

LAPITEC S.P.A

FIRE TEST REPORT

SCOPE OF WORK

NFPA 285 TESTING ON EXTERIOR NON-LOAD-BEARING WALL ASSEMBLY CONTAINING LAPITEC'S SINTERED STONE TILES AND UNDERCUT ANCHORS SUPPORTING SYSTEM

REPORT NUMBER

K1436.01-121-24-R1

TEST DATE

01/22/21

ISSUE DATE

02/02/21

REVISED DATE

03/10/21

RECORD RETENTION END DATE

01/22/25

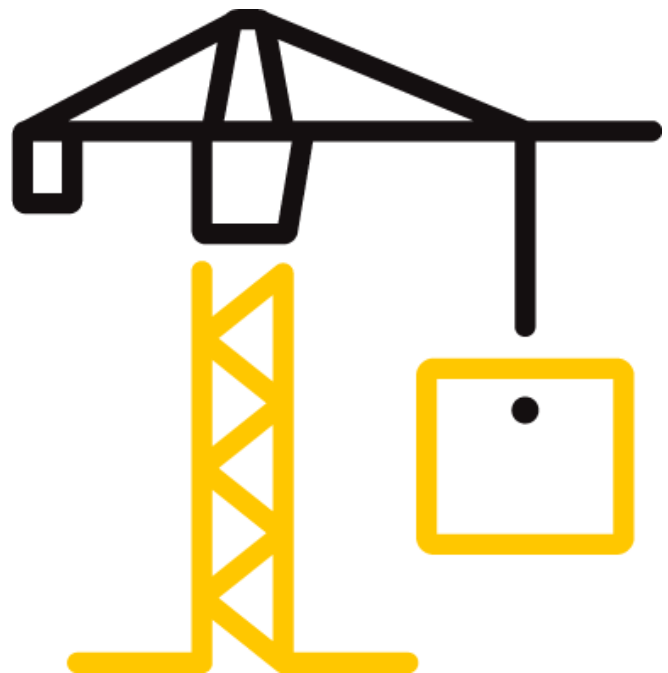
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TEST REPORT FOR LAPITEC S.P.A

Report No.: K1436.01-121-24-R1

Date: 02/02/21

Revised Date: 03/10/21

REPORT ISSUED TO

LAPITEC S.P.A

Via Bassanese 6

31050 Vedelago, Italy

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Lapitec S.p.a, Via Bassanese 6, 31050 Vedelago, Italy, to evaluate the flame propagation characteristics of an exterior, non-load-bearing wall assembly containing Lapitec's Sintered Stone Tile and Undercut Anchors Supporting System. Testing was conducted at the Intertek B&C test facility in York, Pennsylvania. Results obtained are tested values and were secured by using the designated test method(s). A summary of test results and the complete graphical test data is reported herein.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

Wall System: Exterior Non-load-bearing Wall Assembly

Combustible Components: TYVEK® COMMERCIALWRAP®, Fischer Insert

NFPA 285 Test Results

The assembly described and tested in this report **did** meet the Conditions of Acceptance of NFPA 285. Construction of the full assembly is summarized in Section 7 of this test report.

For INTERTEK B&C:

COMPLETED BY:	Nathan Brillhart	REVIEWED BY:	Ethan Grove
TITLE:	Technician – Fire Testing	TITLE:	Manager – Fire Testing
SIGNATURE:		SIGNATURE:	
DATE:	03/10/21	DATE:	03/10/21

NDB:ddr

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SECTION 3

TEST METHOD

The assembly was evaluated in accordance with the following:

NFPA 285-19, *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components*

SECTION 4

MATERIAL SOURCE/INSTALLATION

The components of the test assembly were provided by the client except for the core wall components that were acquired and assembled by Intertek B&C personnel.

SECTION 5

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Nathan Brillhart	Intertek B&C
Mark Dluzeski	Intertek B&C
Logan Chronister	Intertek B&C
Scott Gingrich	Intertek B&C

SECTION 6

TEST PROCEDURE

The wall assembly was instrumented with thermocouples (TCs) in accordance with figures 6.1(a) and 6.1(b) of NFPA 285 test method. 18-gauge Type "K" TCs were used in the burn room and 20-gauge Type "K" was used on exterior façade and cavity air space. The window burner was positioned in the center of the opening and 3-1/2 in. off the exterior face of the wall assembly. Testing was performed on 01/22/2021 in accordance with NFPA 285 test method. Ambient conditions were 61°F and 21% relative humidity. An anemometer was used to verify airflow across test assembly was less than 4 ft./sec as specified in the test method. Video recording, digital photographs, visual observations, and data collection were performed prior, during, and after testing was completed. Temperature data was recorded every 15 seconds. The test was performed at 01:23 PM with the burners on for 30 minutes. All observations are recorded in the table located in Section 8.

