32.0	30.8	31.9	93.2	91.2	127.1	108.7	85.5	83.3	97.6	90.2	191.6	131.0	82.5
32	846.4	38.1	55.2	46.7	37.2	45.1	30.9	32.9	31.5	32.4	93.8	91.9	131.1	110.5	85.5	83.5	100.4	90.6	212.5	136.0	82.6
33	849.1	39.4	55.7	47.9	38.7	46.7	32.0	33.7	32.4	33.5	94.4	92.6	135.1	112.8	85.5	83.8	104.3	91.3	231.2	150.8	82.8
34	852.9	40.7	56.0	49.0	40.2	48.3	33.2	35.0	33.1	34.0	95.1	93.5	138.7	116.0	85.6	84.0	109.3	92.8	249.9	181.3	83.1
35	856.2	41.9	56.2	50.0	41.6	49.6	31.6	33.4	33.3	33.8	96.1	94.6	143.8	120.3	85.7	84.4	115.3	95.9	269.5	203.1	83.8
36	859.0	43.1	56.3	50.9	42.9	50.8	33.3	36.0	34.1	35.0	97.0	95.9	154.6	130.2	85.5	84.9	122.2	101.2	286.3	226.1	84.8
37	862.9	44.2	56.4	51.6	44.1	51.9	33.3	36.0	34.5	34.7	97.9	97.1	169.2	153.7	84.4	85.1	129.6	107.9	299.9	242.6	86.2
38	866.4	45.1	56.5	52.1	45.3	52.8	33.5	36.9	35.0	35.0	99.1	98.2	188.7	185.9	83.9	84.6	137.1	114.4	314.4	259.8	87.9
39	870.0	46.0	56.5	52.6	46.3	53.6	34.1	37.3	35.3	35.5	101.5	99.7	207.6	222.1	84.3	84.1	144.4	120.8	326.3	267.0	89.5
40	873.5	46.9	56.6	52.9	47.2	54.3	34.1	37.3	35.2	35.7	105.2	102.4	226.2	264.3	85.6	84.5	151.7	127.7	340.2	281.8	90.8
41	875.5	47.7	56.7	53.4	48.0	54.9	35.0	37.1	35.4	35.7	109.8	106.4	243.9	307.1	86.2	86.1	159.2	134.9	354.4	294.9	92.2
42	878.9	48.4	56.8	53.7	48.7	55.5	34.7	37.0	34.5	35.5	115.0	111.1	260.9	354.9	86.4	87.2	167.1	142.5	370.2	311.9	93.6
43	882.6	49.0	57.1	54.1	49.4	56.1	35.4	37.6	35.7	35.7	120.8	116.1	277.7	398.8	86.6	87.7	175.5	150.4	387.5	330.5	95.2
44	884.1	49.7	57.3	54.5	50.1	56.7	35.3	38.1	35.0	35.9	127.1	121.6	293.9	430.9	86.9	88.1	184.3	158.8	407.3	351.0	97.1
45	886.3	50.3	57.6	54.9	50.8	57.2	35.4	38.5	36.0	35.6	134.0	127.3	310.2	458.2	87.1	88.6	193.8	168.6	427.2	365.7	99.1
46	890.5	50.9	58.0	55.3	51.6	57.7	35.9	39.3	37.4	37.1	141.2	133.3	326.9	483.0	87.4	89.0	203.9	183.4	445.8	388.2	101.5
47	892.2	51.4	58.3	55.7	52.2	58.2	36.6	39.0	37.1	37.0	148.9	139.7	342.0	505.9	87.6	89.5	215.1	221.1	466.4	412.0	104.1
48	896.3	51.8	58.5	56.2	52.8	58.7	37.1	39.6	36.6	36.7	157.1	146.4	361.2	527.1	87.9	90.1	232.4	326.9	489.9	439.3	107.2
49	896.3	52.2	58.8	56.5	53.3	59.1	35.9	39.3	37.0	36.5	165.9	153.4	378.5	546.9	88.2	90.8	307.8	525.3	516.5	466.3	110.8
50	899.2	52.6	59.0	56.9	53.9	59.5	37.3	40.7	38.1	37.4	175.1	160.7	395.4	564.6	88.6	91.5	471.9	656.8	542.9	496.7	115.2
51	902.7	53.1	59.3	57.3	54.4	59.9	36.3	40.4	37.3	37.6	184.8	168.4	412.3	582.0	89.0	92.3	594.6	716.0	575.6	527.5	125.4
52	903.5	53.5	59.5	57.5	54.8	60.3	36.8	40.1	37.6	37.3	195.1	176.6	429.1	601.3	89.4	93.0	661.0	749.3	621.5	561.2	165.2
53	906.5	54.0	59.7	57.8	55.2	60.6	36.1	40.1	36.9	37.6	205.9	186.1	445.9	623.7	90.1	94.1	701.2	771.6	665.2	599.0	253.0
54	910.6	54.6	60.0	58.0	55.6	61.1	36.8	40.6	38.4	38.2	217.1	197.3	463.4	650.4	90.9	95.6	735.0	790.0	705.0	636.0	358.3
55	911.1	55.2	60.2	58.3	55.9	61.4	37.0	41.0	37.7	38.1	229.1	210.4	483.0	688.9	92.0	97.3	782.0	807.1	715.9	684.1	455.1
56	913.8	55.9	60.5	58.6	56.2	61.8	36.9	40.9	37.6	37.6	241.7	224.7	501.5	776.3	93.4	99.4	802.0	842.8	752.8	763.6	552.1
57	916.2	56.6	60.8	59.0	56.5	62.2	37.8	42.4	38.5	38.9	254.5	240.1	518.0	853.6	94.9	101.4	829.7	859.			

Table 11. Temperatures Measured in Assembly S-34, Steel Stud, 2x2 Gypsum Board Layers, Cellulosic Fibre Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
58	917.3	57.2	61.3	59.4	56.9	62.6	37.5	42.1	38.6	38.4	267.5	256.9	533.9	890.4	96.6	103.6	840.1	851.3	799.7	848.5	699.3
59	919.4	57.8	61.8	59.9	57.3	63.1	38.4	43.1	38.8	39.5	280.3	276.5	550.4	898.1	98.3	111.1	837.7	845.2	807.7	850.7	720.0
60	922.1	58.5	62.4	60.5	57.8	63.7	38.8	43.3	39.6	38.9	292.9	303.1	566.0	897.4	100.9	112.8	836.4	842.1	808.0	852.8	734.0
61	924.1	59.1	63.2	61.0	58.3	64.3	39.8	42.3	39.1	39.0	305.6	346.6	582.9	896.5	104.0	118.0	835.8	839.6	805.4	849.8	743.9
62	925.9	59.6	64.0	61.6	58.8	64.9	39.9	42.5	37.9	39.1	319.0	405.4	599.3	896.5	107.9	124.9	835.4	838.8	806.3	844.8	751.0
63	927.9	60.2	64.9	62.2	59.4	65.5	40.9	43.9	39.6	40.3	333.4	470.6	615.8	896.3	113.9	145.3	835.9	839.7	803.1	841.1	755.7
64	929.6	60.8	66.0	62.9	60.0	66.1	42.5	44.1	40.2	40.4	348.5	532.8	633.4	897.8	122.2	159.7	836.2	840.7	797.6	838.1	761.3
65	931.2	61.4	68.1	63.7	60.8	66.8	44.0	45.5	41.3	41.4	364.2	579.6	655.5	896.2	132.6	186.4	835.1	840.2	795.2	827.0	766.5
66	933.7	62.1	71.2	64.6	61.5	67.5	45.3	46.2	41.9	42.5	380.6	614.9	672.8	895.0	142.5	217.2	834.3	840.0	792.0	821.5	770.8
67	935.6	62.5	73.7	65.5	62.1	68.0	46.7	45.4	40.2	41.6	397.3	642.1	689.1	893.2	156.5	246.2	832.8	838.9	790.0	813.8	774.0
68	937.7	63.1	75.5	66.4	62.6	68.6	48.7	47.0	42.2	42.6	413.9	672.5	705.1	890.8	169.2	274.6	842.7	842.9	787.9	810.6	780.4
69	938.6	63.6	76.9	67.6	63.1	69.2	49.7	46.6	42.1	42.5	430.4	691.2	720.0	884.9	184.1	301.5	838.2	838.5	786.8	801.8	784.0
70	939.6	64.1	77.7	69.0	63.5	69.7	50.5	47.4	42.6	43.7	446.4	711.4	732.8	885.3	198.2	328.2	836.3	835.6	786.1	798.1	787.3
71	942.4	64.7	78.4	70.2	63.9	70.2	51.6	48.0	43.0	43.8	461.9	725.0	742.3	876.6	216.2	352.3	832.5	876.9	786.5	794.4	790.1
72	943.3	64.9	79.0	71.5	64.3	70.7	51.3	48.4	43.4	44.1	477.2	738.9	751.3	876.5	236.5	377.1	829.8	869.6	786.9	791.8	792.0
73	945.6	65.0	79.8	72.9	64.7	71.1	51.5	48.2	43.6	44.5	492.3	753.6	759.8	877.1	258.9	402.2	826.3	862.8	787.8	790.0	793.3
74	946.9	65.2	80.1	74.1	64.9	71.4	51.5	48.4	43.1	44.5	507.1	763.6	765.7	878.4	282.5	426.8	821.5	865.2	789.0	788.3	794.8
75	948.3	65.8	80.4	75.1	65.1	71.6	52.5	48.4	42.4	44.8	521.9	770.1	769.3	874.2	307.0	448.7	819.6	859.0	789.1	786.6	795.6
76	950.3	66.6	80.7	76.0	65.3	71.8	52.1	50.4	42.8	44.5	536.8	777.0	772.9	872.7	330.8	468.8	818.4	855.4	789.9	785.5	796.7
77	952.5	67.0	81.3	76.6	65.6	71.8	51.7	50.8	43.7	44.3	552.4	782.7	777.4	871.0	354.3	488.1	817.9	858.2	790.4	785.2	798.2
78	954.0	67.3	82.0	77.0	66.0	71.7	52.5	52.7	43.8	45.9	568.9	788.2	781.1	871.0	377.5	507.7	817.7	856.1	792.0	785.3	800.0
79	955.1	67.7	82.5	77.3	66.4	71.7	53.3	52.6	44.1	45.9	585.9	793.5	784.2	872.9	400.6	527.5	818.0	848.9	794.3	785.8	802.0
80	958.5	68.1	83.0	77.6	66.8	71.8	55.5	53.6	45.2	45.4	602.2	797.5	786.9	873.7	423.7	546.8	817.5	843.9	796.7	786.5	803.6
81	959.6	68.6	83.7	77.8	67.2	71.9	56.6	55.4	44.1	45.6	617.3	801.2	788.9	875.9	446.3	567.0	816.8	844.1	799.2	786.9	804.9
82	961.1	68.7	85.0	77.9	67.5	72.0	57.6	55.1	44.9	46.3	631.9	805.5	790.9	879.5	468.8	592.4	817.3	839.6	801.6	788.1	807.2
83	962.0	68.8	87.8	78.0	67.8	72.1	57.9	55.2	46.0	45.7	646.1	806.5	793.5	880.9	490.5	612.7	817.3	826.7	803.4	789.7	809.2
84	963.9	68.9	91.2	78.0	68.2	72.4	59.0	54.9	45.9	47.2	659.7	807.7	795.5	882.7	511.6	630.1	817.8	811.8	806.1	791.3	811.6
85	964.9	69.0	94.7	78.1	68.5	72.6	60.4	56.9	47.0	47.7	672.7	808.9	798.2	882.3	532.7	645.3	818.4	789.3	808.9	793.3	814.7
86	966.8	69.1	98.2	78.2	68.9	72.7	60.6	55.9	47.0	47.9	685.6	809.3	802.3	882.9	554.5	658.3	820.9	784.9	811.6	796.2	818.4
87	968.5	69.2	101.4	78.3	69.3	72.8	60.0	56.7	47.4	48.4	698.2	808.4	807.6	877.1	576.3	669.5	823.8	804.1	815.3	799.6	822.6
88	969.6	69.2	104.3	78.4	69.6	72.8	61.3	55.2	45.0	47.3	711.2	809.5	812.4	878.9	596.8	679.8	826.5	807.0	819.6	802.6	826.7
89	971.7	69.0	107.0	78.4	69.8	73.0	61.1	55.4	45.7	45.9	724.6	812.9	819.1	882.7	624.3	690.6	831.7	820.1	824.8	806.8	833.0
90	971.4	68.8	109.7	78.5	69.9	73.8	63.1	55.3	46.0	46.5	738.3	812.6	825.4	882.5	652.5	698.5	834.8	796.7	830.5	811.1	839.0
91	974.3	68.6	112.2	78.6	70.2	75.2	67.7	56.8	47.0	46.9	752.6	813.0	832.4	880.4	681.7	706.3	834.3	797.7	836.4	816.1	844.1
92	975.6	68.5	114.7	78.6	70.3	77.2	70.3	56.2	46.6	46.5	764.4	811.9	837.9	879.4	705.6	712.2	836.3	804.8	841.7	820.0	847.8
93	976.0	68.5	117.4	78.9	70.3	79.9	74.2	56.6	46.8	46.0	775.1	808.8	845.3	878.2	725.2	716.5	839.5	842.8	845.1	823.5	850.5
94	977.5	68.6	120.3	79.1	70.3	82.9	80.4	58.2	46.6	46.7	786.9	807.4	850.1	876.7	742.1	720.8	840.0	854.4	847.8	826.7	853.4
95	978.7	68.9	124.1	79.4	70.3	86.2	85.5	58.0	47.5	44.8	796.7	807.0	852.5	875.3	753.7	726.5	840.0	863.6	851.0	829.7	856.0
96	979.5	69.4	127.5	79.8	70.2	89.3	90.0	59.2	46.4	44.7	805.8	805.7	856.0	874.0	764.1	729.9	837.0	872.1	853.2	832.5	858.4
97	981.3	70.0	132.4	80.4	70.1	92.2	102.0	59.3	47.6	44.8	815.1	805.4	859.6	874.0	774.4	738.4	839.2	874.5	856.4	836.0	861.6
98	982.3	70.7	140.9	81.2	70.0	94.9	129.0	59.7	48.0	44.9	822.8	806.3	862.7	873.4	784.3	741.8	838.4	876.5	859.1	839.5	864.6
99	984.0	71.4	155.3	82.2	69.9	97.5	146.4	60.4	46.4	45.0	829.9	807.0	866.4	874.2	793.0	747.3	836.7	877.6	862.3	845.5	868.5
100	986.1	72.1	175.9	83.2	69.7	99.8	156.2	59.5	45.3	43.9	841.9	811.8	883.0	875.5	808.6	754.5	835.9	884.2	870.1	843.7	877.4
101	986.4	73.1	200.8	84.5	69.7	102.0	168.3	60.6	45.6	43.5	850.2	815.4	885.7	879.2	818.4	760.7	845.7	888.9	874.9	849.9	882.5
102	987.8	74.5	229.2	86.1	69.9	104.3	166.9	58.9	46.4	43.8	855.7	820.0	887.6	879.6	824.5	765.6	836.0	892.7	875.0	854.0	884.2
103	987.9	76.5	264.2	87.9	70.3	106.8	185.0	61.5	45.9	45.1	870.9	823.8	886.2	879.7	829.0	772.3	850.0	896.5	874.2	847.3	882.5
104	991.2	79.2	303.0	89.7	70.8	109.5	191.0	62.5	46.5	44.5	875.3	829.3	889.0	879.2	833.2	776.7	840.8	895.0	882.8	862.3	881.3
105	992.4	82.4	345.8	91.8	71.6	112.2	208.2	60.6	44.1	43.6	877.5	833.0	890.1	878.8	835.6	782.0	861.8	901.5	884.1	858.3	880.2

Table 11. Temperatures Measured in Assembly S-34, Steel Stud, 2x2 Gypsum Board Layers, Cellulosic Fibre Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
0	45.4	29.0	36.6	35.4	28.3	27.0	38.7	36.6	27.4	26.8	40.3	38.2	25.4	25.2	37.9	35.7	26.9	26.5
1	111.6	29.0	36.6	35.4	28.3	27.0	39.0	36.8	27.4	26.8	40.9	38.9	25.4	25.2	38.6	36.2	26.9	26.5
2	224.8	29.0	36.6	35.6	28.3	27.0	52.2	43.3	27.4	26.8	60.8	51.1	25.4	25.2	60.7	45.6	26.9	26.5
3	326.2	29.1	38.5	42.3	28.4	27.0	79.9	61.9	27.4	26.8	79.6	73.9	25.4	25.2	79.8	70.5	26.9	26.5
4	429.0	29.9	46.5	62.7	28.3	27.0	95.6	85.5	27.4	26.8	84.3	83.0	25.4	25.2	85.5	82.8	26.9	26.5
5	535.7	32.4	59.6	76.3	28.3	27.0	96.3	97.1	27.3	26.7	85.2	85.5	25.4	25.2	88.3	86.6	26.9	26.5
6	569.4	35.5	68.0	82.0	28.5	27.4	96.5	97.3	27.3	26.7	86.4	86.3	25.4	25.2	91.7	88.3	27.1	26.6
7	600.1	38.5	73.8	85.6	28.8	28.1	96.9	97.0	27.4	26.8	88.2	87.1	25.4	25.1	96.0	91.2	27.4	26.8
8	632.0	41.6	78.0	88.0	29.4	29.4	100.5	96.9	27.6	26.8	90.5	90.9	25.3	25.1	99.2	95.9	28.1	27.2
9	664.9	45.1	81.0	89.7	30.4	31.4	105.5	97.6	27.9	27.0	94.5	95.2	25.3	25.1	104.9	100.6	29.1	27.6
10	698.3	48.9	83.2	90.8	31.8	34.1	110.6	99.3	28.3	27.2	100.3	98.1	25.3	25.1	111.0	105.2	30.4	28.3
11	711.4	52.7	85.0	91.6	33.6	37.2	117.0	106.7	29.0	27.5	106.1	101.8	25.3	25.2	115.5	109.8	32.2	29.0
12	720.7	56.3	86.2	91.9	35.7	40.6	125.1	114.6	29.9	28.0	113.3	107.1	25.3	25.2	120.8	114.6	34.4	29.9
13	731.8	59.2	86.1	91.6	37.9	43.9	136.4	122.6	31.2	28.6	146.9	115.7	25.4	25.4	127.6	120.7	36.8	31.1
14	743.8	61.0	84.4	88.6	40.4	46.7	161.2	131.9	33.1	29.2	201.7	153.6	25.6	25.7	165.4	130.4	39.2	32.4
15	754.0	62.3	89.9	88.1	42.7	48.6	201.0	151.2	36.3	30.0	240.3	201.8	25.8	26.1	210.5	163.0	41.4	33.8
16	762.3	63.1	93.3	93.2	44.7	50.1	220.0	194.3	41.0	31.0	262.0	225.7	26.1	26.7	236.8	191.9	43.2	35.2
17	769.5	64.6	94.5	95.3	48.3	51.9	240.2	212.1	45.4	32.1	295.1	258.0	26.5	27.3	259.4	206.9	45.1	36.6
18	773.7	66.6	96.9	96.6	53.2	53.8	263.0	234.8	50.7	33.3	321.4	266.2	27.1	28.1	280.9	218.3	47.4	37.9
19	781.5	68.3	98.5	97.3	58.2	56.1	293.2	253.2	57.5	34.7	360.7	285.1	27.9	29.0	301.7	231.4	49.6	39.3
20	790.0	70.1	99.8	96.4	62.5	58.7	321.3	274.1	64.4	36.3	379.7	307.0	29.0	30.0	325.3	250.3	51.8	40.8
21	794.0	72.0	101.0	97.3	66.2	61.1	347.7	295.0	70.5	38.3	390.6	330.4	30.4	31.2	348.8	265.7	53.8	42.3
22	801.6	73.8	102.2	98.3	69.3	63.4	365.8	316.5	75.1	40.7	396.9	351.6	32.3	32.5	369.7	282.2	55.6	43.9
23	805.8	75.0	103.0	99.1	71.4	65.1	380.1	340.7	77.9	43.4	405.0	370.7	34.5	34.1	384.7	302.2	57.2	45.6
24	810.0	76.0	104.0	99.7	72.9	66.8	393.2	366.0	79.8	46.7	420.8	391.5	36.9	35.8	398.1	314.4	58.5	47.2
25	815.4	76.9	105.4	100.7	73.7	68.0	416.1	388.8	81.0	50.1	440.3	414.3	39.4	37.6	414.2	328.9	59.7	48.8
26	819.4	77.6	107.1	102.1	74.2	69.3	438.2	408.7	81.6	53.7	460.3	437.4	41.8	39.5	432.8	344.3	60.8	50.3
27	824.7	78.2	107.7	103.4	75.3	70.0	452.0	425.0	81.7	56.8	483.2	464.7	44.1	41.4	451.2	364.4	61.8	51.8
28	829.4	78.7	108.1	104.9	76.1	70.6	467.3	439.9	81.8	59.3	506.6	487.8	46.2	43.2	469.7	432.3	62.7	53.1
29	833.7	78.9	109.5	106.7	76.7	71.2	482.0	451.6	81.8	61.6	533.8	515.2	48.1	44.9	488.7	453.1	63.4	54.4
30	838.5	79.0	112.1	108.8	77.3	71.7	494.4	463.1	81.7	63.4	561.6	536.7	49.7	46.5	507.4	472.5	64.0	55.5
31	840.9	79.0	116.3	111.4	77.9	72.1	505.6	474.5	81.5	64.9	588.0	555.7	51.2	47.9	526.3	493.5	64.6	56.5
32	846.4	79.3	125.4	114.7	78.6	72.7	515.6	486.3	81.4	66.3	610.6	579.9	52.6	49.2	544.1	514.3	65.0	57.4
33	849.1	79.5	146.0	119.1	79.0	73.3	525.5	497.3	81.4	67.6	630.4	605.7	53.8	50.3	562.1	533.5	65.3	58.3
34	852.9	79.6	173.1	128.4	78.9	73.8	535.7	508.2	81.6	68.7	658.7	635.0	54.8	51.4	579.6	545.6	65.5	59.0
35	856.2	79.8	203.9	154.2	78.6	74.0	547.0	519.3	81.7	70.0	701.5	676.7	55.7	52.5	596.4	571.4	65.8	59.8
36	859.0	80.1	239.0	184.7	78.8	74.1	557.7	530.0	81.2	72.2	746.5	709.5	56.4	53.4	611.9	586.0	66.0	60.5
37	862.9	81.2	280.5	219.8	80.4	74.8	568.5	540.3	80.0	74.3	785.9	742.9	57.0	54.1	623.2	590.8	66.4	61.3
38	866.4	82.7	321.6	258.9	81.3	76.0	580.9	551.9	79.6	75.3	822.9	780.2	57.7	54.8	628.2	592.1	66.9	62.3
39	870.0	84.0	359.4	303.1	81.6	76.6	594.6	564.4	80.3	75.5	839.1	784.4	58.6	55.5	635.9	595.2	67.6	63.5
40	873.5	85.5	395.4	343.8	82.0	77.1	609.5	577.9	81.8	75.9	840.3	819.8	59.4	56.3	646.0	603.2	68.5	64.7
41	875.5	86.8	423.7	379.2	82.5	77.2	625.5	591.5	82.3	77.0	834.6	830.8	60.1	57.0	655.4	614.9	69.2	65.9
42	878.9	88.3	449.4	410.0	83.0	77.2	641.4	604.7	82.6	78.4	842.4	836.5	60.8	57.7	664.8	628.8	69.8	66.9
43	882.6	90.2	475.9	437.5	83.6	77.2	656.9	617.9	82.8	79.3	854.7	836.4	61.4	58.3	673.5	639.8	70.3	67.9
44	884.1	92.2	502.3	462.1	84.1	77.1	674.9	632.0	82.9	80.0	866.1	849.7	62.0	58.8	683.2	654.5	70.8	68.8
45	886.3	94.3	529.3	487.6	84.4	77.2	695.1	646.0	83.1	80.4	878.5	857.0	62.5	59.2	693.0	670.6	71.2	69.7
46	890.5	96.8	557.3	513.4	84.8	77.2	714.7	659.7	83.3	81.0	891.6	889.2	62.9	59.7	703.4	703.9	71.7	70.6
47	892.2	99.5	585.9	542.4	85.4	77.4	732.7	675.0	83.6	81.4	897.9	892.1	63.3	60.1	715.8	726.9	72.1	71.3
48	896.3	102.8	615.5	571.8	86.4	77.7	747.4	696.6	83.9	81.7	903.2	900.3	63.7	60.5	729.8	742.5	72.6	72.1
49	896.3	106.8	644.8	603.4	87.7	78.1	759.9	724.0	84.1	82.2	905.4	900.6	64.0	60.8	744.7	757.1	73.1	72.8
50	899.2	111.7	672.7	642.5	89.6	78.6	771.5	765.5	84.5	82.7	908.3	900.2	64.4	61.1	760.3	765.9	73.6	73.5
51	902.7	118.5	699.0	688.3	92.4	79.2	782.8	891.5	84.8	83.0	914.7	916.0	64.7	61.4	776.5	776.9	74.1	74.2
52	903.5	130.7	722.0	737.7	96.6	79.7	796.0	905.9	85.1	83.4	918.1	922.7	65.1	61.7	793.0	798.5	74.7	75.0
53	906.5	154.6	738.7	777.0	102.7	80.4	808.7	906.3	85.6	83.6	923.2	925.7	65.6	62.1	783.9	813.7	75.4	75.8
54	910.6	197.4	755.2	804.9	111.0	81.2	820.8	908.4	86.0	84.3	922.6	926.5	66.0	62.4	785.0	826.2	76.1	76.5
55	911.1	259.3	774.8	823.9	123.2	83.0	831.6	906.4	86.4	85.0	921.8	914.6	66.5	62.8	776.9	837.5	76.9	77.4
56	913.8	349.1	844.8	841.8	143.8	90.9	839.0	905.3	86.8	85.6	787.3	917.0	67.0	63.3	820.5	874.6	77.7	78.3
57	916.2	499.3	868.2	840.0	202.4	203.9	846.0	903.5	86.9	86.2	800.3	924.4	67.5	63.8	829.6	870.6	78.7	79.3

Table 11. Temperatures Measured in Assembly S-34, Steel Stud, 2x2 Gypsum Board Layers, Cellulosic Fibre Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
58	917.3	605.9	878.6	814.4	292.2	452.1	852.1	904.3	86.8	86.9	809.2	928.1	68.2	64.4	839.6	890.2	79.8	80.9
59	919.4	660.5	889.7	789.3	388.4	559.0	856.9	907.3	86.8	87.4	822.8	931.7	69.6	65.1	851.2	898.9	81.3	83.1
60	922.1	693.8	895.4	774.8	482.7	611.6	860.3	909.0	87.1	87.8	833.5	934.2	71.9	65.8	859.7	906.8	83.0	85.1
61	924.1	716.1	903.7	770.9	562.9	637.3	865.0	912.2	87.8	88.0	847.3	934.6	73.6	66.7	869.1	913.4	84.5	86.8
62	925.9	733.1	908.6	770.7	619.8	653.1	869.0	913.5	88.9	87.9	854.4	936.0	75.0	67.6	881.2	917.8	85.8	88.1
63	927.9	746.9	909.3	772.1	652.6	664.2	872.5	914.2	90.2	87.9	856.1	936.8	77.1	68.6	883.4	922.0	87.1	88.9
64	929.6	758.6	906.2	771.8	669.4	670.4	875.8	913.6	91.6	87.9	884.1	934.5	79.0	69.4	871.3	926.6	88.4	89.7
65	931.2	767.9	914.5	768.0	684.2	670.5	878.3	911.4	92.7	88.2	886.7	925.5	80.1	70.2	868.5	921.1	89.8	90.7
66	933.7	775.4	925.4	766.6	701.2	671.0	881.3	908.2	93.6	88.5	887.5	912.5	82.0	70.9	849.6	919.0	91.1	91.6
67	935.6	781.4	924.9	696.3	714.0	667.5	883.5	903.9	94.4	88.9	888.3	900.0	84.2	71.7	833.8	916.9	92.6	92.6
68	937.7	787.1	918.6	690.5	720.4	670.9	885.2	898.9	95.8	89.4	889.9	886.8	86.5	72.5	830.4	935.7	93.8	93.6
69	938.6	791.2	916.0	687.3	730.8	673.8	886.2	893.6	97.8	89.9	885.9	875.4	87.3	73.1	830.9	913.9	94.8	94.5
70	939.6	795.5	913.4	715.9	741.5	806.9	886.7	888.2	101.1	90.4	889.3	885.0	87.4	73.6	842.7	900.4	95.5	95.2
71	942.4	799.5	911.2	706.6	753.7	811.1	887.5	883.7	104.1	91.0	887.3	855.1	86.7	74.1	841.8	884.0	96.2	95.9
72	943.3	802.3	907.7	696.9	761.2	817.0	886.7	878.9	107.4	91.7	888.6	845.7	86.3	74.6	841.5	880.5	96.9	96.7
73	945.6	804.8	905.7	687.5	763.4	819.5	885.7	875.3	110.3	92.7	898.1	838.9	86.7	75.0	846.3	870.0	98.1	97.9
74	946.9	806.8	904.3	678.1	774.9	820.0	884.6	871.1	112.1	94.6	899.6	832.6	87.5	75.4	847.6	858.6	100.2	99.7
75	948.3	807.7	901.3	670.7	780.2	818.5	882.6	866.3	113.5	97.3	905.9	825.4	89.1	76.1	848.3	849.2	102.5	102.1
76	950.3	808.7	901.4	668.7	788.5	817.6	881.3	863.5	114.7	100.1	913.1	820.2	94.3	76.8	852.6	836.0	105.3	104.7
77	952.5	810.0	898.8	683.8	796.0	816.6	879.9	861.3	116.0	103.2	919.6	816.3	104.1	77.6	865.8	832.8	108.9	107.7
78	954.0	810.9	902.4	761.1	802.9	815.9	878.4	859.4	118.1	106.6	927.7	814.1	111.0	78.5	877.7	825.8	112.5	111.0
79	955.1	811.7	901.0	815.2	809.3	815.1	876.9	857.4	121.4	110.3	942.4	812.7	117.1	79.3	862.1	822.9	115.8	114.7
80	958.5	812.1	893.1	813.9	809.9	814.0	875.3	856.0	125.2	113.4	949.2	812.2	129.6	80.2	867.4	816.4	119.2	118.2
81	959.6	811.4	891.5	813.8	808.6	812.7	872.6	854.5	129.6	117.0	950.1	812.2	157.7	81.1	872.6	804.2	125.9	121.7
82	961.1	811.7	886.1	786.9	808.0	812.4	869.3	853.6	134.0	120.9	956.4	814.8	190.6	82.0	876.3	800.2	138.9	124.6
83	962.0	811.7	880.1	687.2	805.4	810.2	865.1	851.2	137.9	124.7	957.5	814.9	228.5	83.4	883.0	796.4	157.8	127.5
84	963.9	812.0	873.1	678.8	803.7	807.5	860.6	849.5	141.1	128.9	959.2	815.1	254.0	85.0	855.9	792.7	177.3	133.0
85	964.9	812.1	866.0	676.0	803.1	804.9	855.1	847.3	143.3	133.5	958.9	815.1	281.5	86.3	850.1	790.0	192.5	141.0
86	966.8	813.2	860.8	673.6	803.8	801.4	850.0	845.9	145.5	139.0	960.4	815.6	314.4	87.3	946.8	787.9	208.5	154.1
87	968.5	824.3	854.5	675.6	805.8	798.2	845.1	843.9	148.2	144.9	948.4	815.5	344.7	88.1	931.9	785.7	224.8	168.8
88	969.6	820.6	849.5	673.7	808.9	796.0	841.5	843.6	152.8	152.0	946.2	815.9	377.5	88.6	919.1	785.4	240.6	181.6
89	971.7	816.9	836.8	676.2	814.9	793.3	842.2	844.4	158.4	158.3	944.7	819.1	419.0	89.2	916.5	784.9	255.9	192.6
90	971.4	815.1	830.5	671.3	822.1	785.8	839.8	842.9	165.4	163.2	940.1	819.5	466.1	89.7	905.1	784.8	270.8	203.2
91	974.3	818.3	823.6	667.2	829.9	779.3	841.0	842.5	173.5	167.8	936.4	820.8	521.4	90.2	902.9	786.1	286.7	214.1
92	975.6	823.0	819.5	664.6	837.0	770.8	841.6	840.8	180.8	171.3	928.2	820.6	578.6	90.7	902.9	787.0	308.4	224.6
93	976.0	826.2	816.0	602.8	842.4	765.0	843.7	839.0	187.3	174.6	921.2	820.9	618.1	91.3	896.6	787.5	338.9	233.9
94	977.5	823.5	814.8	825.4	851.8	760.1	846.4	838.8	193.8	178.3	907.7	821.1	648.7	92.2	891.4	787.7	352.7	243.0
95	978.7	822.3	834.0	626.8	855.4	761.7	846.9	839.2	203.8	182.1	897.9	822.9	671.4	93.1	889.8	790.3	378.9	251.8
96	979.5	818.5	835.9	648.6	859.0	757.3	848.1	839.3	214.8	186.2	892.6	823.6	691.4	94.2	877.4	792.6	409.9	260.2
97	981.3	821.1	848.1	659.7	864.3	757.0	850.7	839.7	226.1	190.1	***	***	***	***	***	***	***	***
98	982.3	814.4	848.0	682.9	868.7	761.0	853.6	841.8	237.8	194.7	879.6	827.5	726.7	96.1	866.8	797.4	479.0	275.4
99	984.0	813.2	850.3	771.3	873.3	776.4	858.3	843.1	250.1	199.4	876.1	829.8	743.1	96.9	861.4	799.7	511.3	282.2
100	986.1	819.9	865.9	783.4	885.5	793.6	870.0	847.9	263.0	204.6	874.6	839.8	762.0	97.7	856.9	803.6	540.8	288.7
101	986.4	824.6	870.7	828.3	885.2	854.4	874.9	851.0	277.1	210.4	869.9	843.2	780.7	98.5	856.5	810.7	566.5	295.5
102	987.8	832.8	875.6	786.4	888.4	857.9	878.1	853.9	293.6	217.2	866.8	846.6	800.5	99.5	852.6	814.2	587.8	302.4
103	987.9	834.6	878.9	831.5	889.4	785.1	880.4	854.6	311.9	224.4	868.2	847.1	817.3	102.4	850.6	818.2	604.2	309.8
104	991.2	838.8	886.1	832.9	882.5	842.5	883.2	858.5	332.5	231.8	860.0	853.1	832.4	104.8	844.9	822.3	616.1	319.4
105	992.4	798.3	887.3	834.5	876.5	854.7	887.4	858.8	355.5	239.8	871.3	851.8	844.2	106.7	843.3	825.0	625.2	329.8

Table 12. Average Temperatures Measured in Assembly S-34, Steel Stud, 2x2 Gypsum Board Layers, Cellulosic Fibre Insulation

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(26,27,30,31,34,35)	BL/SStd. (Exp.) Av(12,13,18,19)	BL/Cav. (Exp.) Av(22,23)	Mid. SStd. Av(10,11,16,17)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(14,15,20,21)	BL/FL (UnExp.) Av(28,29,32,33,36,37)	UnExp. Av(1,2,3,4,5)
0	45.4	37.9	35.0	36.0	31.6	27.7	29.2	26.4	25.4
1	111.6	38.4	35.0	36.0	31.5	27.7	29.2	26.4	25.4
2	224.8	52.3	36.0	36.1	31.5	27.7	29.2	26.4	25.4
3	326.2	74.3	49.7	40.4	32.3	27.7	29.2	26.4	25.3
4	429.0	86.1	62.1	54.6	37.9	27.7	29.6	26.4	25.3
5	535.7	89.8	70.8	68.0	45.8	27.7	31.0	26.3	25.3
6	569.4	91.1	78.7	75.0	51.6	27.9	32.8	26.4	25.3
7	600.1	92.7	83.2	79.7	57.7	28.5	35.0	26.5	25.3
8	632.0	95.7	85.8	83.0	63.0	29.4	37.6	26.7	25.3
9	664.9	99.7	87.5	85.3	67.4	30.9	40.5	27.0	25.3
10	698.3	104.1	88.6	87.0	70.9	32.9	43.6	27.4	25.3
11	711.4	109.5	89.4	88.3	73.6	35.4	46.8	28.0	25.4
12	720.7	115.9	90.0	89.1	75.7	38.1	49.9	28.8	25.5
13	731.8	128.3	90.3	88.8	77.1	40.9	52.7	29.8	25.8
14	743.8	157.4	89.4	86.5	77.2	43.6	54.7	30.9	26.1
15	754.0	194.6	90.6	89.0	77.1	45.7	56.6	32.2	26.5
16	762.3	221.8	96.9	93.2	79.6	47.4	58.8	33.9	27.1
17	769.5	245.3	99.8	94.9	82.7	50.1	61.5	35.5	27.7
18	773.7	264.1	100.7	96.8	85.1	53.5	64.4	37.4	28.3
19	781.5	287.6	101.3	97.9	87.1	57.1	67.2	39.7	29.1
20	790.0	309.6	102.5	98.1	88.9	60.6	70.4	42.0	29.8
21	794.0	329.7	103.4	99.1	90.2	63.7	73.4	44.4	30.6
22	801.6	347.1	104.8	100.2	91.1	66.3	76.0	46.7	31.5
23	805.8	363.9	106.6	101.0	91.7	68.3	77.9	48.8	32.4
24	810.0	380.7	108.9	101.8	92.1	69.8	79.5	50.8	33.5
25	815.4	400.4	111.4	103.0	92.3	70.9	80.7	52.8	34.7
26	819.4	420.3	114.0	104.6	92.2	71.7	81.5	54.6	36.0
27	824.7	440.1	117.0	105.5	92.2	72.6	81.9	56.3	37.4
28	829.4	467.3	120.4	106.5	92.1	73.3	82.2	57.7	38.8
29	833.7	487.4	125.4	108.1	92.1	73.9	82.4	59.0	40.2
30	838.5	506.0	132.3	110.4	92.4	74.5	82.5	60.1	41.7
31	840.9	523.9	139.6	113.8	93.1	75.0	82.6	61.1	43.1
32	846.4	541.8	147.5	120.0	94.2	75.7	82.7	62.0	44.5
33	849.1	559.1	157.5	132.5	95.7	76.2	82.9	62.8	45.7
34	852.9	577.2	171.5	150.7	97.7	76.4	83.1	63.5	46.8
35	856.2	602.0	184.2	179.1	100.5	76.3	83.4	64.3	47.8
36	859.0	623.6	199.3	211.9	104.1	76.4	83.8	64.9	48.8
37	862.9	641.9	216.4	250.2	108.1	77.6	84.2	65.5	49.7
38	866.4	659.4	237.2	290.2	112.2	78.6	84.8	66.1	50.4
39	870.0	668.9	255.7	331.3	116.6	79.1	85.5	66.8	51.0
40	873.5	682.8	278.1	369.6	121.8	79.5	86.6	67.7	51.6
41	875.5	692.1	300.1	401.5	127.6	79.8	87.8	68.6	52.1
42	878.9	703.1	324.5	429.7	133.9	80.1	88.9	69.4	52.6
43	882.6	713.2	348.6	456.7	140.7	80.4	89.9	70.0	53.1
44	884.1	726.8	370.8	482.2	147.9	80.6	91.0	70.5	53.7
45	886.3	740.0	390.3	508.4	155.9	80.8	92.3	71.0	54.2
46	890.5	760.4	411.0	535.4	165.4	81.0	93.7	71.5	54.7
47	892.2	773.4	431.6	564.2	181.2	81.4	95.2	72.0	55.2
48	896.3	786.6	454.4	593.7	215.7	82.0	97.0	72.4	55.6
49	896.3	798.6	477.1	624.1	288.1	82.9	99.2	72.8	56.0
50	899.2	812.0	499.9	657.6	366.1	84.1	101.7	73.3	56.4
51	902.7	843.1	524.3	693.7	415.9	85.8	106.3	73.7	56.8
52	903.5	855.7	553.3	729.8	445.5	88.2	119.6	74.2	57.1
53	906.5	860.2	583.4	757.8	466.2	91.5	147.9	74.7	57.4
54	910.6	864.9	613.7	780.0	484.9	96.1	185.6	75.2	57.8
55	911.1	864.8	643.0	799.4	502.1	103.1	225.9	75.8	58.2
56	913.8	857.3	698.6	843.3	527.8	117.4	273.5	76.5	58.6
57	916.2	862.4	745.0	854.1	545.9	203.1	333.3	77.1	59.0

Table 12. Average Temperatures Measured in Assembly S-34, Steel Stud, 2x2 Gypsum Board Layers, Cellulosic Fibre Insulation (Cont.)

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, SStd. - Steel Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(10,11,20,21,28,29)	BL/SStd. (Exp.) Av(12,13,30,31)	BL/Cav. (Exp.) Av(22,23)	Mld. SStd. Av(14,15,32,33)	BL/Cav. (UnExp.) Av(24,25)	BL/SStd. (UnExp.) Av(16,17,34,35)	BL/FL (UnExp.) Av(18,19,26,27,36,37)	UnExp. Av(1,2,3,4,5)
58	917.3	870.6	768.1	846.5	553.9	372.1	376.4	77.8	59.5
59	919.4	878.1	776.7	839.5	559.9	473.7	397.5	78.9	60.0
60	922.1	883.9	781.0	835.1	568.6	547.1	410.4	80.1	60.6
61	924.1	890.2	783.7	837.3	581.9	600.1	420.5	81.2	61.2
62	925.9	895.3	786.7	839.7	599.7	636.4	429.2	82.2	61.8
63	927.9	897.5	789.1	840.7	619.9	658.4	440.5	83.3	62.5
64	929.6	901.0	791.7	839.0	639.5	669.9	450.4	84.3	63.2
65	931.2	898.6	793.5	841.3	654.8	677.3	463.4	85.3	64.1
66	933.7	893.0	795.3	846.0	667.4	686.1	476.5	86.3	65.4
67	935.6	887.7	796.5	810.6	677.8	690.7	489.5	87.4	66.4
68	937.7	887.8	798.6	804.5	693.0	695.6	502.8	88.6	67.2
69	938.6	881.0	798.3	801.6	699.6	702.3	515.2	89.6	68.1
70	939.6	878.7	800.6	814.7	707.4	774.2	527.3	90.6	68.8
71	942.4	873.2	800.0	808.9	724.1	782.4	539.5	91.3	69.5
72	943.3	870.3	801.6	802.3	728.9	789.1	551.9	92.3	70.1
73	945.6	869.0	803.7	796.6	733.8	791.5	564.8	93.5	70.7
74	946.9	865.7	805.3	791.2	739.4	797.5	577.7	94.9	71.2
75	948.3	863.0	804.8	786.0	742.6	799.3	589.7	96.8	71.6
76	950.3	861.1	805.3	785.1	746.9	803.1	601.3	99.3	72.1
77	952.5	862.6	806.0	791.3	752.8	806.3	612.6	102.9	72.5
78	954.0	863.8	807.3	831.7	757.7	809.4	624.0	106.3	72.8
79	955.1	862.4	809.3	858.1	761.6	812.2	635.4	109.8	73.1
80	958.5	862.7	811.0	853.5	765.3	812.0	646.5	114.3	73.5
81	959.6	861.0	812.7	852.7	769.8	810.6	657.4	122.2	73.8
82	961.1	861.8	815.0	836.5	773.6	810.2	670.0	131.8	74.2
83	962.0	861.4	816.9	837.7	774.2	807.8	681.0	143.3	74.9
84	963.9	855.5	818.9	776.0	774.2	805.6	691.3	153.2	75.8
85	964.9	852.8	820.7	771.0	772.3	804.0	701.2	163.0	76.6
86	966.8	867.8	823.2	767.2	775.1	802.6	711.1	174.8	77.4
87	968.5	861.7	824.9	765.0	783.6	802.0	723.2	186.6	78.2
88	969.6	858.6	828.4	761.6	788.6	802.5	731.5	198.9	78.9
89	971.7	858.6	833.3	756.5	797.3	804.1	741.2	212.2	79.4
90	971.4	855.4	837.4	750.9	795.6	803.9	751.3	226.4	80.1
91	974.3	854.9	841.3	745.4	799.4	804.6	762.6	242.3	80.9
92	975.6	853.5	844.7	742.0	804.4	803.9	772.2	259.1	81.9
93	976.0	851.5	848.0	709.4	816.3	803.7	779.6	274.0	83.0
94	977.5	848.9	850.3	720.1	822.2	805.9	784.9	284.8	84.2
95	978.7	847.8	852.1	730.4	826.8	808.6	789.6	296.8	85.8
96	979.5	845.6	853.9	742.3	830.2	808.1	792.7	309.4	87.2
97	981.3	845.2	856.5	753.9	833.6	810.7	798.4	308.1	89.0
98	982.3	844.5	858.7	765.4	836.0	814.9	801.3	334.9	91.5
99	984.0	844.7	862.1	810.8	837.8	824.8	805.5	347.2	95.2
100	986.1	848.8	868.1	824.7	843.5	839.5	815.1	359.5	100.1
101	986.4	851.0	872.4	849.5	850.0	869.8	821.5	371.5	106.0
102	987.8	852.0	874.1	831.0	851.1	873.1	826.8	383.5	112.8
103	987.9	853.2	871.9	855.2	860.3	837.2	829.6	395.0	121.1
104	991.2	853.7	878.3	859.5	860.1	862.5	832.5	406.2	130.4
105	992.4	856.3	877.8	860.9	868.4	865.6	824.0	416.8	140.8

Table 13. Temperatures Measured in Assembly S-49, Wood Stud, 2x2 Gypsum Board Layers, No Insulation