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SECTION 6 (CONTINUED)

TEST PROCEDURE

The apparatus is considered to be under calibrated conditions when the time average temperatures and the time average heat flux readings obtained for a calibration wall match the requirements of Table 8.1.6 of NFPA 285. Calibration was performed on February 19, 2020 with natural gas as the fuel source and the window burner placed 3-1/2 inches from the exterior surface of the assembly. Table 6.1 of this section shows the average burner flow and heat flux. Table 6.2 shows the time average temperatures obtained during the calibration test.

Table 6.1 Average Burner Output Information

TIME INTERVAL (MIN:SEC)	ROOM BURNER (SCFM)	WINDOW BURNER (SCFM)	2 FT FLUX (W/cm ²)	3 FT FLUX (W/cm ²)	4 FT FLUX (W/cm ²)
0:00-5:00	35.6	0.0	1.2	0.8	0.6
5:00-10:00	35.6	4.3	2.2	1.8	1.3
10:00-15:00	43.8	5.6	2.4	2.5	1.7
15:00-20:00	43.6	8.1	2.4	3.0	2.2
20:00-25:00	43.6	11.0	2.6	3.4	2.4
25:00-30:00	46.5	15.2	3.4	3.9	2.9

Table 6.2 Average Time Temperature Values for Calibration*

TIME INTERVAL (MIN:SEC)	THERMOCOUPLE LOCATIONS							
	BURN ROOM (°F)	INT. WALL (°F)	1FT (°F)	2FT (°F)	3FT (°F)	4FT (°F)	5FT (°F)	6FT (°F)
0:00-5:00	1117	1098	695	771	723	679	569	517
5:00-10:00	1241	1231	859	971	1007	990	874	803
10:00-15:00	1430	1418	986	1101	1148	1126	1004	907
15:00-20:00	1475	1457	1050	1151	1210	1211	1107	1016
20:00-25:00	1503	1485	1081	1180	1252	1266	1171	1079
25:00-30:00	1585	1557	1139	1239	1328	1360	1263	1164

*Some values obtained during calibration are considered out of the 10% deviation allowed by versions of NFPA 285 earlier than the 2019.

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SECTION 7**TEST ASSEMBLY DESCRIPTION****Interior Cladding**

The full interior surface of the wall assembly was clad with 5/8 in. thick National Gypsum Gold Bond® Fire-Shield® gypsum board meeting the requirements of ASTM C1396. The gypsum board was fastened to the wall framing with #6 x 1-1/4 in. long, bugle head, self-drilling screws with a nominal spacing of 8 in. around the board perimeter and 12 in. in the field. Drywall orientation on the burn floor consisted of four pieces of gypsum board fastened to the core wall, with the run edge running parallel with the framing and the cut edge perpendicular to the framing. Drywall orientation on the second floor consisted of vertically oriented boards with the run edge running parallel with the framing and the cut edge perpendicular to the framing. Drywall orientation for the areas above the top support angle and below the bottom support angle consisted of boards that were oriented with the run edge perpendicular with the framing. All joints were taped with USG Sheetrock® Brand paper joint tape and spackled with USG Sheetrock® Brand joint compound. All fastener heads were spackled with USG Sheetrock® Brand joint compound.

Framing

The core wall consisted of 18 ft. long, 6 in. deep, 16-gauge galvanized steel studs fastened to 14 ft. length, 6 in. deep, 16-gauge galvanized steel track as shown in the drawings found in Section 14. The studs were connected to the track with one #6 x 1/2 in. long self-drilling, pan head fastener per stud flange. ROCKWOOL™ Cavityrock® pieces with a nominal density of 4.0 lb. /cu. ft. were installed per the manufacturer's installation instructions to fit into each stud cavity placed at the second story floor line. The safing length dimensions were no less than the apparatus floor slab thickness of 8 in.

Exterior Sheathing

5/8 in. thick National Gypsum Gold Bond® eXP® exterior gypsum sheathing, meeting the requirements of ASTM C1177, was placed horizontally across the full exterior surface of the assembly. The gypsum sheathing was fastened to the wall framing with #6 x 1-1/4 in. long, bugle head, self-drilling screws with a nominal spacing of 8 in. around the board perimeter and 12 in. in the field.

Water-resistive Barrier

TYVEK® COMMERCIALWRAP® was installed horizontally over the exterior sheathing and held in place with staples until the aluminum L brackets were installed. The upper layer overlapped the bottom layer a minimum of 6 in.