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	21.0	21.5	21.6	21.2	21.2	21.3	21.8	21.7	21.4	21.6	***	***	***	***	***	***	***	***	***	***	21.1
1	302.7	21.5	21.6	21.2	21.2	21.4	21.9	21.8	21.4	21.6	20.9	20.6	20.7	20.5	21.0	20.7	21.4	21.0	21.0	20.7	21.1
2	425.9	21.5	21.6	21.2	21.1	21.3	21.9	21.8	21.5	21.7	20.9	20.6	20.7	20.5	21.0	20.7	21.4	21.0	21.4	20.9	21.1
3	484.2	21.5	21.6	21.2	21.2	21.3	21.8	21.7	21.4	21.5	21.4	20.7	23.1	22.4	21.6	20.9	21.3	21.0	31.9	22.8	21.7
4	525.5	21.5	21.6	21.3	21.1	21.4	21.8	21.7	21.4	21.6	25.0	22.0	35.4	33.9	24.9	22.2	21.4	21.1	36.5	29.1	29.4
5	567.7	21.5	21.6	21.3	21.2	21.4	21.9	21.8	21.5	21.6	34.2	25.1	54.7	55.3	31.5	25.0	21.7	21.4	48.8	36.7	38.4
6	589.9	21.5	21.6	21.2	21.2	21.4	21.9	21.8	21.5	21.7	44.0	29.7	69.3	71.1	39.8	28.7	22.4	22.0	58.5	43.9	46.8
7	612.0	21.5	21.7	21.3	21.2	21.5	22.0	22.0	21.6	21.8	51.0	35.9	77.5	79.3	46.5	33.2	23.6	23.0	66.0	49.9	53.5
8	634.0	21.5	21.8	21.4	21.3	21.8	22.0	22.2	21.6	21.9	55.8	41.2	81.9	83.4	51.6	37.5	25.2	24.3	71.7	54.5	57.6
9	660.9	21.6	22.2	21.6	21.5	22.3	22.2	22.5	21.7	22.2	59.4	45.6	84.4	85.8	55.2	41.4	27.2	25.9	74.1	57.9	61.9
10	676.6	21.7	22.7	22.0	21.8	23.1	22.4	23.0	21.9	22.7	62.6	49.2	86.1	87.4	58.2	44.9	29.3	27.7	75.6	60.4	64.6
11	687.9	21.9	23.5	22.4	22.2	24.2	22.8	23.8	22.1	23.3	64.6	52.2	87.7	88.8	60.5	48.0	31.5	29.7	76.7	62.4	66.2
12	700.3	22.2	24.5	23.0	22.9	25.5	23.2	24.6	22.3	24.1	66.4	54.6	88.9	89.7	62.6	50.7	33.8	31.7	77.9	64.0	68.1
13	712.0	22.6	25.8	23.7	23.7	27.2	23.8	25.6	22.7	25.0	67.4	56.2	89.1	90.0	64.0	53.2	36.1	33.6	75.8	65.2	67.6
14	724.2	23.1	27.2	24.7	24.7	29.1	24.5	26.6	23.0	26.0	67.9	57.5	88.8	90.1	64.5	54.8	38.2	35.5	74.2	66.2	67.5
15	737.3	23.7	28.8	25.6	25.8	31.1	25.2	27.6	23.4	27.1	68.0	58.1	88.4	90.3	65.9	56.8	40.2	37.3	73.7	66.5	67.7
16	746.3	24.5	30.5	26.7	27.0	33.1	26.1	28.9	23.9	28.4	70.0	60.3	88.7	90.5	71.3	60.8	42.2	39.0	78.5	70.4	69.2
17	755.1	25.3	32.3	28.0	28.3	35.1	27.0	30.0	24.5	29.4	74.1	64.0	92.3	92.7	75.6	65.6	44.2	40.7	82.4	75.5	73.1
18	762.6	26.3	34.1	29.2	29.7	37.0	28.0	31.1	25.0	30.5	77.6	68.1	96.2	96.0	78.7	70.0	46.5	43.0	85.5	79.0	76.4
19	770.8	27.4	36.0	30.7	31.1	39.0	28.8	32.2	25.5	31.2	80.2	71.9	97.4	96.5	80.9	73.6	49.0	45.4	88.5	82.5	78.9
20	779.2	28.6	38.2	32.3	32.7	41.0	29.9	33.8	26.3	32.4	82.0	75.2	97.9	97.1	82.6	76.6	51.6	48.1	93.6	86.8	80.6
21	786.0	29.9	40.7	34.2	34.5	43.3	31.0	35.2	27.1	33.3	83.4	77.9	98.3	97.6	84.2	79.1	54.3	50.9	98.4	91.3	82.0
22	792.7	31.3	43.2	36.3	36.5	45.8	32.2	37.0	27.9	34.9	84.5	80.2	98.7	98.3	85.0	80.6	57.0	53.6	102.7	95.1	83.4
23	798.2	32.8	45.8	38.6	38.7	48.1	33.6	38.0	29.1	36.5	85.6	81.5	99.1	99.1	85.5	81.8	59.5	56.3	106.0	97.9	84.8
24	804.1	34.4	48.1	41.1	41.2	50.5	34.8	39.6	30.4	37.8	86.3	82.6	99.8	100.3	86.5	82.9	61.9	58.8	108.7	100.5	86.4
25	809.9	36.0	50.2	43.6	43.7	52.6	36.5	40.8	31.5	39.1	87.1	83.8	100.7	101.9	87.0	83.7	64.2	61.0	111.3	103.0	89.5
26	815.2	37.7	52.2	46.0	46.1	54.5	37.7	42.0	32.7	40.5	87.7	84.6	101.9	104.4	87.7	84.1	66.2	63.1	113.6	105.2	91.4
27	819.6	39.3	53.5	48.2	48.3	56.1	38.9	42.7	33.8	41.5	87.9	85.2	103.9	107.0	87.7	84.9	68.1	64.9	115.5	107.2	92.7
28	823.5	40.9	54.8	50.2	50.4	57.5	39.7	43.3	35.2	42.1	88.0	85.7	106.0	109.8	87.9	85.3	69.7	66.6	117.1	108.8	93.8
29	828.7	42.6	56.0	52.0	52.2	58.6	41.0	44.7	36.5	43.9	88.3	86.0	108.3	112.8	88.4	85.9	71.2	68.1	118.8	110.6	94.7
30	833.7	44.2	56.9	53.6	53.9	59.5	42.0	45.5	37.7	44.5	88.6	86.2	110.2	115.7	88.8	86.4	72.4	69.4	120.7	112.1	95.6
31	837.4	45.8	57.7	54.9	55.2	60.2	42.9	46.0	38.6	44.8	88.8	86.5	111.7	118.3	88.8	86.9	73.5	70.5	123.9	113.2	96.7
32	841.2	47.2	58.4	56.0	56.2	60.8	43.3	46.0	39.4	44.7	89.0	86.9	113.8	121.3	89.0	87.2	74.4	71.6	129.3	115.5	98.1
33	845.2	48.6	58.9	57.1	57.2	61.4	44.3	46.8	40.4	45.9	89.5	87.4	115.9	125.2	88.9	87.6	75.2	72.7	132.8	120.6	100.2
34	849.1	49.7	59.3	57.8	58.0	61.9	44.7	47.8	41.3	46.3	89.7	87.9	118.3	130.3	89.0	87.3	75.9	73.7	140.8	124.4	103.2
35	853.0	50.8	59.7	58.6	58.8	62.3	44.8	47.3	41.9	46.4	89.8	88.0	121.3	135.9	91.6	87.3	76.4	74.5	156.6	135.0	108.0
36	856.5	51.8	60.2	59.5	59.4	62.7	45.4	48.4	42.3	46.4	90.8	88.0	125.3	140.6	99.0	88.1	76.9	75.3	176.0	151.9	116.5
37	860.2	52.7	60.5	60.2	60.1	63.1	45.4	48.2	42.8	46.0	95.7	88.8	129.2	153.3	110.3	91.8	77.4	76.0	199.5	163.7	128.9
38	864.0	53.4	60.9	60.9	60.7	63.5	45.8	48.2	43.2	46.5	106.9	89.9	136.9	189.9	124.1	101.0	78.0	76.6	225.8	175.3	147.2
39	866.3	54.3	61.4	61.5	61.3	63.9	46.2	49.1	43.9	47.3	123.9	93.8	164.3	238.4	138.6	114.8	78.8	77.2	252.5	187.7	169.0
40	869.1	55.2	62.6	62.3	61.7	64.2	46.6	50.7	44.6	47.4	142.2	104.5	215.8	288.9	154.1	127.3	80.0	78.0	274.5	201.8	188.6
41	872.2	56.3	64.1	63.8	62.1	64.8	46.8	51.8	45.0	48.3	162.7	117.4	271.5	329.7	168.6	140.2	81.8	79.0	293.3	218.3	204.2
42	875.7	57.6	65.4	65.5	62.4	65.9	47.2	53.2	45.9	49.0	181.5	128.2	324.5	369.2	180.2	153.2	84.1	80.5	307.2	235.2	217.3
43	878.8	59.1	66.4	66.9	63.1	67.3	47.8	54.4	46.7	50.7	197.8	140.5	370.4	403.7	192.1	164.8	86.7	82.5	316.4	248.0	229.9
44	881.6	60.7	67.0	67.8	64.1	68.5	48.6	53.9	47.9	51.3	213.7	152.6	412.2	432.9	203.7	178.9	89.7	84.9	327.9	260.5	242.5
45	884.4	62.3	67.1	68.4	65.5	69.3	49.6	53.9	48.9	51.5	228.6	166.9	460.4	459.6	216.5	194.5	93.1	87.6	338.1	271.4	257.1
46	887.4	63.7	67.3	68.8	67.0	69.9	50.8	55.8	50.9	53.6	244.6	181.7	501.7	481.1	230.4	210.7	96.4	90.6	354.2	282.2	274.8
47	889.3	65.1	67.7	69.0	68.2	70.6	51.4	55.8	52.4	54.7	260.2	197.7	544.8	502.0	244.0	226.3	99.4	94.2	368.8	293.1	292.2
48	891.7	66.2	68.1	69.5	69.1	71.2	52.9	56.7	54.0	54.6	276.9	213.8	569.0	526.0	258.1	242.6	102.4	98.2	384.2	304.1	308.7
49	894.2	67.2	68.1	69.7	69.6	71.7	54.1	57.2	55.6	55.9	291.7	229.8	585.0	545.2	272.7	258.3	105.5	102.5	397.2	316.5	325.3
50	896.5	68.1	68.4	69.9	70.0	72.2	54.8	56.7	56.3	56.2	308.7	245.3	605.1	557.1	288.0	274.8	108.8	106.7	410.7	327.7	340.8
51	898.9	68.8	68.5	70.1	70.4	72.5	55.2	56.1	57.1	55.9	325.3	260.8	614.1	563.8	302.2	289.5	112.3	111.1	424.3	339.2	356.3
52	902.3	69.4	68.7	70.4	70.8	72.7	56.1	57.2	57.8	56.6	337.8	273.9	614.6	576.7	317.3	304.7	116.1	115.9	434.1	350.7	375.3
53	903.7	69.9	68.8	70.7	71.0	73.0	56.4	57.7	58.7	57.4	354.4	290.3	613.9	590.2	332.8	317.8	120.1	121.2	447.0	358.0	387.8
54	905.0	70.4	69.1	71.1	71.2	73.3	56.7	57.3	58.4	56.5	370.1	307.0	615.4	604.9	346.8	333.4	124.5	126.9	455.8	367.3	399.2
55	907.7	70.6	69.1	71.3	71.3	73.4	57.5	57.4	58.9	56.9	384.8	324.4	622.1	614.5	360.8	348.0	129.2	133.0	465.5	379.8	413.1
56	909.8	71.0	69.1	71.6	71.4	73.6	57.9	57.4	58.5	56.8	400.2	337.1	625.6	622.8	376.1	362.2	134.2	139.1	474.6	389.5	426.4
57	913.1	71.2	69.5	72.2	71.5	74.0	58.5	57.6	59.4	57.3	414.0	350.4	632.2	627.6	390.8	376.6	139.6	145.3	483.0	402.	

Table 13. Temperatures Measured in Assembly S-49, Wood Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
58	914.3	71.5	69.9	72.9	71.6	74.4	58.6	57.6	59.1	56.4	428.3	365.2	637.8	629.7	403.5	391.5	145.3	151.7	492.3	413.5	452.6
59	917.1	71.7	70.3	73.8	71.8	75.1	59.1	57.1	59.1	56.8	442.7	378.9	636.3	635.9	419.5	405.1	151.5	158.4	501.5	424.4	464.5
60	918.6	71.9	71.0	74.9	72.2	75.9	58.9	56.9	59.2	56.6	458.4	395.4	635.3	642.0	433.1	416.3	158.0	165.3	508.8	434.5	477.8
61	920.6	72.2	71.7	76.0	72.5	76.8	59.7	56.8	59.7	57.3	470.1	406.7	634.9	645.3	449.4	426.7	164.8	172.5	520.4	446.4	489.5
62	922.5	72.5	72.6	77.0	73.0	78.0	60.0	57.0	59.3	56.2	483.2	420.4	640.1	651.4	464.5	440.7	172.1	179.7	529.9	457.7	499.0
63	925.7	73.0	73.5	78.0	73.7	79.2	60.4	57.6	59.8	56.8	496.0	436.8	650.7	650.2	477.6	459.2	180.7	188.0	538.8	470.0	510.2
64	925.7	73.6	74.6	79.2	74.8	80.4	61.3	57.6	59.9	57.5	509.4	452.4	657.5	649.3	488.0	470.3	191.0	196.9	547.6	482.7	521.2
65	928.2	73.9	75.9	80.5	75.9	81.9	62.4	58.4	60.0	58.0	527.9	469.5	666.8	646.9	498.7	480.3	201.8	207.0	560.2	495.2	535.0
66	930.4	74.0	77.3	82.2	77.0	83.5	63.2	59.1	60.0	58.9	551.0	481.6	683.9	651.5	511.6	494.5	214.8	218.4	576.0	507.6	552.3
67	931.9	73.7	78.6	83.9	78.0	85.0	63.6	58.5	60.2	59.1	578.5	500.3	706.0	657.4	523.0	508.0	228.9	230.5	596.6	519.8	577.2
68	934.8	73.4	80.0	86.1	79.0	87.6	64.1	58.5	59.2	59.0	604.3	514.0	732.0	664.8	536.7	520.4	244.6	242.7	622.9	536.8	606.6
69	935.8	73.3	83.5	89.0	80.5	91.2	63.6	59.4	59.3	61.4	647.0	536.0	780.6	673.0	551.9	532.5	259.3	254.7	673.5	554.2	662.8
70	938.7	73.7	87.5	92.0	81.9	94.4	62.5	61.6	58.3	62.8	685.2	560.5	822.8	685.1	568.7	546.1	278.1	267.4	737.1	575.1	727.6
71	943.6	74.5	90.7	94.3	83.8	97.4	62.0	64.5	58.7	63.4	819.4	626.2	838.9	710.7	590.0	599.9	767.2	286.3	841.4	635.7	844.6
72	944.7	75.3	93.0	96.3	86.6	99.9	61.8	64.9	58.8	64.5	832.6	674.0	833.9	744.3	608.5	670.8	836.4	309.2	855.7	671.2	819.5
73	945.4	76.6	94.4	97.8	89.8	102.4	64.1	68.5	59.7	67.8	866.8	742.8	863.7	763.5	649.6	806.4	870.9	347.3	866.4	760.6	841.8
74	946.9	78.1	95.8	99.2	93.1	104.7	64.5	69.2	59.8	69.2	870.4	768.2	871.3	779.3	722.7	843.1	882.9	402.8	869.2	801.9	852.5
75	945.4	79.6	97.2	100.5	95.7	106.9	64.7	72.1	60.0	70.9	874.0	789.1	879.0	855.9	820.6	855.7	890.1	462.3	861.9	820.6	845.1
76	945.6	81.5	98.5	101.9	97.8	109.0	64.3	75.4	60.0	75.7	887.6	816.3	893.5	893.6	842.6	878.9	898.5	527.9	859.9	845.0	837.4
77	951.4	84.4	100.2	103.1	99.9	110.8	67.3	79.4	61.7	80.8	873.4	817.3	882.4	867.1	827.9	869.7	890.6	595.7	861.9	845.7	823.0
78	946.0	88.5	102.0	104.7	101.9	112.7	69.7	83.1	62.9	84.8	868.2	807.2	878.8	840.3	822.2	865.6	884.0	666.2	860.3	845.6	816.4
79	945.0	93.1	103.9	106.1	103.8	115.1	73.9	87.4	64.5	88.4	861.4	796.8	876.8	817.4	819.3	860.6	878.4	723.2	858.4	845.3	818.6
80	951.0	96.9	105.4	107.8	105.3	117.7	78.2	89.2	61.6	91.9	852.6	787.5	868.5	800.5	816.8	853.3	868.4	748.4	865.5	842.7	830.3
81	954.9	100.6	107.1	110.1	106.8	120.2	82.7	93.1	64.0	96.1	843.5	781.0	858.9	789.5	812.9	846.7	858.1	759.1	877.5	835.0	845.4
82	955.5	103.7	109.7	113.2	108.3	123.0	89.1	99.4	68.7	103.8	838.5	778.0	863.7	783.6	812.1	841.4	852.4	762.4	876.7	829.0	846.1
83	956.1	100.9	112.9	116.6	109.9	126.5	99.3	105.4	69.0	108.3	824.2	770.6	841.9	776.2	798.7	835.8	847.3	759.7	888.8	813.8	862.9
84	957.9	105.9	116.3	120.0	111.9	134.1	118.7	113.5	72.3	114.2	801.4	744.1	813.4	754.5	775.4	818.2	823.5	730.6	871.1	791.4	844.8
85	958.1	112.4	119.9	125.4	114.2	144.4	142.2	125.5	80.1	128.0	791.2	729.0	800.5	740.8	758.2	806.0	817.4	715.3	866.5	780.8	842.4
86	960.1	122.3	125.0	138.3	116.4	186.7	161.0	139.7	90.0	155.9	790.6	725.4	800.1	738.3	752.7	807.9	815.7	711.7	881.0	788.5	858.1
87	961.0	135.6	135.7	211.7	118.6	251.0	190.5	163.9	102.3	228.0	794.0	728.9	813.2	741.2	751.3	813.4	818.2	716.7	898.0	793.8	870.3

Table 13. Temperatures Measured in Assembly S-49, Wood Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
0	21.0	20.9	21.0	20.8	21.2	20.9	20.8	20.5	21.2	21.0	20.4	20.2	21.3	21.0	20.6	20.4	21.2	20.9
1	302.7	20.8	21.0	20.8	21.2	20.9	24.1	22.3	21.2	21.0	21.8	21.3	21.3	21.0	26.8	23.8	21.2	20.9
2	425.9	20.8	21.3	20.9	21.2	20.9	61.0	50.8	21.2	21.0	56.8	48.2	21.3	21.0	69.3	58.7	21.2	20.9
3	484.2	21.1	25.6	24.0	22.0	21.3	80.0	75.7	21.2	21.0	91.1	85.2	21.3	21.0	79.8	76.5	21.2	20.9
4	525.5	22.6	35.8	31.1	26.5	23.4	82.9	81.0	21.3	21.0	93.3	90.2	21.4	21.0	81.6	79.9	21.3	21.0
5	567.7	26.8	45.5	38.5	34.3	27.7	85.5	83.9	22.2	21.2	94.6	92.5	21.4	21.0	84.1	82.4	21.9	21.2
6	589.9	32.5	53.3	44.9	42.0	32.8	86.8	80.7	23.7	21.9	94.5	92.5	21.5	21.1	84.6	83.7	23.1	21.9
7	612.0	38.4	58.6	49.9	47.7	37.3	87.6	82.4	26.2	23.1	94.3	92.2	21.7	21.1	85.5	83.4	25.1	23.0
8	634.0	43.0	62.2	53.8	51.9	41.2	88.7	83.1	29.3	24.8	94.4	92.3	22.1	21.3	85.3	83.5	27.7	24.4
9	660.9	46.8	65.1	56.8	55.2	44.5	91.6	85.1	32.7	26.9	94.7	92.7	22.7	21.7	86.0	84.6	30.6	26.2
10	676.6	49.9	67.3	59.1	57.9	47.2	95.5	88.7	36.1	29.2	98.7	93.5	23.6	22.2	88.0	87.8	33.6	28.1
11	687.9	52.4	69.1	60.9	60.0	49.7	99.2	92.9	39.4	31.6	107.4	99.8	24.7	22.8	96.3	90.7	36.5	30.1
12	700.3	54.6	70.6	62.5	61.9	51.9	104.0	96.8	42.5	34.0	112.5	103.2	26.0	23.6	103.1	94.2	39.2	32.1
13	712.0	56.2	71.8	63.8	63.4	53.6	111.4	101.5	45.3	36.3	119.0	108.5	27.5	24.5	123.7	102.9	41.8	34.2
14	724.2	57.4	72.1	64.4	63.9	54.9	140.5	120.0	47.7	38.5	126.3	115.0	29.1	25.6	162.1	133.0	44.1	36.2
15	737.3	58.3	74.4	66.4	65.0	56.4	179.7	153.9	49.6	40.5	148.7	134.9	30.8	26.7	204.2	172.7	46.1	38.0
16	746.3	60.2	80.1	72.8	69.5	59.9	211.3	189.5	51.3	42.3	183.5	172.6	32.6	27.9	226.0	198.7	48.1	39.8
17	755.1	63.8	83.9	76.6	73.9	64.4	228.3	207.3	53.1	44.2	204.6	197.4	34.3	29.3	248.0	216.3	50.9	42.0
18	762.6	67.7	88.0	80.0	76.9	68.4	253.5	224.9	55.7	46.5	217.6	209.8	36.2	30.6	276.3	242.4	54.3	44.8
19	770.8	71.1	92.7	83.6	79.0	71.8	281.2	251.7	58.8	49.5	236.8	228.7	38.4	32.2	301.4	267.7	57.8	48.0
20	779.2	74.1	97.3	88.4	80.9	74.9	303.5	278.2	61.8	52.7	254.6	246.3	40.7	33.8	321.6	287.9	61.0	51.4
21	786.0	76.7	101.4	93.5	82.7	77.3	321.9	303.0	64.5	56.0	272.7	263.0	43.1	35.7	350.4	318.8	63.9	54.9
22	792.7	78.7	104.4	97.1	85.3	79.1	354.7	324.0	67.0	59.2	290.0	281.4	45.8	37.8	377.6	355.1	66.4	58.2
23	798.2	80.3	107.1	100.1	87.7	80.5	383.8	347.8	69.1	62.2	306.9	299.9	48.5	40.1	406.8	385.8	68.4	61.1
24	804.1	81.5	109.6	102.8	89.5	81.7	409.2	373.0	70.9	64.8	324.1	317.6	51.1	42.5	435.1	414.5	69.9	63.6
25	809.9	82.4	112.0	105.2	91.0	83.4	433.7	397.2	72.3	66.9	340.6	334.6	53.7	44.9	458.6	438.4	71.2	65.7
26	815.2	83.2	113.7	107.2	92.2	85.2	456.8	422.2	73.4	68.7	357.0	350.7	56.0	47.3	481.2	460.2	72.3	67.4
27	819.6	84.0	115.0	109.1	93.2	86.6	477.6	443.9	74.3	70.1	371.1	365.5	58.1	49.7	501.8	482.2	73.2	68.9
28	823.5	84.9	116.4	110.7	94.3	87.8	498.7	465.0	75.0	71.4	383.0	381.1	60.0	52.0	521.0	503.7	74.1	70.2
29	828.7	86.4	118.1	112.7	96.4	88.9	518.9	485.8	75.7	72.5	399.7	396.2	61.5	54.1	537.4	521.5	74.8	71.3
30	833.7	88.1	121.3	115.1	96.6	90.0	536.3	504.7	76.2	73.4	416.3	411.1	62.8	56.0	552.3	538.3	75.4	72.2
31	837.4	89.5	128.0	118.6	98.4	91.4	551.8	520.7	76.7	74.1	431.4	426.1	64.0	57.8	571.1	554.5	76.0	73.1
32	841.2	90.7	131.7	124.8	101.2	93.3	566.0	535.3	77.1	74.8	447.3	448.5	64.9	59.3	587.1	570.7	76.5	73.9
33	845.2	92.3	142.7	131.2	105.2	96.0	580.8	550.6	77.5	75.5	465.0	480.5	65.7	60.6	603.8	587.4	77.0	74.7
34	849.1	94.6	167.6	151.0	114.1	101.3	595.2	566.6	77.9	76.0	487.8	549.4	66.4	61.9	622.1	605.2	77.6	75.6
35	853.0	97.4	193.1	177.1	128.5	109.6	611.6	584.5	78.3	76.5	533.5	611.0	66.9	62.9	641.9	628.8	78.2	76.7
36	856.5	102.4	216.6	192.3	146.7	121.5	631.4	602.7	78.8	77.3	596.5	647.7	67.4	63.9	660.6	664.4	78.8	77.7
37	860.2	109.8	238.9	206.1	164.6	136.3	658.1	623.4	79.4	78.1	654.9	681.0	67.8	64.7	679.2	743.7	79.2	78.4
38	864.0	120.8	258.2	218.4	182.3	153.2	685.2	642.3	79.8	78.8	689.8	749.6	68.2	65.4	692.6	781.6	80.0	78.8
39	866.3	135.2	275.6	235.2	197.5	170.9	711.7	666.7	80.0	79.1	699.8	785.2	68.7	66.1	705.2	796.3	82.9	79.9
40	869.1	151.4	288.7	246.9	209.2	184.6	735.2	699.1	80.9	79.3	908.1	828.2	69.5	66.9	716.0	807.9	86.2	82.8
41	872.2	168.3	299.3	250.6	219.3	195.1	747.4	739.0	83.4	79.7	913.5	832.2	70.7	67.9	724.0	811.7	89.5	86.0
42	875.7	184.7	308.1	255.4	227.4	204.6	766.2	801.5	86.3	81.0	922.4	832.2	72.1	69.1	733.6	833.9	92.2	89.0
43	878.8	197.9	311.5	263.1	237.8	214.5	775.8	851.5	89.3	83.7	927.1	847.4	73.8	70.6	742.3	872.7	94.0	91.1
44	881.6	211.1	317.3	277.0	247.9	226.7	776.6	891.9	91.9	87.2	931.0	860.4	75.6	72.5	750.8	919.2	95.6	92.8
45	884.4	225.0	324.4	294.3	260.0	240.8	780.3	899.7	94.1	90.5	931.2	869.6	77.6	74.7	758.0	917.1	97.3	94.5
46	887.4	240.6	332.7	322.9	273.2	257.0	785.1	901.4	96.1	93.4	935.6	894.4	79.5	77.0	764.0	913.5	98.9	96.3
47	889.3	256.9	341.6	349.2	287.2	272.7	791.5	901.5	98.1	95.5	938.6	903.5	81.2	79.5	770.3	914.9	100.5	98.2
48	891.7	272.4	353.8	373.3	299.5	287.9	799.5	904.6	100.1	97.2	941.6	907.8	82.5	81.9	776.7	918.1	102.1	99.9
49	894.2	287.6	364.9	389.3	314.9	301.6	807.7	900.9	102.0	99.2	944.9	909.6	83.9	84.2	782.0	921.6	103.8	101.7
50	896.5	299.9	376.6	402.9	328.2	315.7	817.8	901.2	103.6	101.2	961.4	912.7	85.2	86.0	787.1	926.0	105.4	103.5
51	898.9	312.8	388.9	411.2	342.4	328.3	826.2	904.1	105.2	103.1	970.8	916.1	86.4	87.5	791.3	935.2	107.1	105.3
52	902.3	325.1	401.7	419.4	357.0	341.4	831.2	907.3	107.0	105.0	966.3	918.6	87.7	88.8	795.1	945.0	108.9	107.0
53	903.7	336.1	412.5	431.6	368.7	356.1	837.4	909.1	109.0	106.7	971.5	920.4	89.1	89.9	799.3	950.3	110.7	108.8
54	906.0	346.7	422.4	439.0	379.4	367.9	844.0	912.7	111.1	108.3	970.9	924.0	90.3	91.1	803.6	957.2	112.7	110.7
55	907.7	355.7	433.8	446.1	392.5	379.4	850.4	916.5	113.5	110.0	975.3	927.5	91.8	92.2	806.3	960.9	115.0	112.9
56	909.8	367.3	445.1	451.8	406.2	390.2	857.7	920.5	116.1	111.7	978.1	931.6	93.4	93.3	809.8	966.4	117.6	115.3
57	913.1	378.0	456.5	457.0	419.4	399.2	864.9	926.1	118.7	113.6	981.6	934.5	95.0	94.6	812.2	970.2	120.4	117.8

Table 13. Temperatures Measured in Assembly S-49, Wood Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
58	914.3	389.1	466.2	466.1	432.4	411.9	872.2	928.5	121.3	115.9	983.3	937.6	96.7	95.8	815.7	974.8	123.1	120.1
59	917.1	399.3	475.7	472.9	444.6	421.2	879.9	931.8	124.0	118.3	983.8	938.9	98.4	97.2	818.8	973.8	125.6	122.4
60	918.6	410.6	486.5	482.5	457.4	432.5	886.8	933.7	127.5	120.3	984.7	947.3	100.1	98.6	823.9	977.4	128.3	124.7
61	920.8	423.7	494.0	493.4	468.3	444.2	891.9	935.1	132.2	122.2	987.8	946.8	101.8	100.1	829.3	977.9	131.0	127.3
62	922.5	435.5	503.9	504.7	479.1	456.7	898.0	938.1	139.0	124.9	988.1	952.2	103.7	101.5	835.7	980.9	134.2	130.9
63	925.7	449.5	512.9	519.1	490.2	469.6	903.4	940.8	147.0	128.0	982.0	956.1	105.8	103.1	839.7	980.8	140.3	137.4
64	925.7	461.8	523.1	529.6	500.8	482.6	909.1	943.9	154.7	131.2	988.6	959.3	108.5	105.1	844.6	981.9	148.5	147.2
65	928.2	475.4	533.4	540.5	510.5	492.4	915.4	945.1	167.6	134.6	980.7	957.8	111.1	106.7	853.0	982.7	156.8	158.0
66	930.4	488.1	542.4	548.9	521.1	501.6	921.6	947.3	188.9	140.7	974.7	962.7	117.2	109.0	858.5	978.5	171.9	172.9
67	931.9	502.2	553.2	561.8	531.9	512.6	928.3	950.0	214.4	148.8	969.3	965.0	125.6	110.5	865.9	977.4	196.0	193.5
68	934.8	519.8	565.9	574.2	545.3	524.0	935.2	952.7	233.3	157.4	966.6	968.3	131.6	111.6	872.1	975.9	219.5	212.9
69	935.8	542.1	578.3	585.6	558.5	537.4	945.5	955.0	249.6	169.1	958.6	971.6	130.0	112.0	878.4	974.7	234.5	226.8
70	938.7	569.8	590.8	598.8	572.7	551.2	933.6	956.6	268.0	187.8	931.4	968.5	126.3	113.1	885.4	979.3	247.5	239.0
71	943.6	631.9	607.8	615.0	590.5	581.8	809.0	964.9	288.9	210.7	825.9	970.8	122.6	114.3	900.4	983.4	260.7	252.0
72	944.7	625.1	628.3	628.1	607.8	607.2	837.5	939.1	334.9	238.7	828.2	928.1	121.7	116.4	908.8	958.2	275.0	264.3
73	945.4	658.7	664.1	697.9	668.3	729.5	866.6	928.6	391.8	265.4	865.5	904.7	124.3	119.3	865.7	941.2	288.3	274.3
74	946.9	681.2	721.6	761.6	745.3	794.9	867.7	921.4	430.5	289.6	879.4	894.4	133.5	124.2	818.7	880.9	302.0	286.1
75	945.4	696.8	808.4	804.8	813.0	822.6	869.1	913.4	459.1	314.5	862.2	865.5	147.6	130.6	820.5	821.0	316.5	295.4
76	945.6	721.8	827.7	833.1	833.9	860.1	886.3	887.8	483.7	341.0	869.2	850.2	175.8	147.5	843.8	836.3	348.4	322.3
77	951.4	736.1	817.8	828.2	827.2	853.1	866.7	849.6	505.4	369.9	867.2	839.2	210.1	161.7	836.8	824.9	423.9	374.7
78	946.0	749.3	817.9	828.7	826.2	855.4	866.0	841.0	521.7	398.3	865.7	836.0	251.6	171.5	834.5	820.0	465.7	441.5
79	945.0	762.4	818.6	830.3	826.2	857.0	867.2	828.5	544.8	423.9	863.8	832.8	334.1	204.2	831.4	816.3	490.0	484.2
80	951.0	772.4	817.1	829.6	825.3	852.9	858.5	815.9	567.4	446.5	859.1	827.7	435.9	267.7	827.2	812.5	521.5	524.0
81	954.9	777.3	813.3	826.2	821.8	844.5	846.4	807.9	590.5	467.1	856.6	819.2	560.3	330.3	821.6	808.2	554.2	556.3
82	955.5	780.9	810.3	824.3	820.3	843.7	842.5	802.9	615.4	487.5	851.7	819.2	713.8	373.5	822.8	809.5	598.8	603.5
83	956.1	773.9	799.2	811.3	805.6	823.5	825.5	791.6	645.6	510.6	849.8	799.6	951.4	415.5	804.5	793.7	646.8	671.3
84	957.9	758.0	777.7	787.7	783.0	780.8	800.8	776.7	675.2	527.8	837.6	779.3	921.8	743.5	775.6	766.2	826.7	829.9
85	958.1	747.3	763.5	771.0	765.3	764.1	786.6	768.9	711.3	685.3	831.0	761.4	977.3	750.8	755.6	748.0	962.8	949.2
86	960.1	747.7	762.7	768.3	760.8	760.2	786.0	771.3	751.6	670.6	834.4	755.3	967.0	736.2	748.1	742.3	834.6	962.7
87	961.0	749.7	768.0	768.6	760.3	762.2	785.6	789.4	791.3	660.6	837.2	753.7	941.4	968.5	746.8	743.0	844.0	934.9

Table 14. Average Temperatures Measured in Assembly S-49, Wood Stud, 2x2 Gypsum Board Layers, No Insulation

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, Std. - Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(26,27,30,31,34,35)	BL/Std. (Exp.) Av(12,13)	BL/Cav. (Exp.) Av(18,19,22,23)	Mid. Std. Av(10,11,14,15)	BL/Cav. (UnExp.) Av(20,21,24,25)	BL/Std. (UnExp.) Av(16,17)	BL/FL (UnExp.) Av(28,29,32,33,36,37)	UnExp. Av(1,2,3,4,5)
0	21.0	20.5	#DIV/0!	20.9	#DIV/0!	21.0	#DIV/0!	21.1	21.4
1	302.7	23.4	20.6	20.9	20.8	21.0	21.2	21.1	21.4
2	425.9	57.5	20.6	21.1	20.8	21.0	21.2	21.1	21.4
3	484.2	81.4	22.7	26.1	21.1	21.5	21.1	21.1	21.4
4	525.5	84.8	34.7	33.1	23.5	25.5	21.2	21.2	21.4
5	567.7	87.2	55.0	42.4	28.9	31.8	21.5	21.5	21.4
6	589.9	87.1	70.2	50.1	35.6	38.5	22.2	22.2	21.4
7	612.0	87.6	78.4	58.1	41.6	44.2	23.3	23.4	21.4
8	634.0	87.9	82.7	60.6	46.5	48.4	24.8	24.9	21.6
9	660.9	89.1	85.1	63.5	50.4	52.1	26.6	26.8	21.8
10	676.6	92.0	86.8	65.6	53.7	54.9	28.5	28.8	22.3
11	687.9	97.7	88.2	67.3	56.4	57.1	30.6	30.9	22.8
12	700.3	102.3	89.3	68.8	58.6	59.1	32.7	32.9	23.6
13	712.0	111.2	89.6	69.1	60.2	60.2	34.8	34.9	24.6
14	724.2	132.8	89.5	69.3	61.2	60.9	36.8	36.9	25.7
15	737.3	165.7	89.4	70.3	62.2	61.9	38.7	38.6	27.0
16	746.3	196.9	89.6	75.5	65.6	64.7	40.6	40.3	28.4
17	755.1	217.0	92.5	79.6	69.8	68.8	42.4	42.3	29.8
18	762.6	237.4	96.1	83.1	73.6	72.3	44.7	44.7	31.3
19	770.8	261.2	96.9	86.8	76.6	75.2	47.2	47.4	32.8
20	779.2	282.0	97.5	91.5	79.1	77.6	49.9	50.2	34.6
21	786.0	305.0	98.0	96.1	81.2	79.7	52.6	53.0	36.5
22	792.7	330.5	98.5	99.8	82.6	81.6	55.3	55.7	38.6
23	798.2	356.2	99.1	102.8	83.6	83.3	57.9	58.2	40.8
24	804.1	378.9	100.1	105.4	84.6	84.8	60.4	60.5	43.0
25	809.9	400.5	101.3	107.9	85.4	86.6	62.6	62.4	45.2
26	815.2	421.3	103.2	109.9	86.0	88.0	64.7	64.2	47.3
27	819.6	440.4	105.4	111.7	86.4	89.1	66.5	65.7	49.1
28	823.5	458.7	107.9	113.3	86.7	90.2	68.1	67.1	50.8
29	828.7	476.6	110.5	115.1	87.2	91.4	69.6	68.3	52.3
30	833.7	493.2	112.9	117.3	87.5	92.6	70.9	69.4	53.6
31	837.4	509.3	115.0	120.9	87.7	94.0	72.0	70.3	54.8
32	841.2	525.8	117.5	125.3	88.0	95.8	73.0	71.1	55.7
33	845.2	544.7	120.6	131.8	88.3	98.4	74.0	71.8	56.6
34	849.1	571.1	124.3	145.9	88.5	103.3	74.8	72.5	57.3
35	853.0	601.9	128.6	165.4	89.2	110.9	75.5	73.3	58.0
36	856.5	633.9	133.0	184.2	91.5	121.8	76.1	74.0	58.7
37	860.2	673.4	141.2	202.1	96.6	134.9	76.7	74.6	59.3
38	864.0	740.2	163.4	219.4	105.5	150.9	77.3	75.2	59.9
39	866.3	760.8	201.4	237.8	117.8	168.2	78.0	76.1	60.5
40	869.1	782.4	252.4	253.0	132.0	183.5	79.0	77.6	61.2
41	872.2	794.6	300.6	265.4	147.2	196.7	80.4	79.6	62.2
42	875.7	815.0	346.9	276.5	160.8	208.5	82.3	81.6	63.4
43	878.8	836.1	387.0	284.8	173.8	220.0	84.6	83.8	64.5
44	881.6	855.0	422.6	295.7	187.2	232.1	87.3	85.9	65.6
45	884.4	859.3	460.0	307.1	201.6	245.7	90.4	88.1	66.5
46	887.4	865.7	491.4	323.0	216.9	261.4	93.5	90.2	67.3
47	889.3	870.1	523.4	338.2	232.1	277.3	96.8	92.2	68.1
48	891.7	874.7	547.5	353.9	247.8	292.1	100.3	94.0	68.8
49	894.2	877.8	565.1	367.0	263.2	307.3	104.0	95.8	69.3
50	896.5	884.4	581.1	379.5	279.2	321.1	107.7	97.5	69.7
51	898.9	890.6	589.0	390.9	294.4	335.0	111.7	99.1	70.1
52	902.3	893.9	595.6	401.5	308.4	349.7	116.0	100.7	70.4
53	903.7	898.0	602.1	412.3	323.6	362.2	120.6	102.4	70.7
54	906.0	902.1	610.1	421.1	339.3	373.3	125.7	104.1	71.0
55	907.7	906.1	618.3	431.3	354.5	385.2	131.1	105.9	71.1
56	909.8	910.7	624.2	440.2	368.9	397.5	136.6	107.9	71.4
57	913.1	914.9	629.9	449.8	383.0	409.0	142.4	110.0	71.7

Table 14. Average Temperatures Measured in Assembly S-49, Wood Stud, 2x2 Gypsum Board Layers, No Insulation (Cont.)

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, Std. - Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(26,27,30,31,34,35)	BL/Std. (Exp.) Av(12,13)	BL/Cav. (Exp.) Av(18,19,22,23)	Mld. Std. Av(10,11,14,15)	BL/Cav. (UnExp.) Av(20,21,24,25)	BL/Std. (UnExp.) Av(16,17)	BL/FL (UnExp.) Av(28,29,32,33,36,37)	UnExp. Av(1,2,3,4,5)
58	914.3	918.7	633.8	459.5	397.1	421.5	148.5	112.1	72.1
59	917.1	921.2	636.1	468.6	411.6	432.4	154.9	114.3	72.5
60	918.6	925.6	638.6	478.1	425.8	444.6	161.7	116.6	73.2
61	920.8	928.1	640.1	488.6	438.2	456.4	168.6	119.1	73.8
62	922.5	932.2	645.7	499.1	452.2	467.6	175.9	122.4	74.6
63	925.7	933.8	650.4	510.2	467.4	479.9	184.3	126.9	75.5
64	925.7	937.9	653.4	520.8	480.0	491.6	194.0	132.5	76.5
65	928.2	939.1	656.8	532.3	494.1	503.3	204.4	139.1	77.6
66	930.4	940.6	667.7	543.7	509.7	515.8	216.6	150.1	78.8
67	931.9	942.7	681.7	557.9	527.4	531.0	229.7	164.8	79.8
68	934.8	945.1	698.4	575.0	543.8	549.0	243.6	177.7	81.2
69	935.8	947.3	726.8	597.9	566.8	575.2	257.0	187.0	83.5
70	938.7	942.4	753.9	625.4	590.1	605.3	272.8	196.9	85.9
71	943.6	909.1	774.8	675.0	658.9	662.2	526.7	208.2	88.1
72	944.7	900.0	789.1	695.8	696.5	664.9	572.8	225.2	90.2
73	945.4	895.4	813.6	747.3	766.4	724.6	609.1	243.9	92.2
74	946.9	877.1	825.3	788.6	801.1	768.5	642.8	261.0	94.2
75	945.4	858.6	867.5	823.9	834.8	794.4	676.2	277.3	96.0
76	945.6	862.3	893.6	841.4	856.3	813.3	713.2	303.1	97.7
77	951.4	847.4	874.8	838.4	847.1	809.8	743.1	341.0	99.7
78	946.0	843.9	859.6	838.1	840.3	811.8	775.1	375.1	102.0
79	945.0	840.0	847.1	838.1	834.5	816.0	800.8	413.5	104.4
80	951.0	833.5	834.5	838.7	827.6	820.2	808.4	460.5	106.6
81	954.9	826.7	824.2	838.0	821.0	822.2	808.6	509.8	109.0
82	955.5	824.8	818.7	835.1	817.5	822.8	807.4	565.4	111.6
83	956.1	810.8	809.0	828.3	807.3	816.5	803.5	640.2	113.4
84	957.9	789.4	784.0	807.0	784.8	791.6	777.1	754.2	117.6
85	958.1	775.2	770.7	795.4	771.1	779.8	766.3	839.5	123.3
86	960.1	772.9	769.2	800.1	769.1	781.7	763.7	820.5	137.7
87	961.0	772.6	777.2	807.1	771.9	785.6	767.5	856.8	170.5

Table 15. Small-Scale Assembly Parameters and Fire Test Results

Assembly Number	Stud Type	Stud Size (mm)	Stud Spacing (mm)	Gypsum Board Layers (Exp/Unexp.)	Gypsum Board Thickness (mm)	Gypsum Board Type	Insulation Type	Insulation Thickness (mm)	Resilient Channel	Point Failure (min)	Average Failure (min)
S-01	Steel	90	600	2X2	12.7	RL	***	***	***	82	84
S-32	Steel	90	600	2X2	12.7	RL	GF	90	***	74	76
S-33	Steel	90	600	2X2	12.7	RL	MF	40	***	98	101
S-34	Steel	90	600	2X2	12.7	RL	CFI	90	***	102	***
S-02	Wood	89	600	2X2	12.7	RL	***	***	***	88	90
S-03	Steel	90	600	2X2	12.7	RH	***	***	***	104	105
S-49	Wood	89	400	2X2	12.7	RL*	***	***	***	87	87

RL - Low Density Regular Gypsum Board with glass fibre in Gypsum Board (7.35 kg/m²)

RL* - Low Density Regular Gypsum Board, no glass fibre in Gypsum Board (7.27 kg/m²)

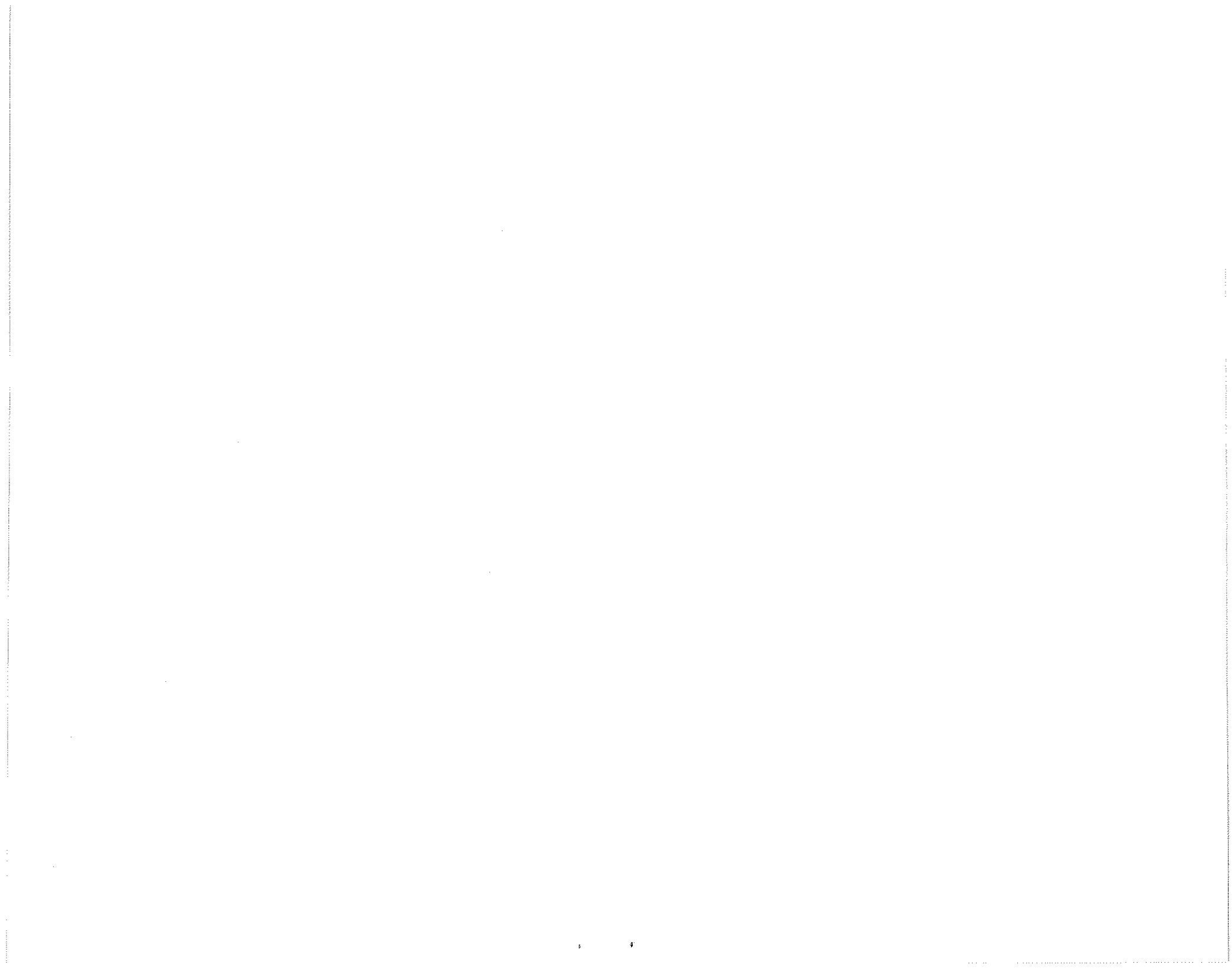
RH - Regular Gypsum Board, no glass fibre in Gypsum Board (7.82 kg/m²)

GF - Glass Fibre Insulation

MF - Mineral Fibre Insulation

CFI - Cellulosic Fibre Insulation (blown dry)