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SECTION 7 (CONTINUED)**TEST ASSEMBLY DESCRIPTION****Window Opening**

A 78 in. wide x 30 in. tall window opening was made from 16-gauge galvanized steel track. The opening was centered on the vertical centerline of the wall assembly with the finished sill located 30 in. above the first story floor line. The steel track sections were mechanically fastened with #6 x 1/2 in. long self-drilling, pan head fasteners at each corner. Upon the completion of the exterior sheathing, 18-gauge galvanized steel metal flashing was installed around in the opening. The 15-7/8 in. wide flashing extended from the interior gypsum to the exterior edge of the sintered stone panels and was fastened every 6 in. on center to the framing with #10x1 in. HWH self-drilling screws.

Exterior Insulation

Two layers of ROCKWOOL™ Cavityrock® were installed around the aluminum L-brackets and covered the entire assembly. The first (inner) layer consisted of 2 in. thick Cavityrock® and the second (outer) layer utilized 2-1/2 in. thick Cavityrock®. The final exterior insulation thickness was 5-1/2 in. The mineral wool was held in place by the L-brackets.

Exterior Cladding

160mm deep, SFS Mensola Avanti FP 160, aluminum L-brackets with a thermal break were fastened to the core wall framing with two 4,8 x 45 self-drilling screws and two M8x24 washers per bracket. The first row was installed 187 mm above the bottom of the test assembly. Additional rows were installed 693mm, 1243mm, and 1793mm above the base of the wall. The first bracket attached to the jamb framing was installed 300mm above the brackets just below the opening and a second bracket 500mm above the first. Brackets above the window opening started 300mm above the second bracket at the jambs and were spaced every 570mm to the top of the assembly.

45x45x2,3mm SFS Avanti L profiles were oriented vertically, fitted into the L-bracket slots and secured to the L-bracket with two SLA3/6-8-S4-SR2-4,2x19 stainless steel (SS) screws. The distance from the face of the exterior sheathing to the face of the L-profile was 7 inches. Vertical profiles left-and-right of the opening were 5,412mm long. Profiles above the window opening were 3,770mm long and installed with the bottom flush with the opening header. Profiles below the window opening were 882mm long and installed with the top flush with the opening sill. The profiles attached at the jambs were 795mm long.

Aluminum rails, BWM-ATK 103 P, were oriented horizontally and fastened at each L-profile intersection with two SLA3/6-8-S4-SR2-4,2x19 SS screws. The locations of the rails aligned with the panel brackets. The first rail was installed 14mm above the top of the window opening.

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Subsequent rows alternated between 650mm and 105mm to the top of the assembly. Rails below the window were installed 862mm and 1642mm below the rail at the header. Rails left and right of the opening were installed 105mm from the rails above and below the opening.

12mm thick Lapitec Tiles were pre-cut and drilled to cover the entire exterior surface of the assembly. Fischer inserts, FZP-II 11x8 M6/T/12 PA, were installed in the predrilled locations with a Fischer tool and tightened to 5 Nm. Aluminum panels clasps were attached to the Fischer inserts with M6 nuts and M6x10 washers. Rigid clasps were located at the bottom of the tiles. Adjustable clasps were located at the top of the tiles and fitted with a M6x10 bolt for panel adjustments. Starting at the bottom of the assembly the tiles were placed on the rails and adjusted to maintain a 1/4 in. gap between panels. After installation of the tiles a continuous horizontal joint was located 29-3/4 in. above the top of the window opening. Continuous vertical joints were located 39 in. to the left and right of the assembly centerline at the opening jambs. The depth of the air gap from the face of the mineral wool insulation to the back of the tile was 2-1/2 in.

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SECTION 8

TEST OBSERVATIONS

TIME (Min:Sec)	OBSERVATIONS
00:00	Ignition of room burner.
01:30	Window header flashing begins to warp.
01:44	Interior gypsum paper ignites.
02:40	Tile directly above the window opening cracks.
05:00	Ignition of window opening burner.
05:18	Tile directly above the window opening develops a second visible crack.
10:30	Tile in the second row above the window opening cracks.
21:08	Small section of tile drops from the bottom of the tile at the top of the assembly.
29:00	Black smoke begins to emit from behind the right jamb flashing
30:00	Burners Extinguished. Test Concluded.

SECTION 9

TEST RESULTS

TEST REQUIREMENTS	TEST RESULTS	PASS/FAIL
Flames did not reach 10 ft. above the window opening header.	Flames did not reach 10 ft. above the window opening header.	PASS
Flames did not reach a lateral distance of 5 ft. from the vertical centerline.	Flames did not reach a lateral distance of 5 ft. from the vertical centerline.	PASS
Flames did not propagate beyond the limits of the first story test room.	Flames did not propagate beyond the limits of the first story test room.	PASS
No visible flaming in the second story test room	No visible flaming in the second story test room.	PASS
TC's 11 and 14-17 (1000°F limit)	TC's 11 and 14-17 did not exceed their 1000°F limit.	PASS
TC's 18-19, 28, and 31-40 (1000°F limit)	TC's 18-19, 28, and 31-40 did not exceed their 1000°F limit.	PASS
TC's 49-54 (500°F above ambient)	TC's 49-54 did not exceed 500°F above their ambient temperatures.	PASS