*** - Null Value



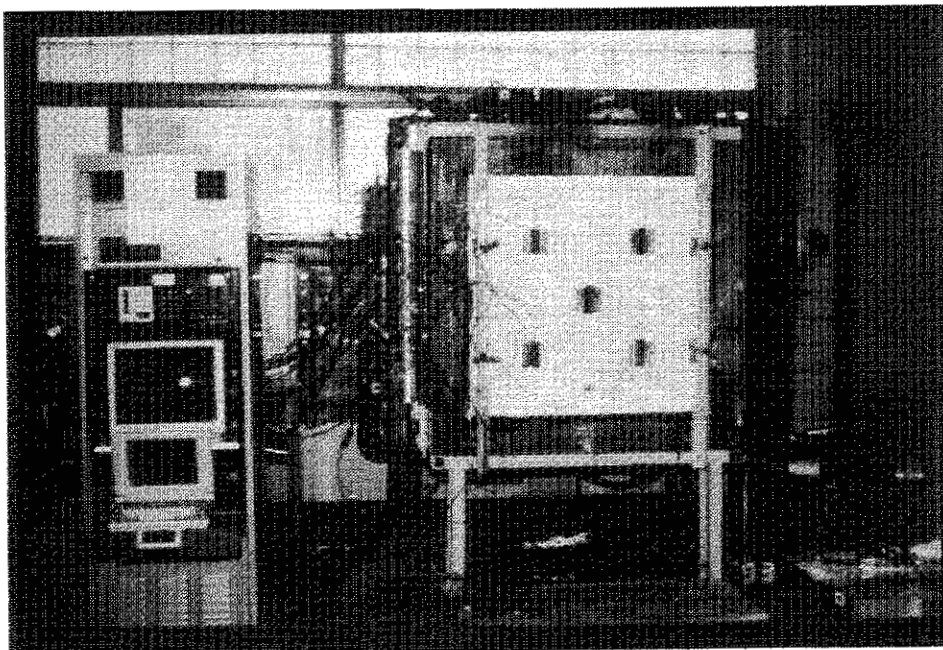
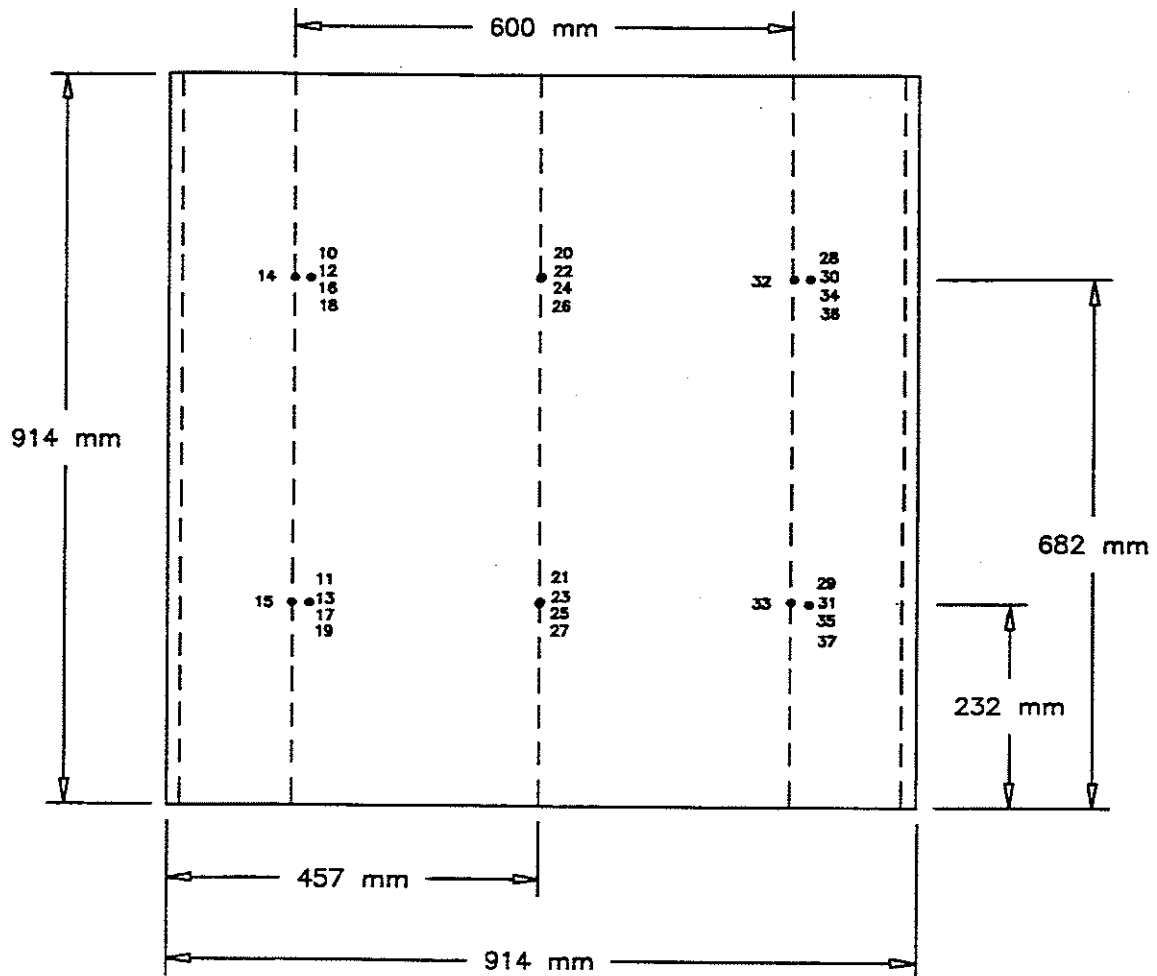
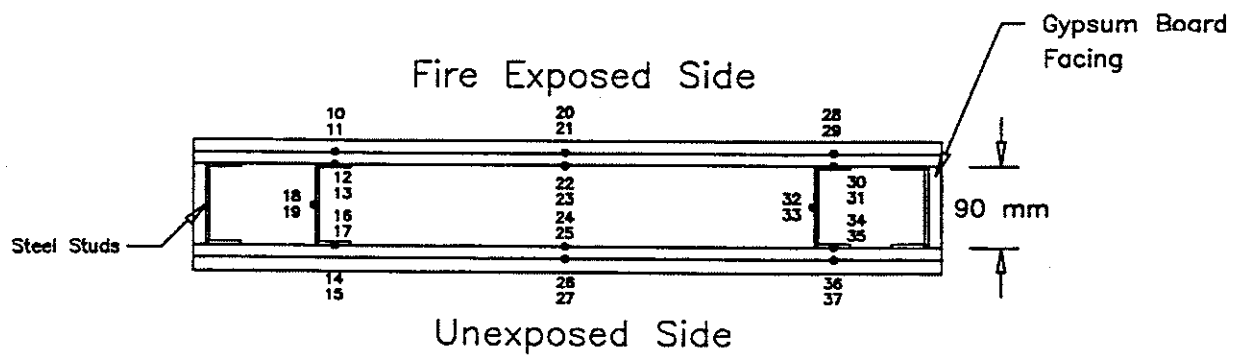


Figure 1. Small-Scale Test Assembly Furnace



Drawing Not To Scale

Figure 2. Thermocouple Locations in Small-Scale Test S-01

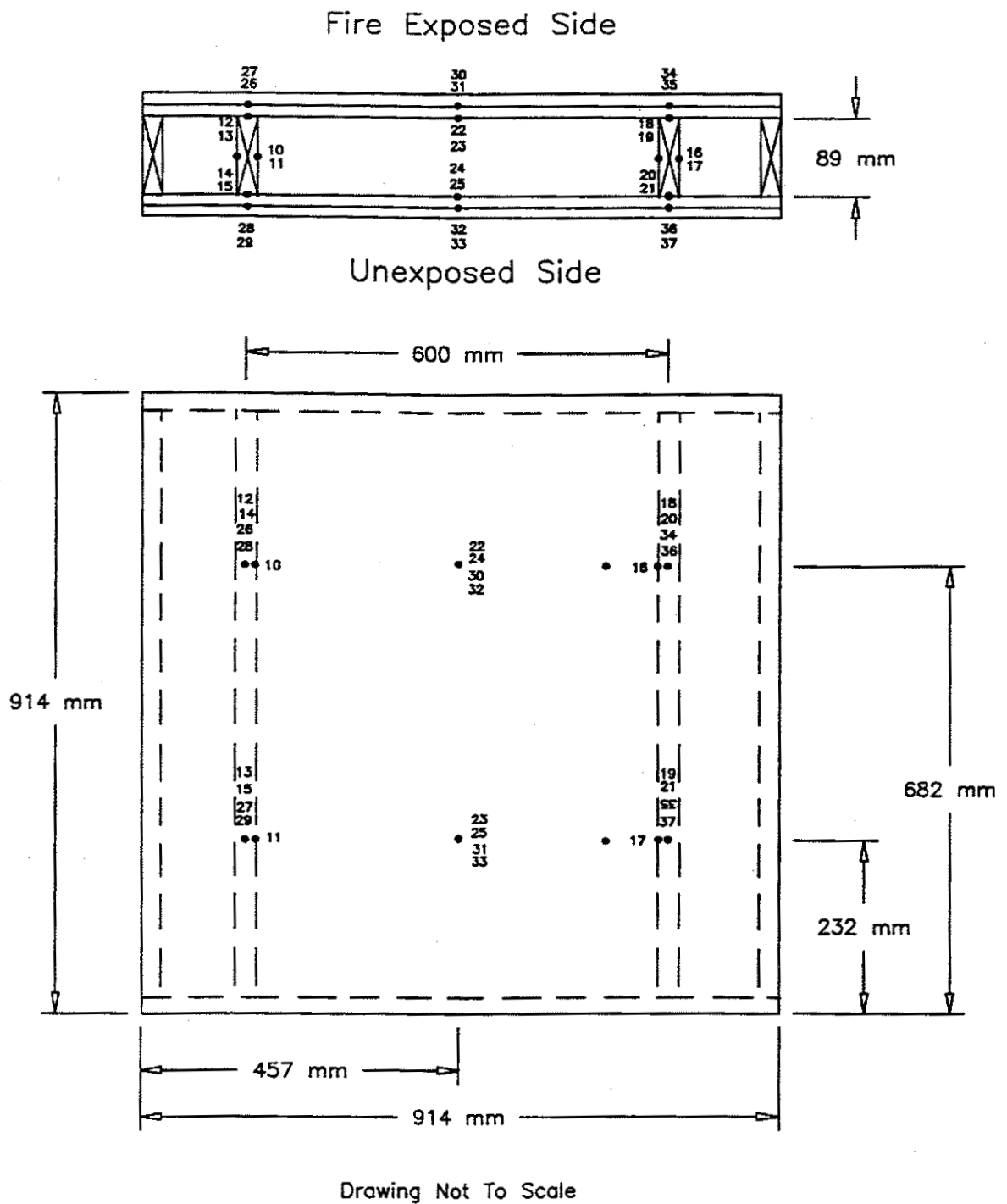


Figure 3. Thermocouple Locations in Small-Scale Test S-02

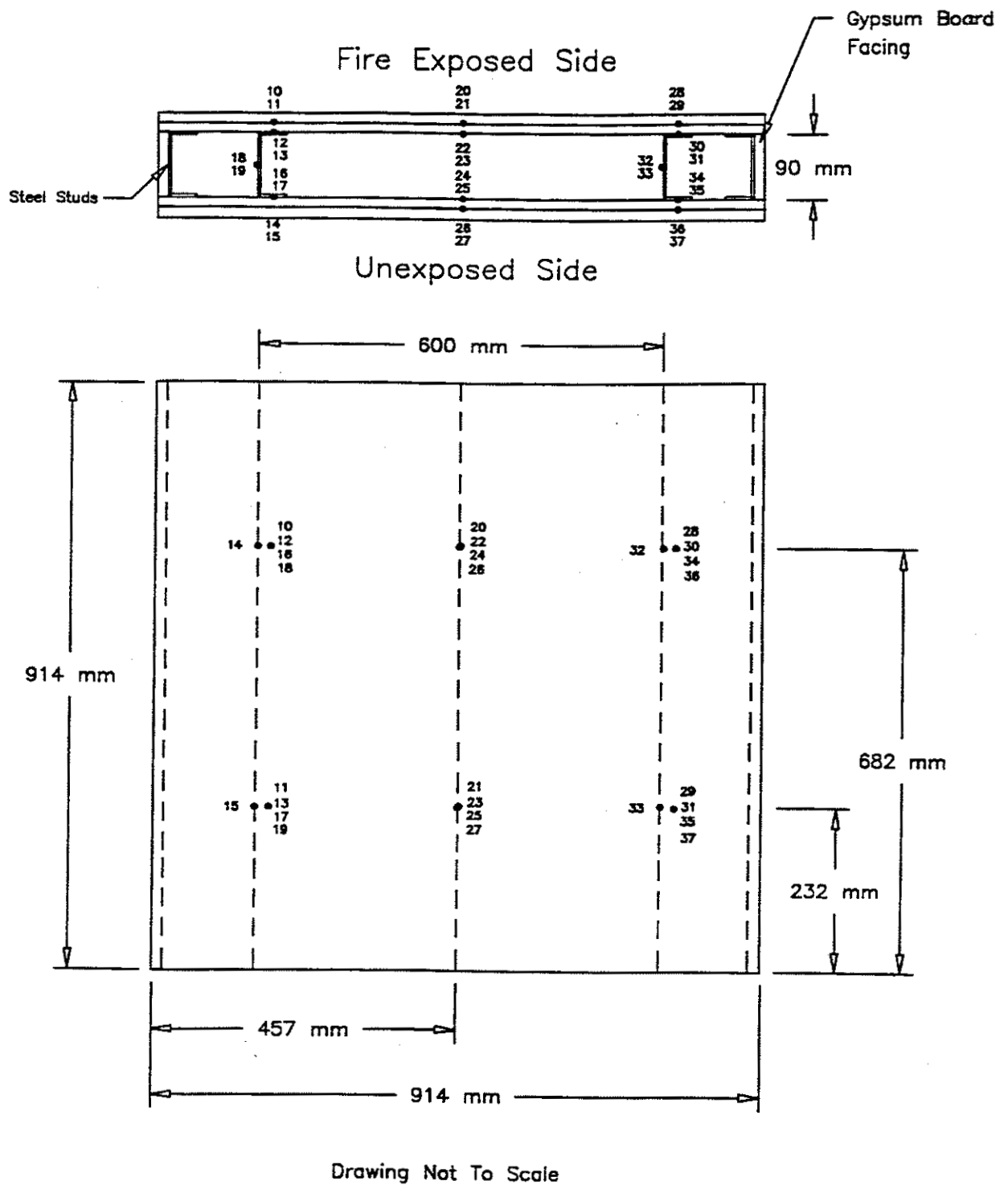
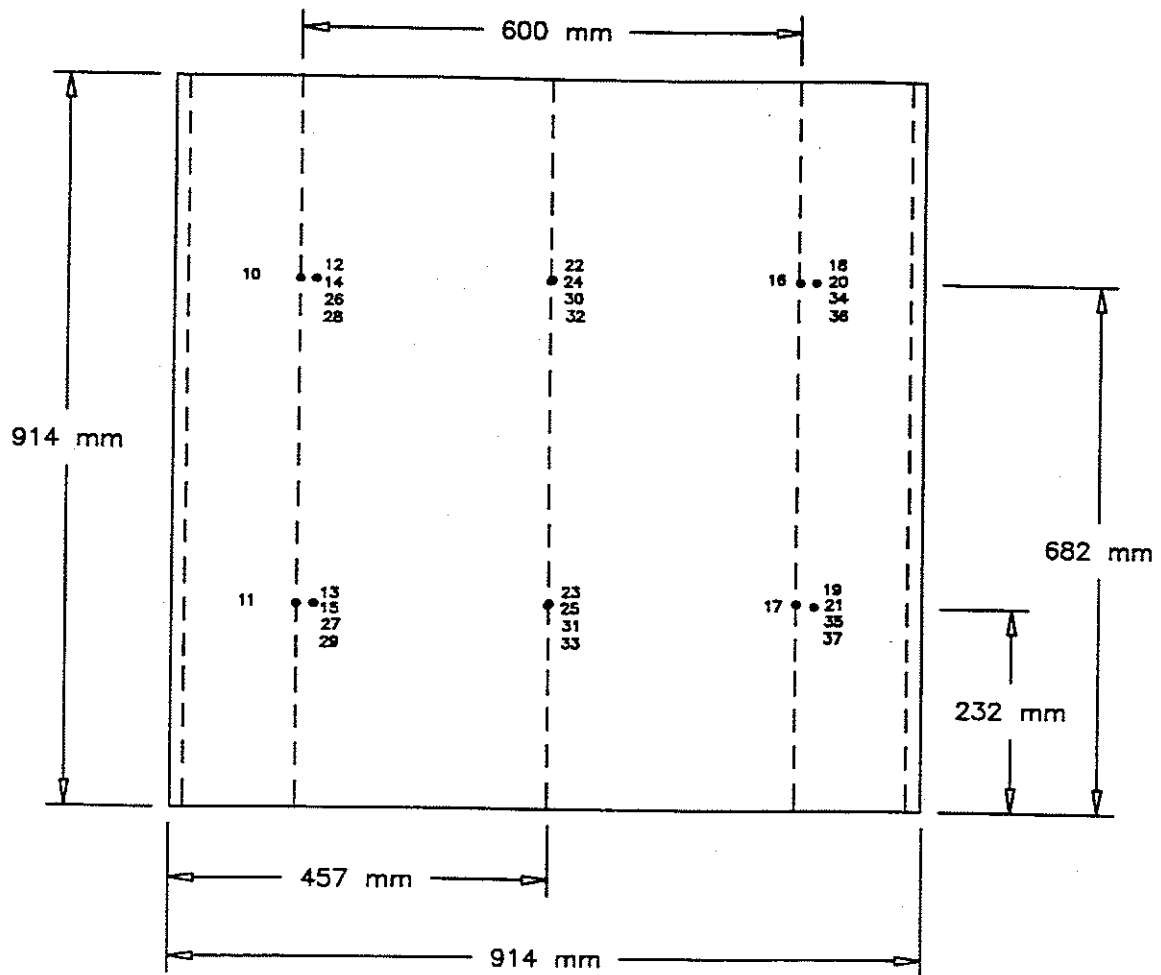
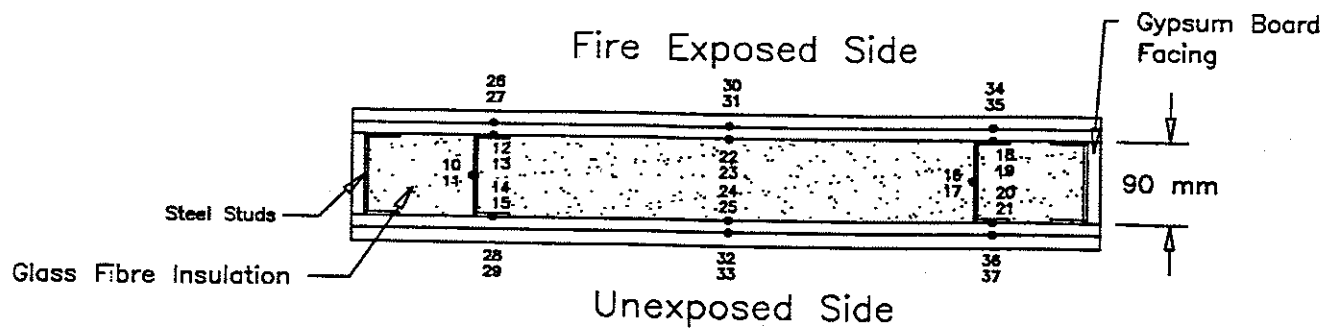
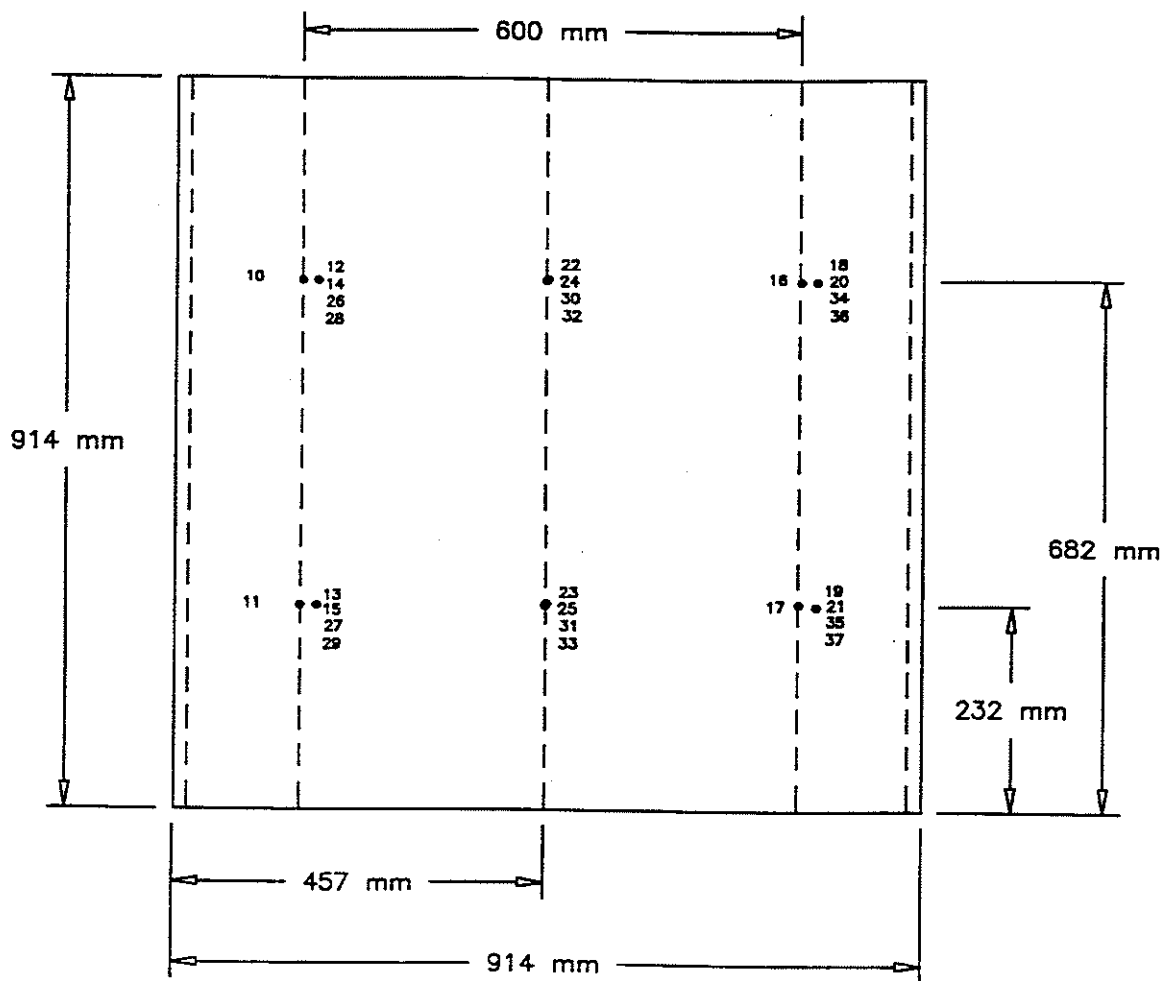
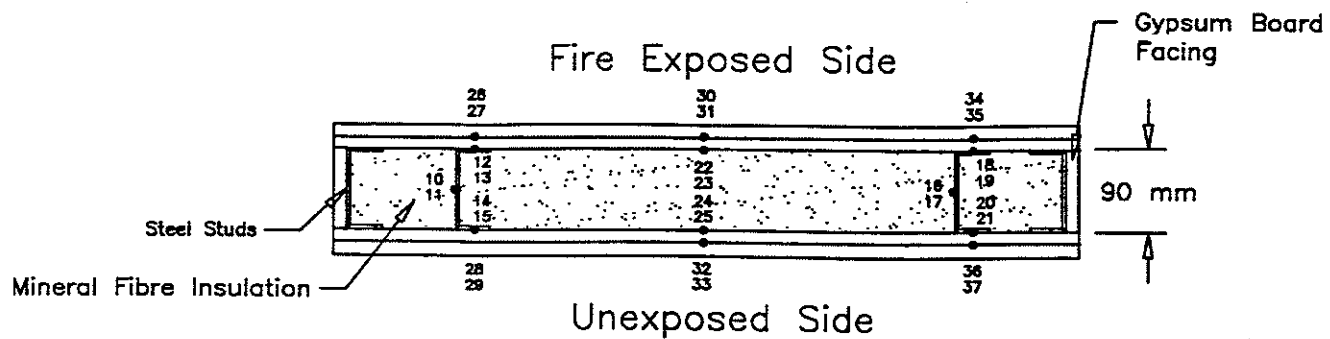


Figure 4. Thermocouple Locations in Small-Scale Test S-03



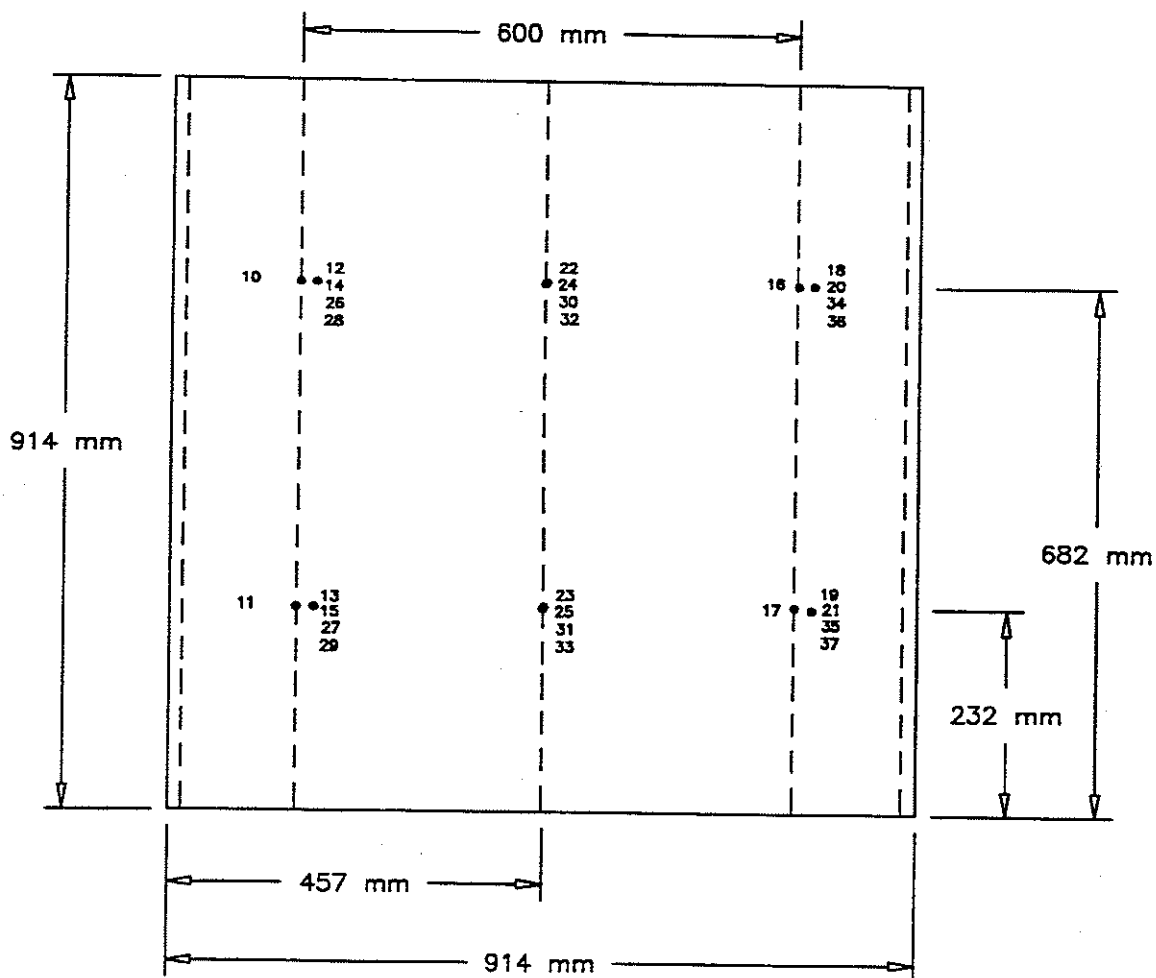
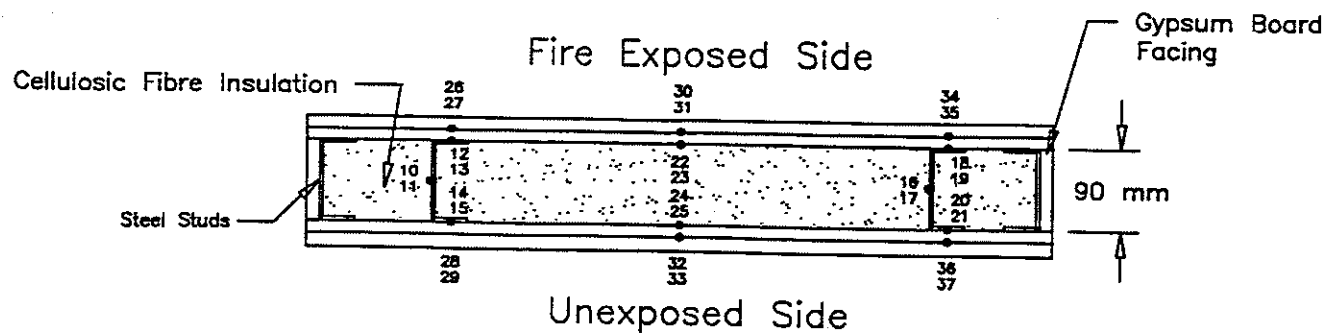
Drawing Not To Scale

Figure 5. Thermocouple Locations in Small-Scale Test S-32



Drawing Not To Scale

Figure 6. Thermocouple Locations in Small-Scale Test S-33



Drawing Not To Scale

Figure 7. Thermocouple Locations in Small-Scale Test S-34

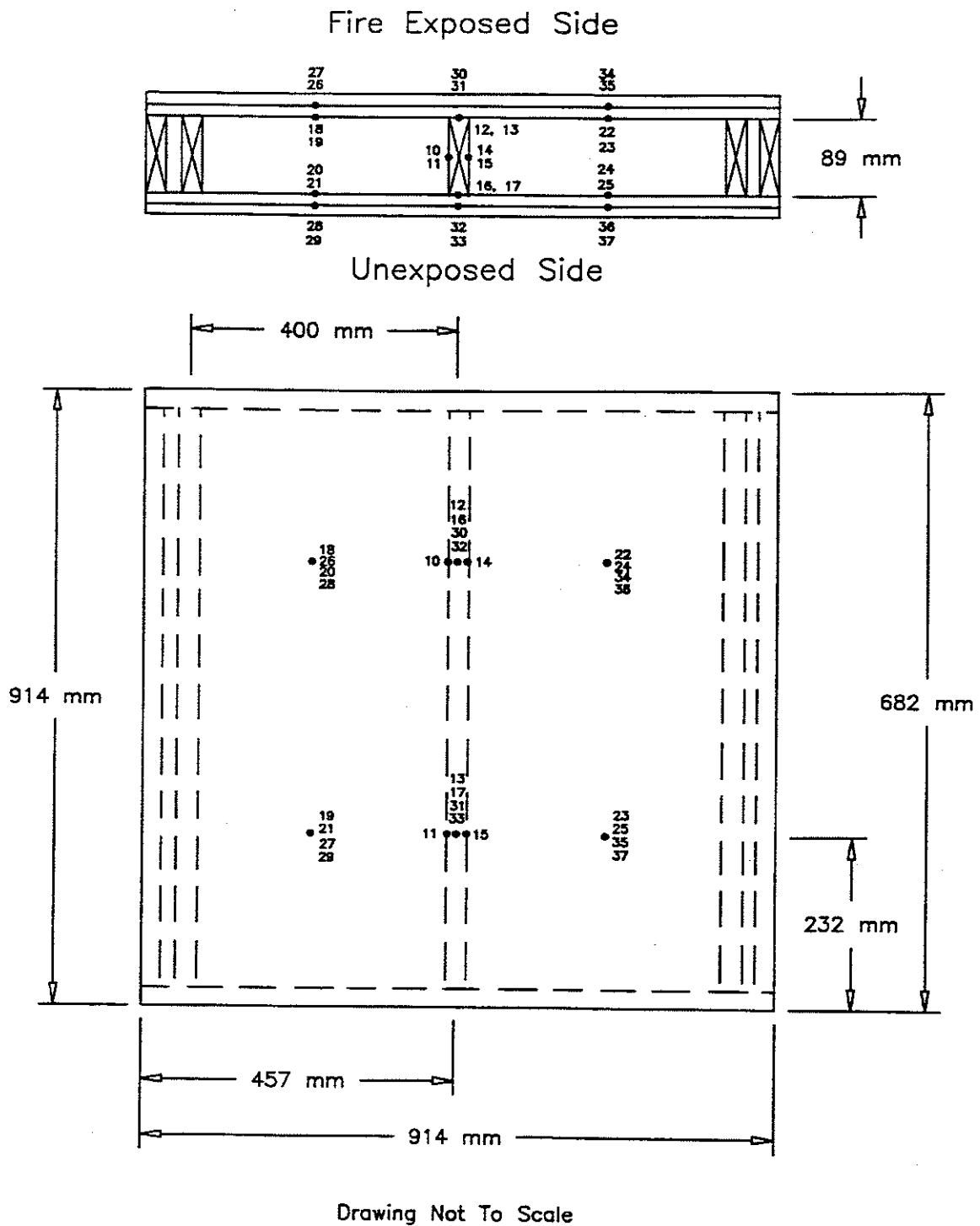
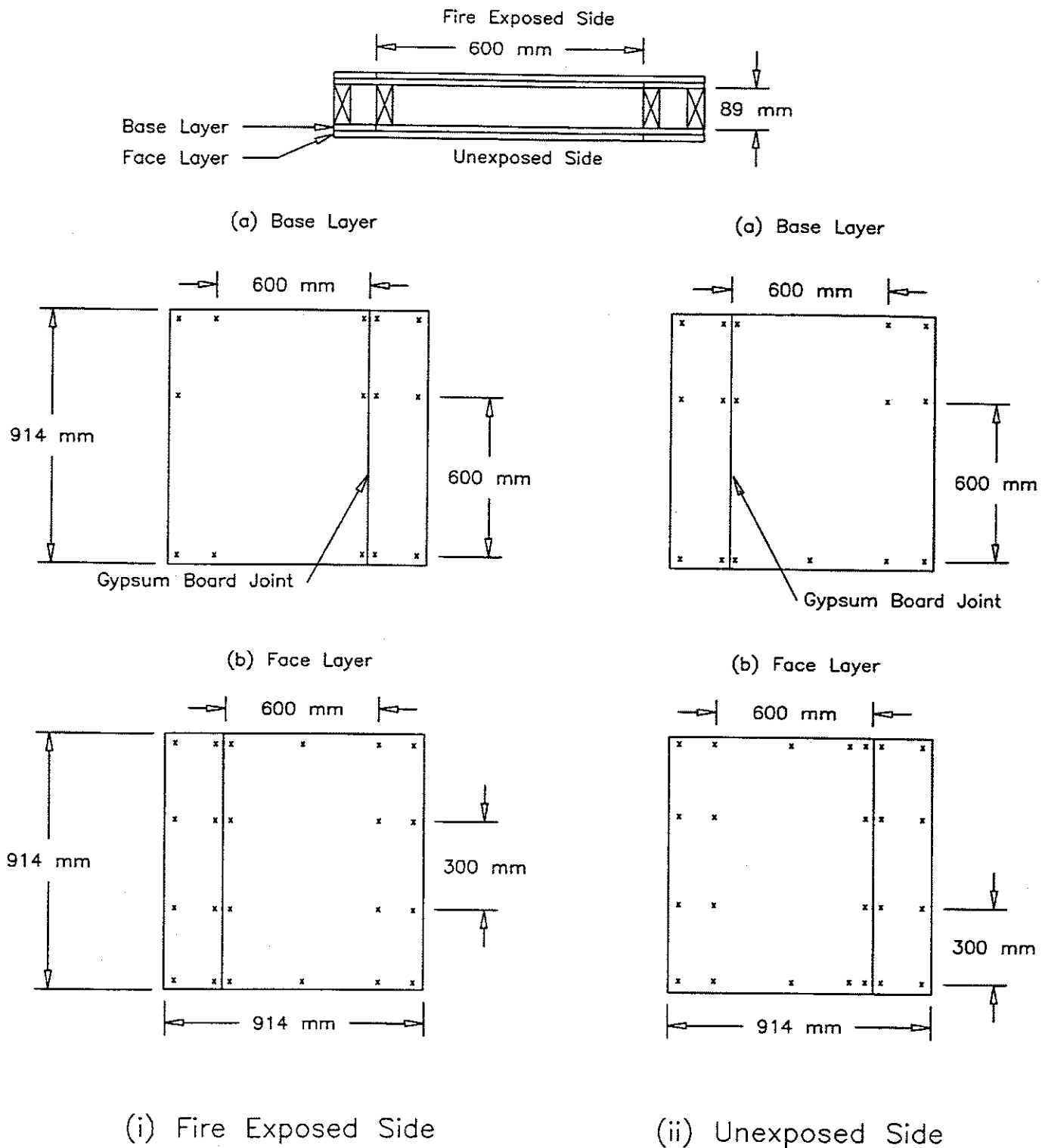
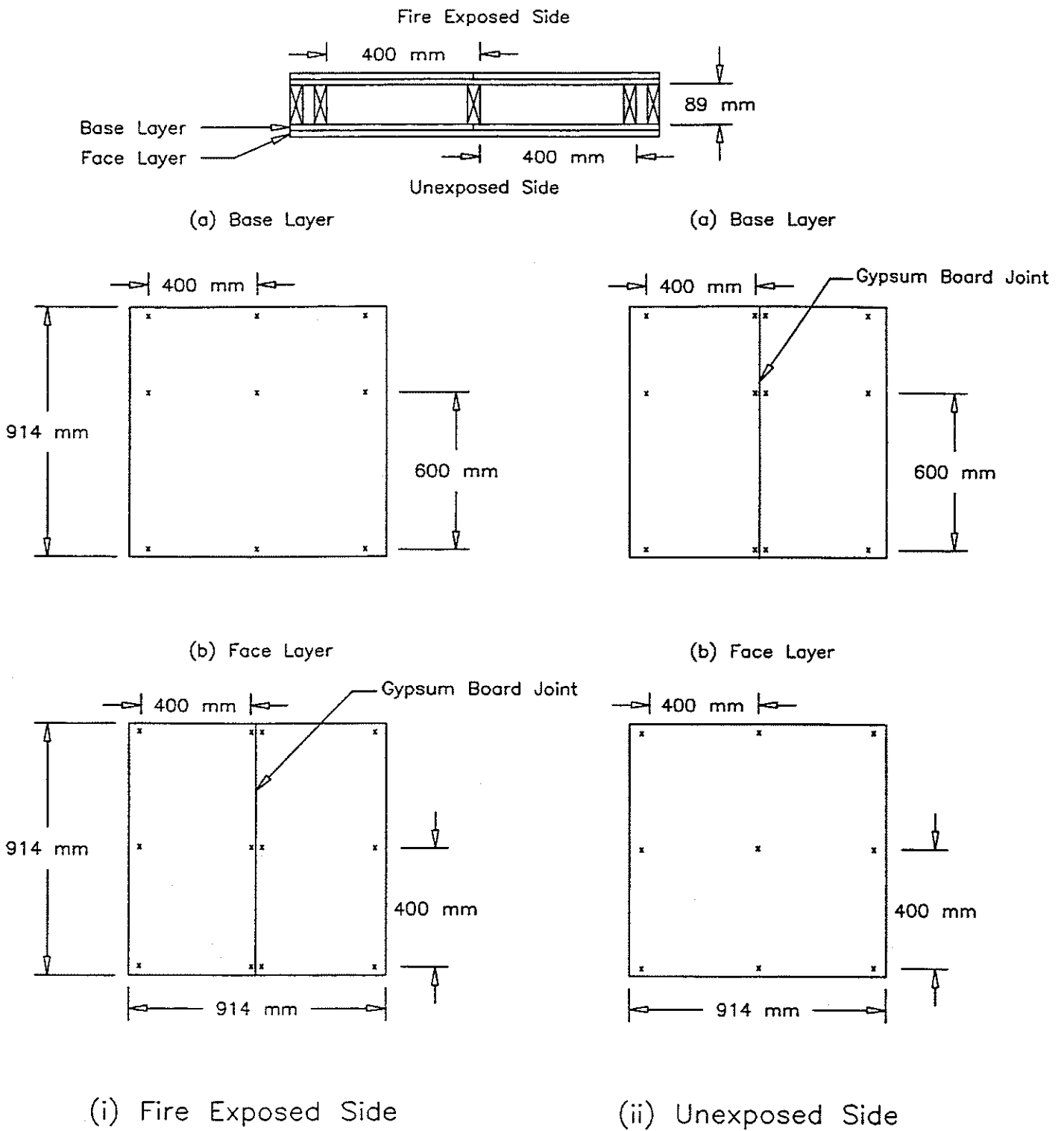


Figure 8. Thermocouple Locations in Small-Scale Test S-49



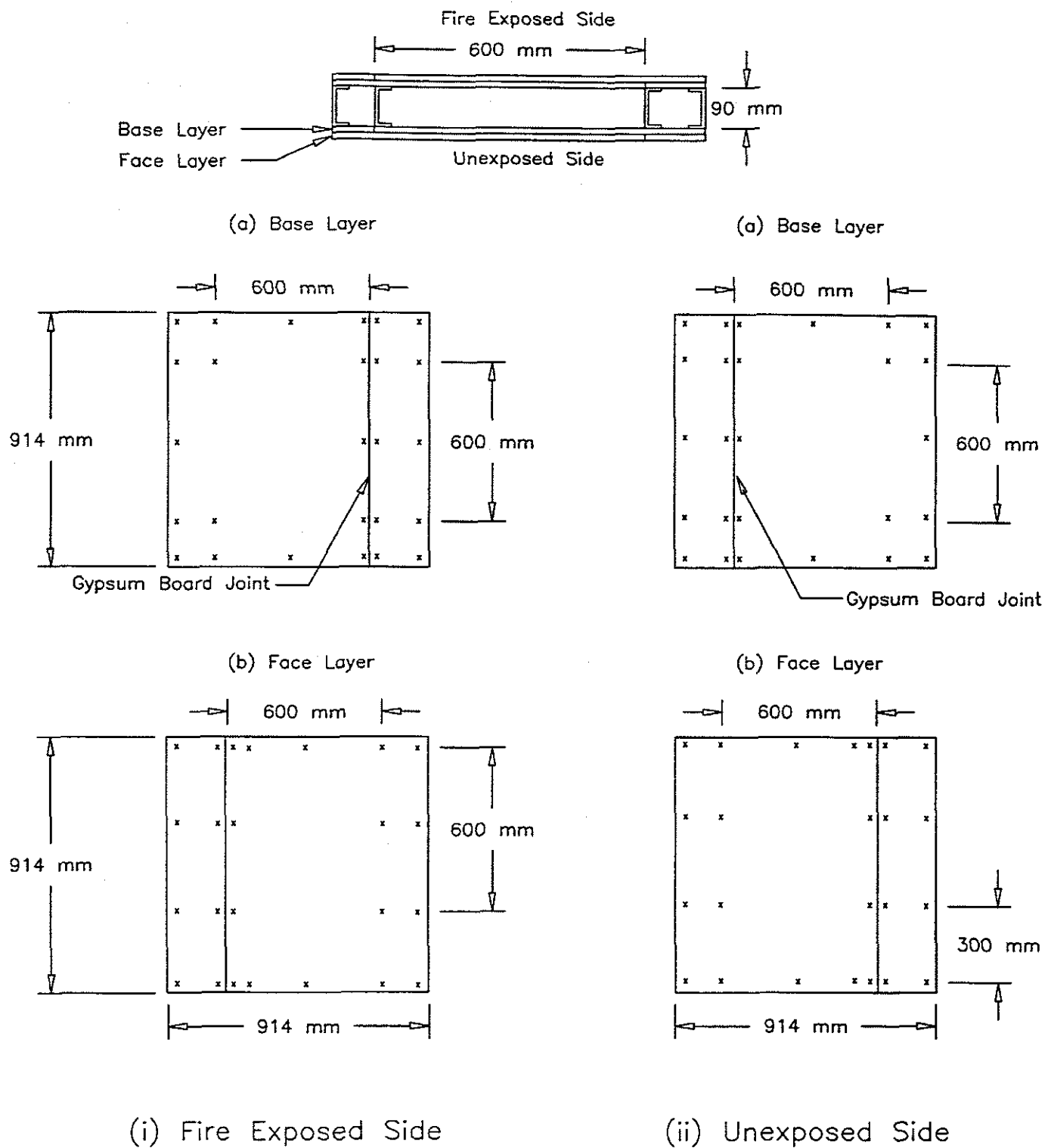
Drawing not to scale

Figure 9. Screw Locations for 600 mm O.C. Wood Stud, 2x2 Regular Gypsum Board Layers, Small-Scale Assembly S-02



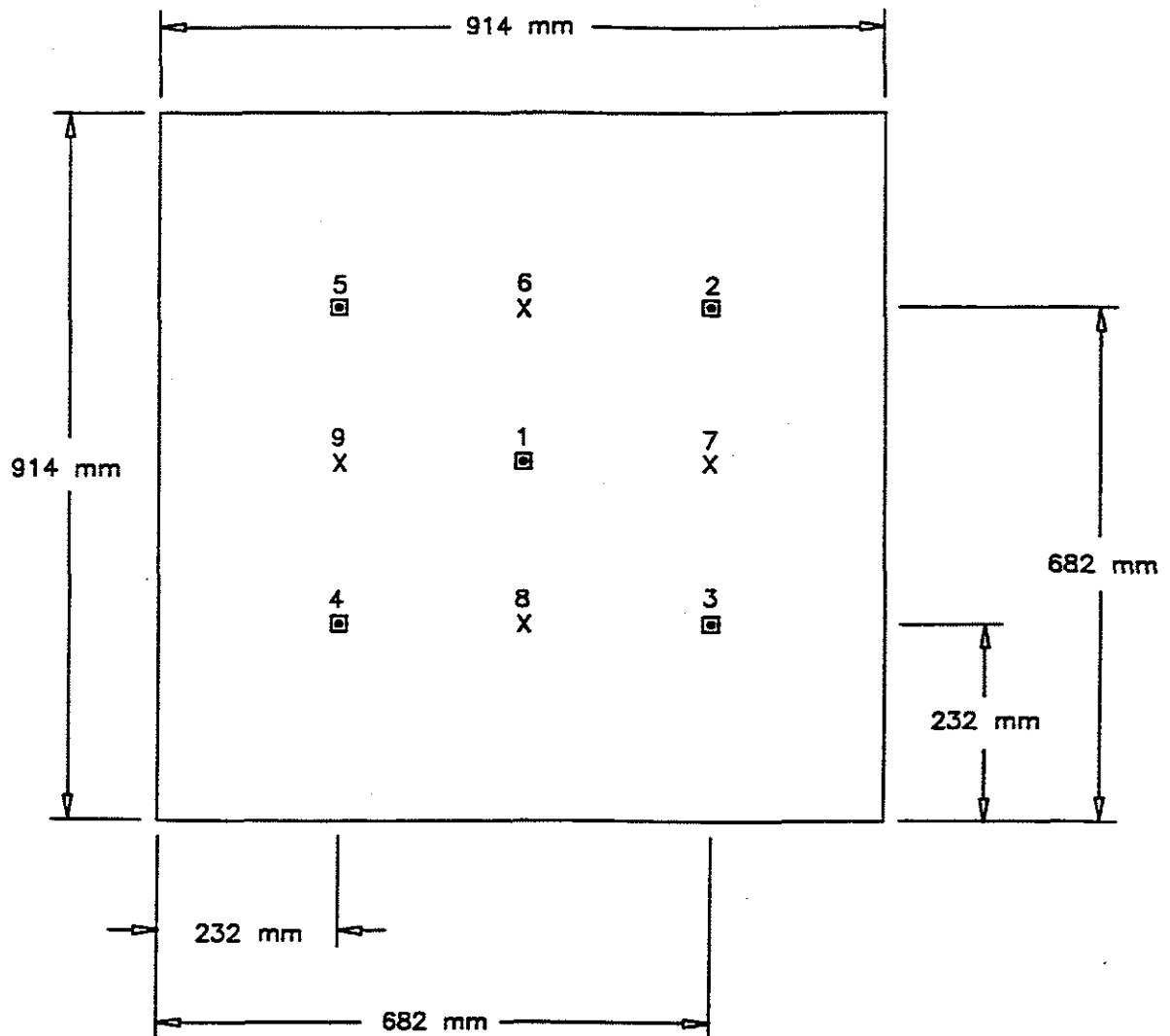
Drawing not to scale

Figure 10. Screw Locations for 400 mm O.C. Wood Stud, 1x2 Regular Gypsum Board Layers, Small-Scale Assembly S-49



Drawing not to scale

Figure 11. Screw Locations for 600 mm O.C. Steel Stud, 2x2 Regular Gypsum Board Layers, Small-Scale Assemblies S-01, S-03, S-32 to S-34



■ Thermocouple Under Std. ULC/S101 Insulated Pad
 x Bare Thermocouple

Drawing not to scale

Figure 12. Thermocouple Locations on Unexposed Surface
 Small-Scale Tests

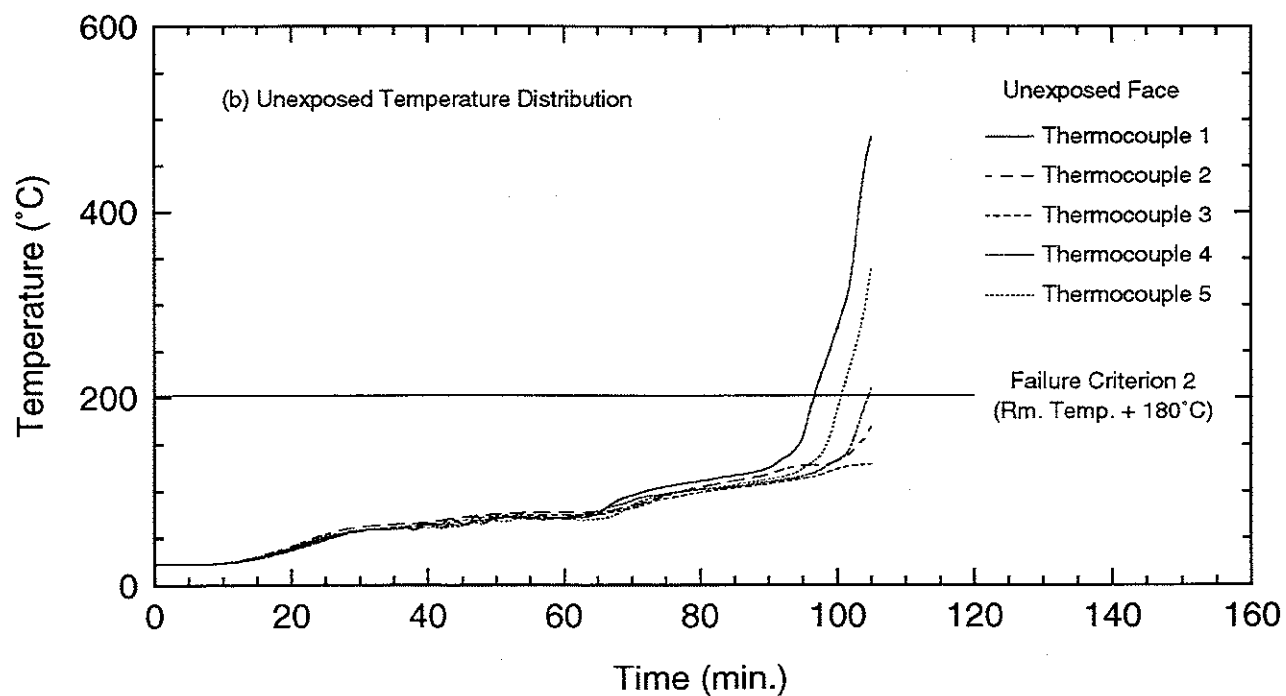
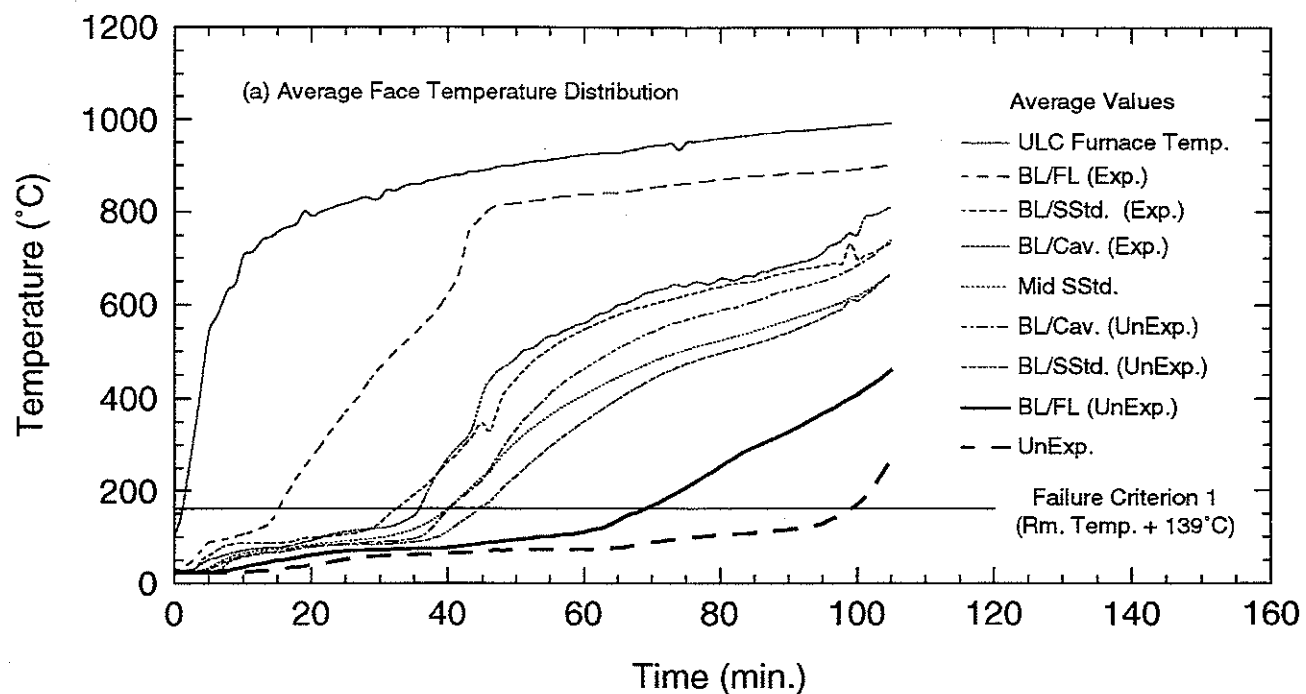


Figure 13. Temperature Distributions For Small Scale Test Assembly S-01

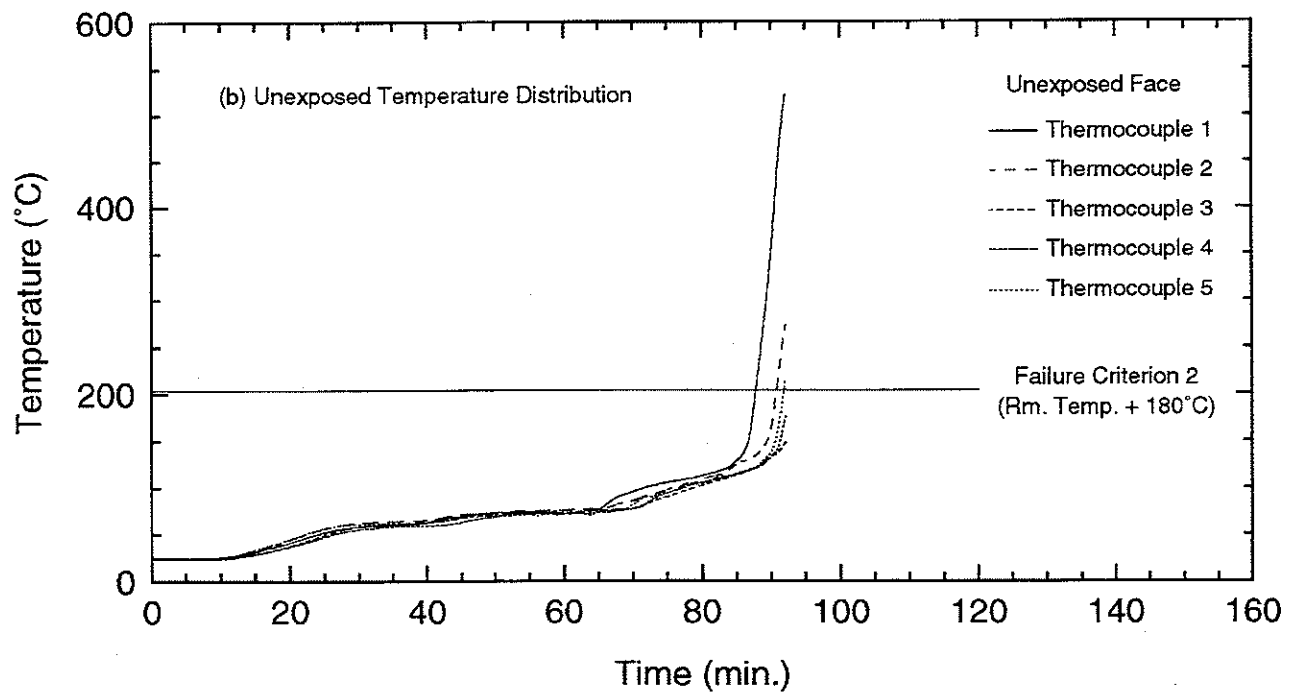
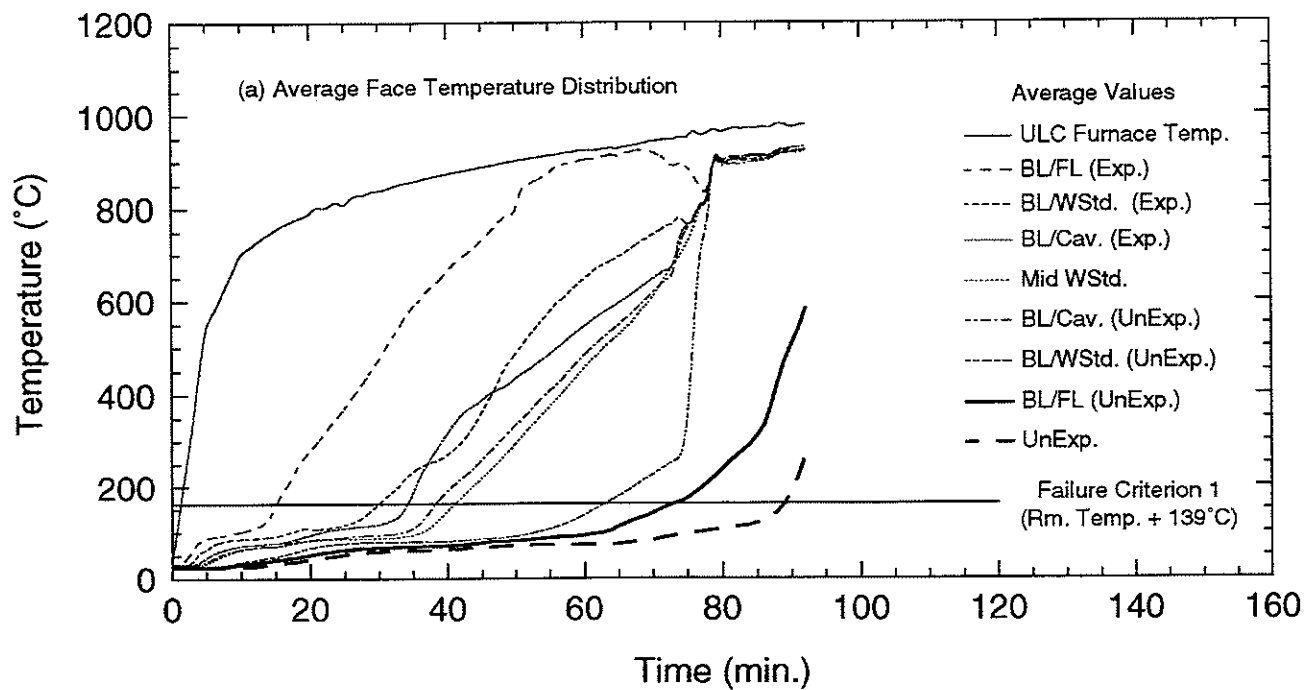


Figure 14. Temperature Distributions For Small Scale Test Assembly S-02

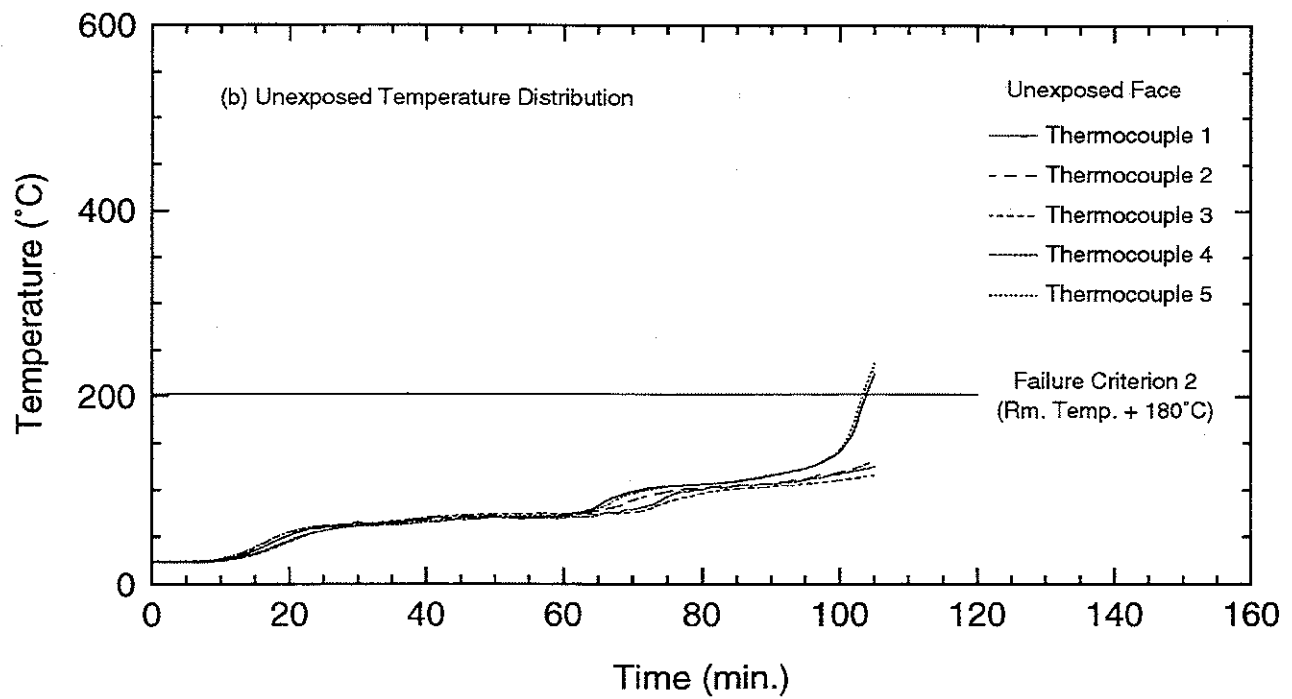
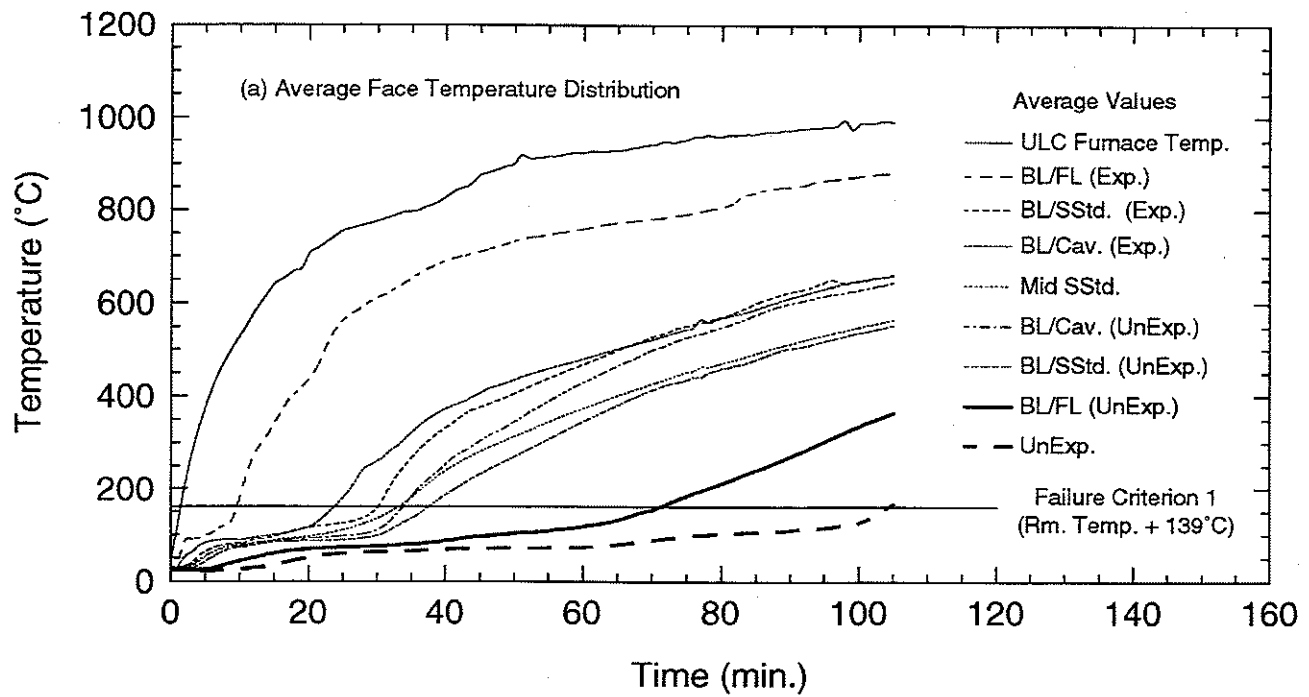


Figure 15. Temperature Distributions For Small Scale Test Assembly S-03

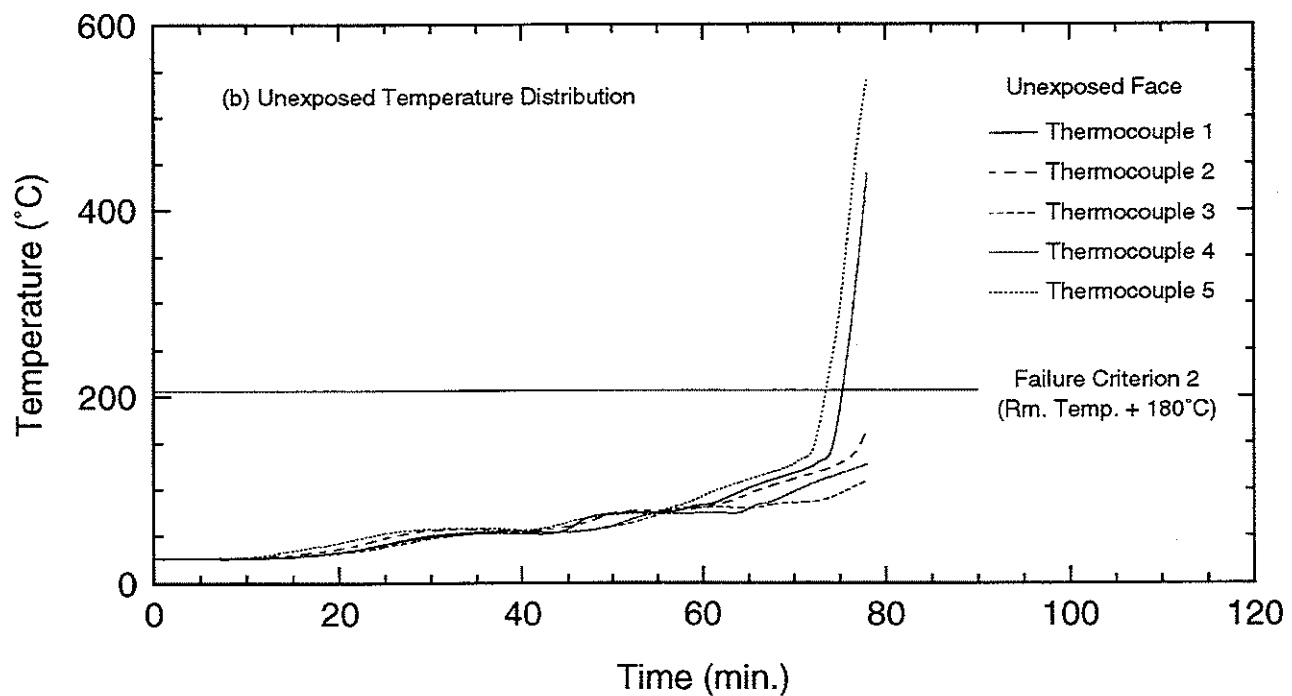
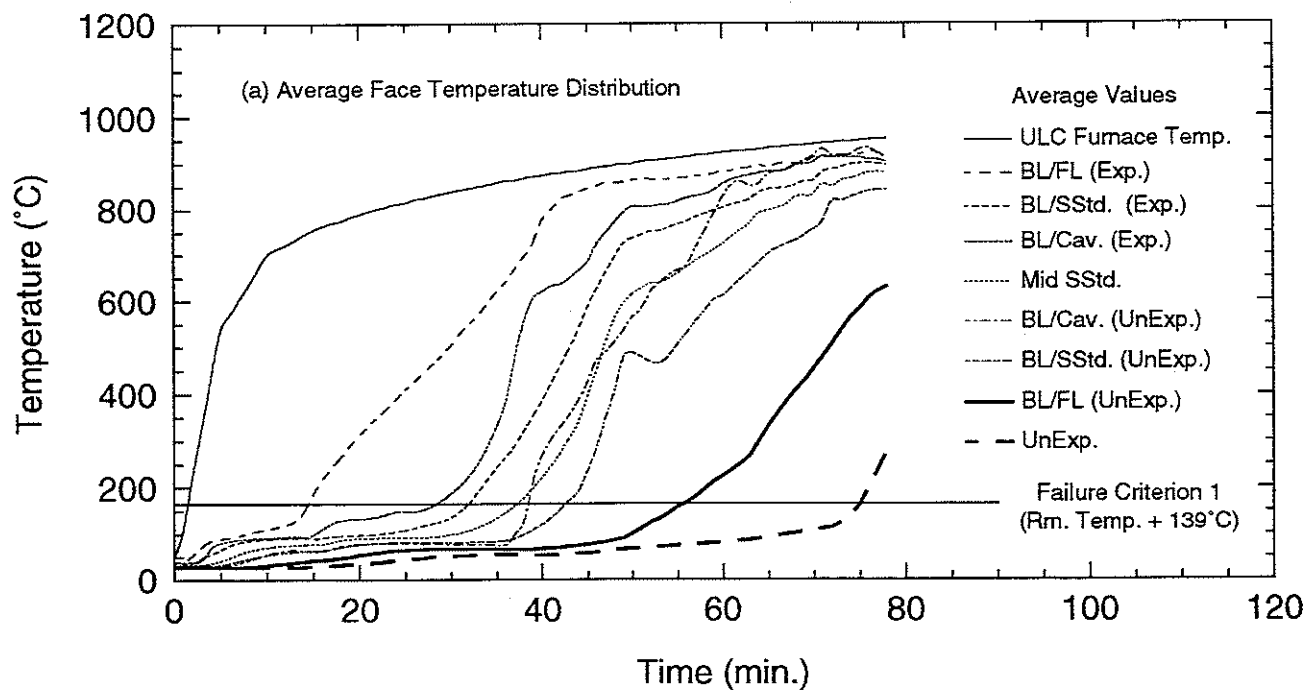


Figure 16. Temperature Distributions For Small Scale Test Assembly S-32

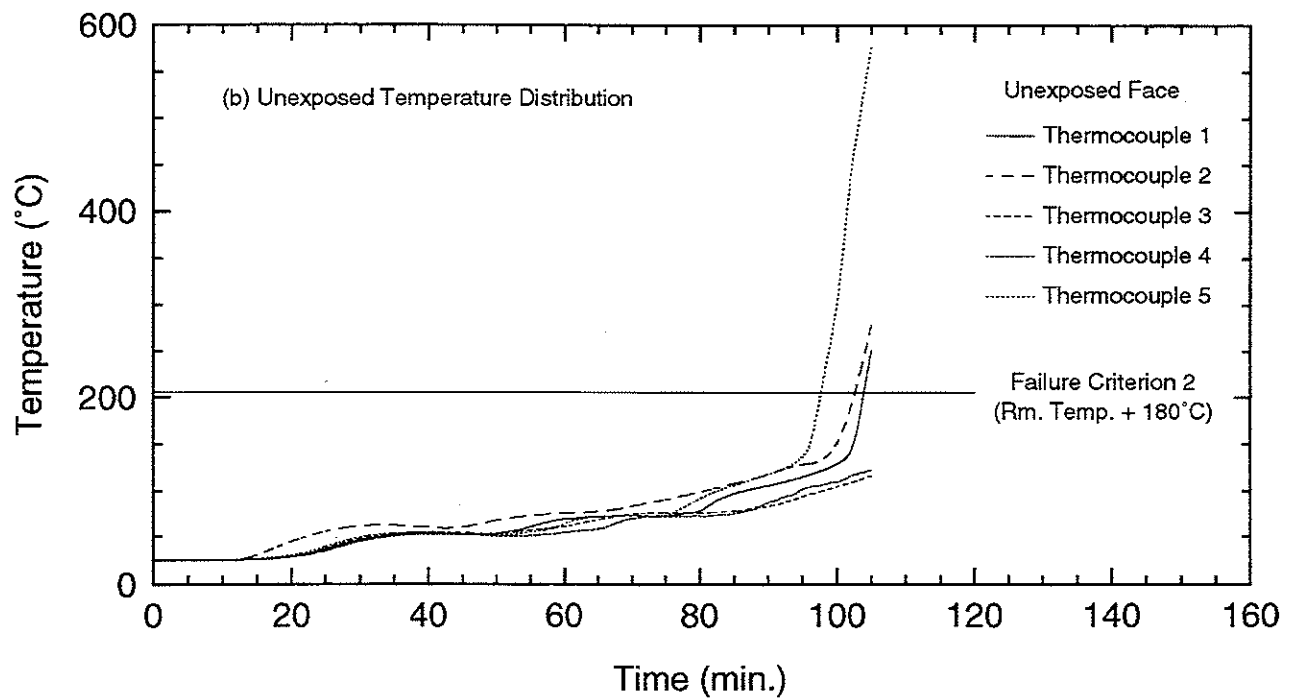
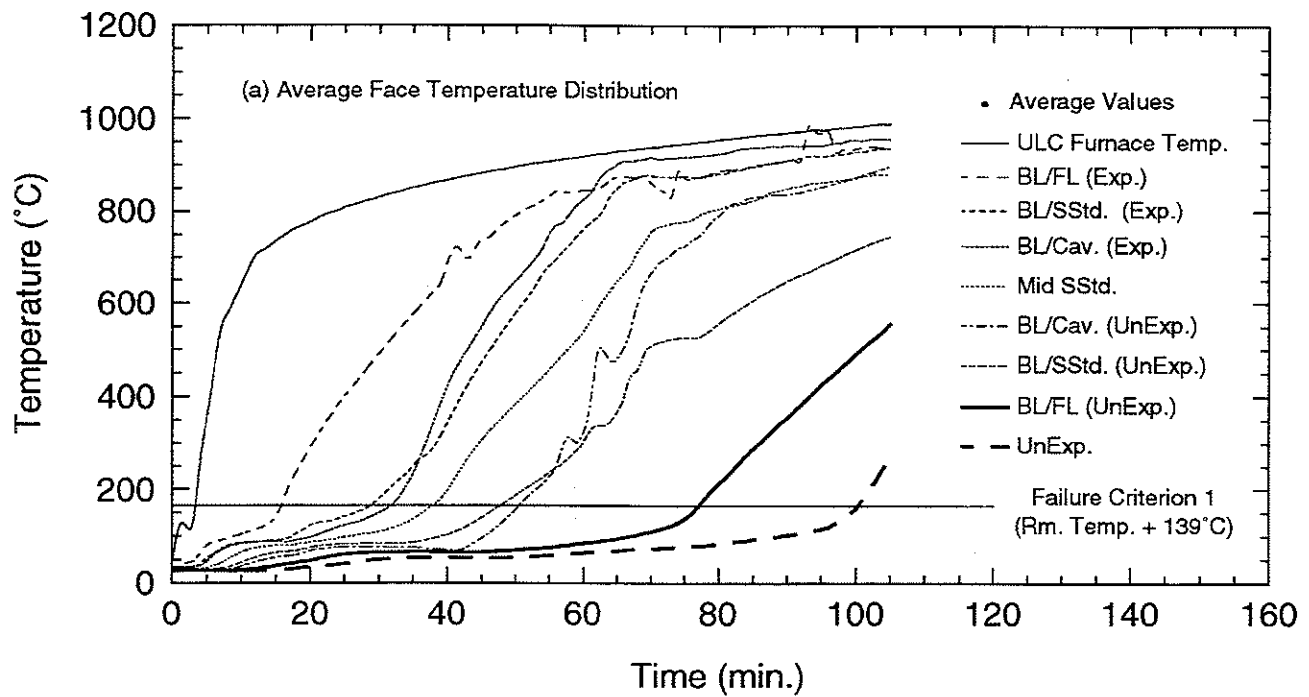


Figure 17. Temperature Distributions For Small Scale Test Assembly S-33

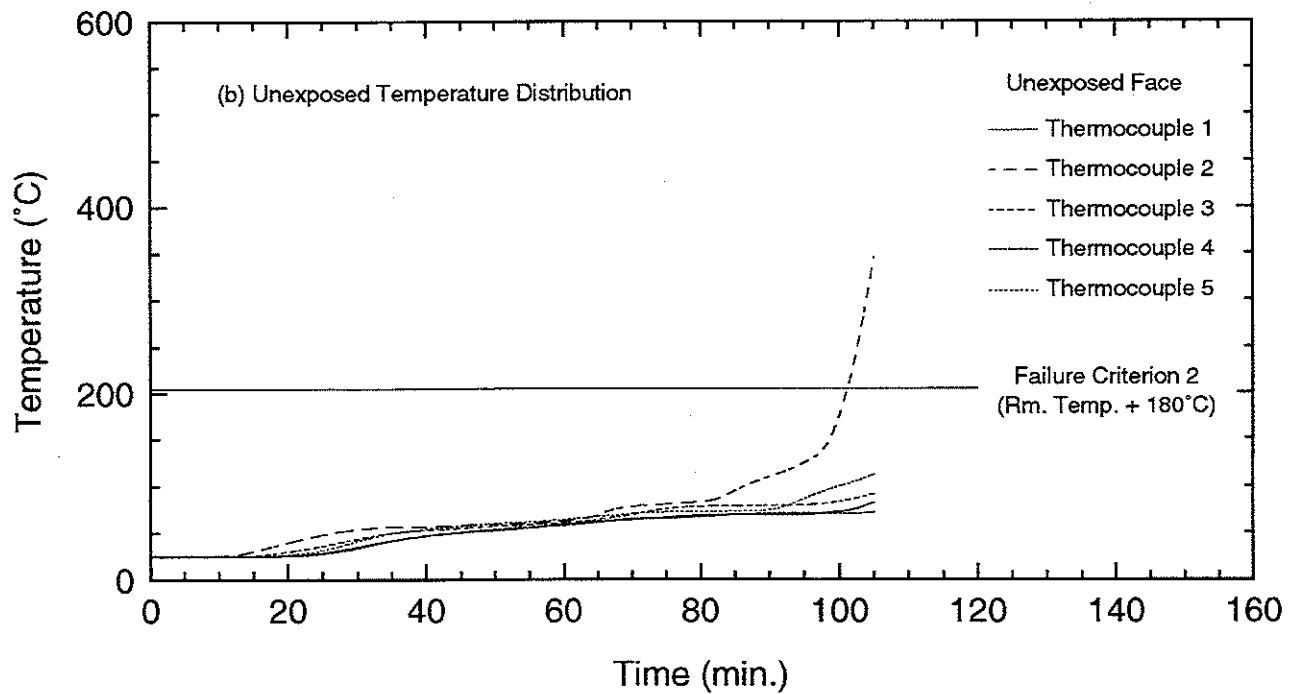
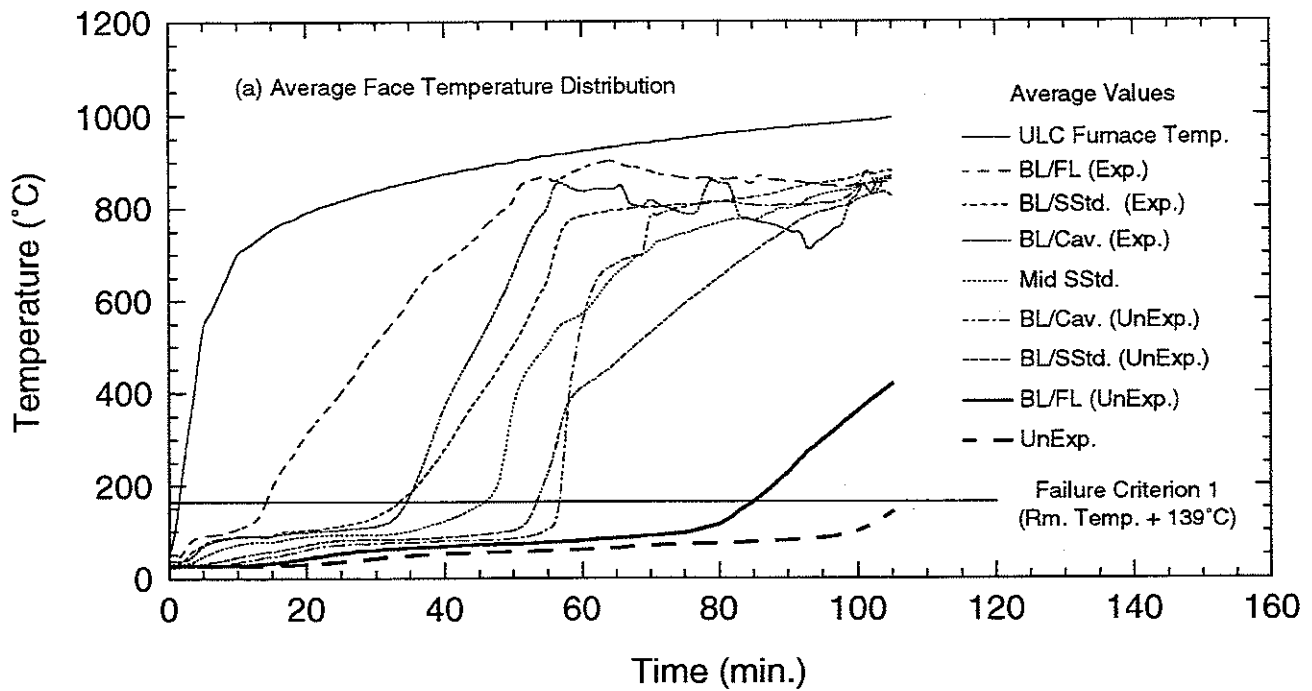


Figure 18. Temperature Distributions For Small Scale Test Assembly S-34

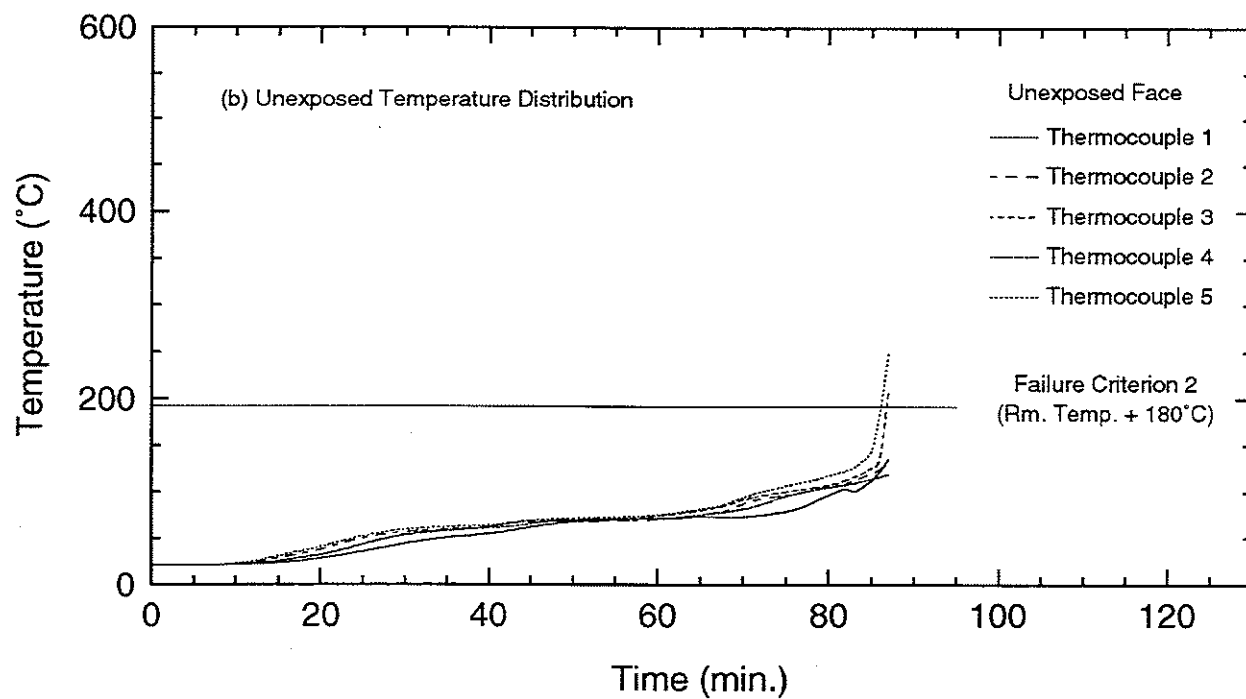
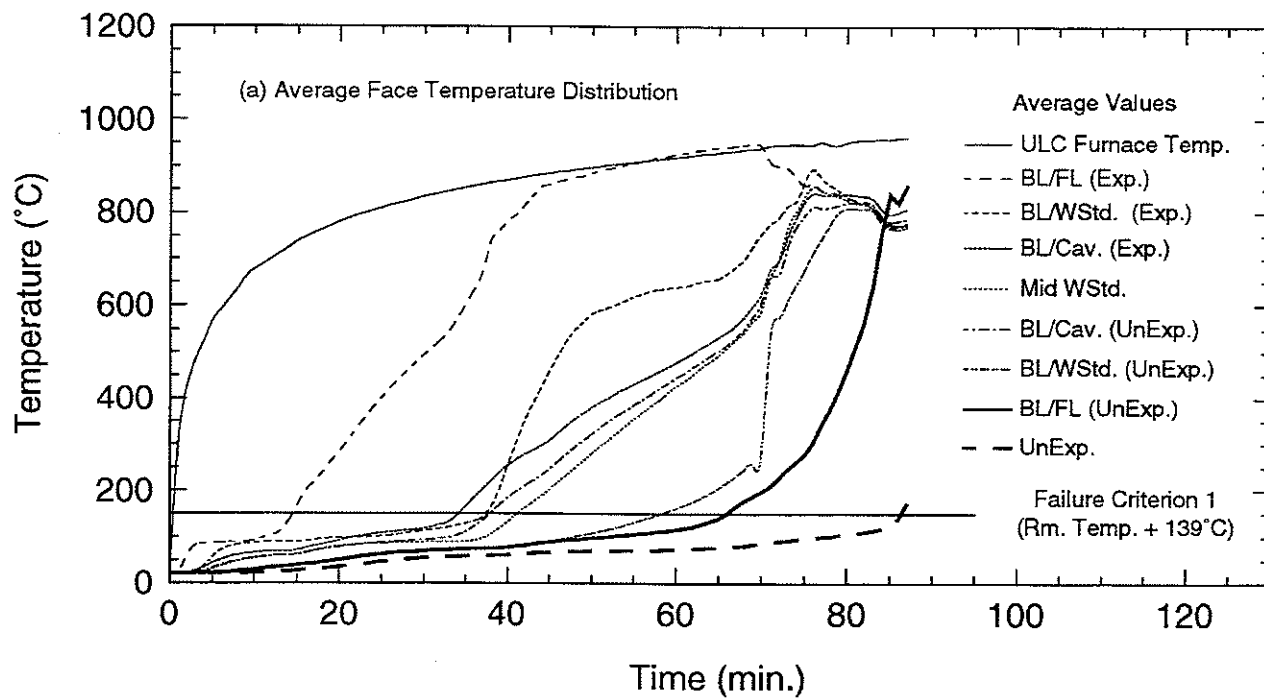


Figure 19. Temperature Distributions For Small Scale Test Assembly S-49

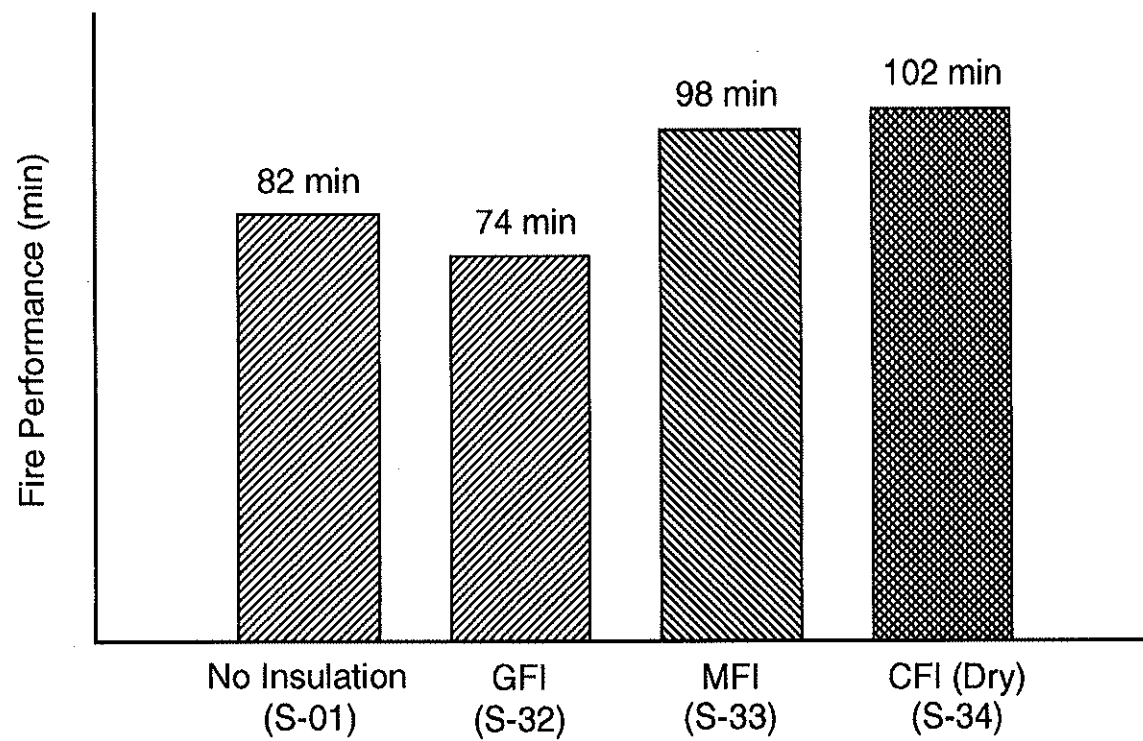


Figure 20. Effect of Insulation (90 mm thick) on Fire Performance of Small-Scale Wall Assemblies

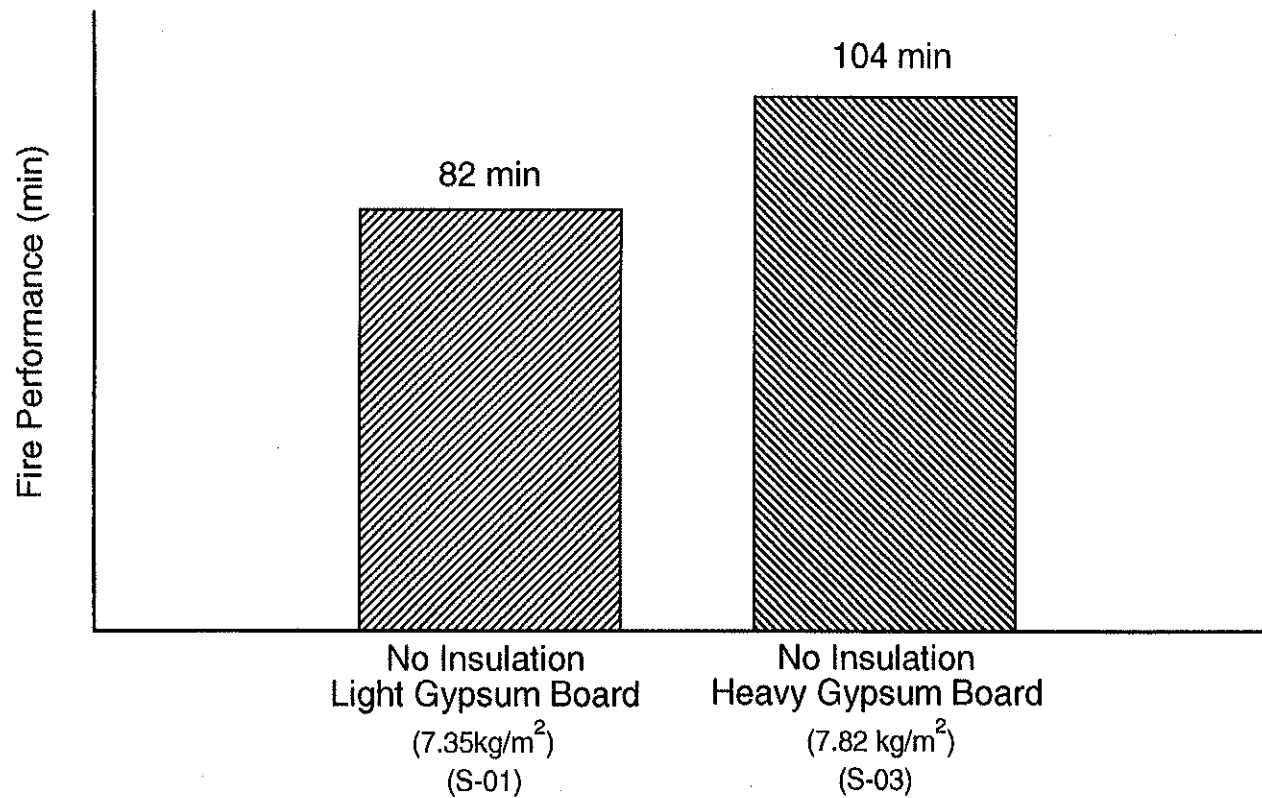


Figure 21. Effect of Reduction of Mass/Unit Area of Regular Gypsum Board on Fire Performance of Small-Scale Wall Assemblies

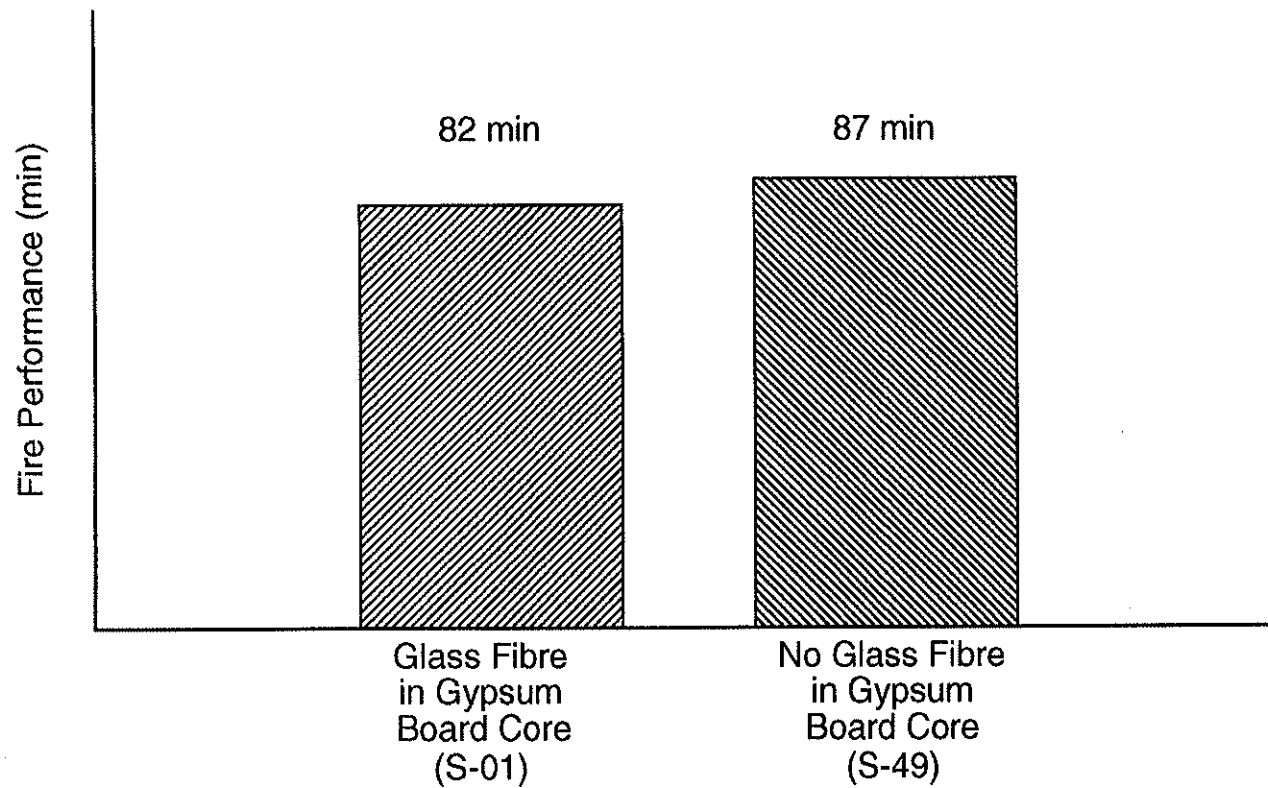


Figure 22. Effect of Glass Fibre in Regular Light Gypsum Board Core on Fire Performance of Small-Scale Wall Assemblies