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SECTION 10

SKETCH OF EXTERIOR CLADDING BURN PATTERN

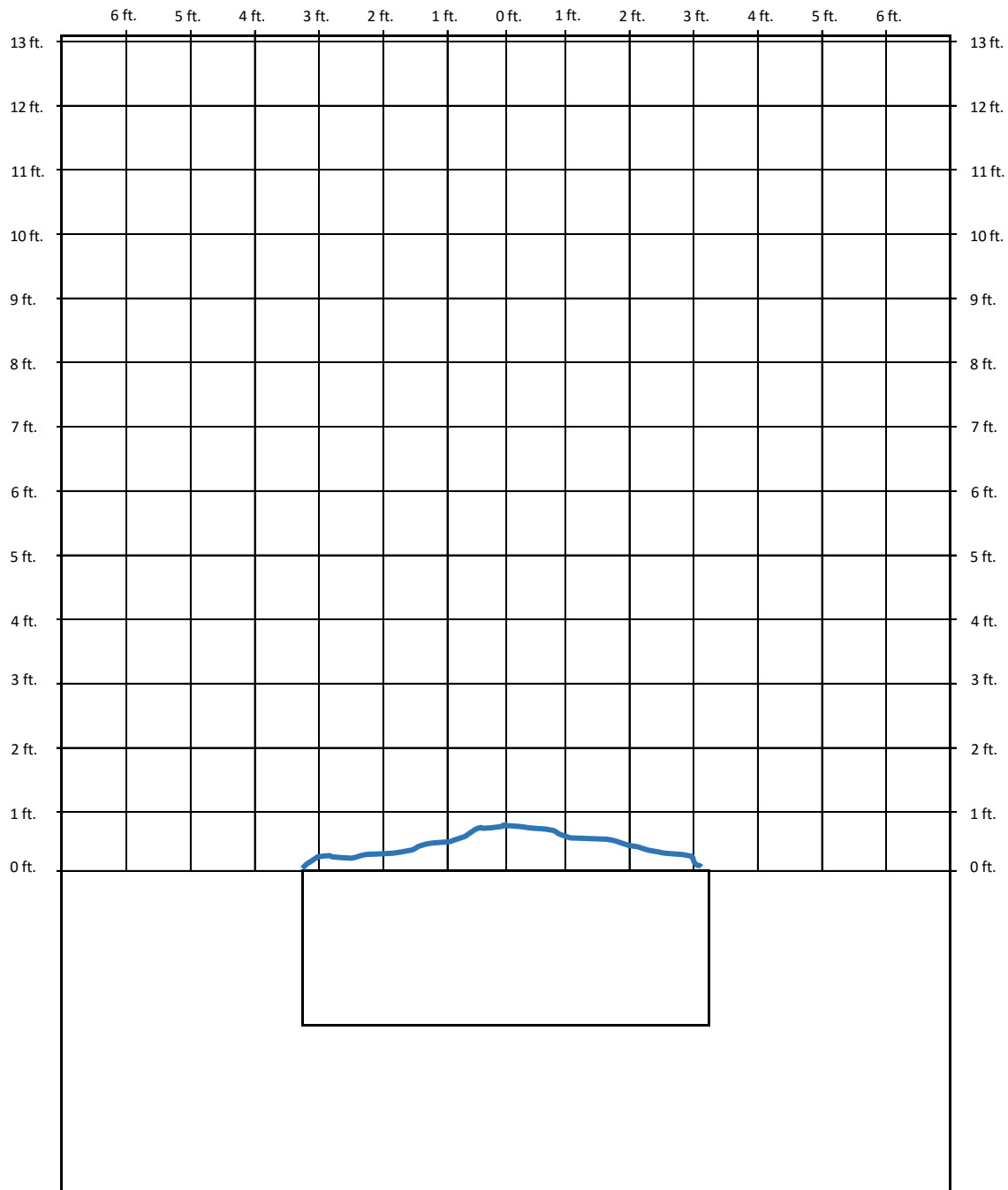
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Blue line shows weather-resistant barrier burn pattern.



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SECTION 11

PHOTOGRAPHS



Photo No. 1
Core Wall Framing Completed



Photo No. 2
Exterior Sheathing Installed

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SECTION 11 (CONTINUED)

PHOTOGRAPHS



Photo No. 3

TYVEK® COMMERCIALWRAP® Installed



Photo No. 4

L-Brackets Installed

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PHOTOGRAPHS



Photo No. 5

2 Inch Layer of Mineral Wool Installed (First Layer)



Photo No. 6

2-1/2 Inch Layer of Mineral Wool Installed (Second Layer)

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PHOTOGRAPHS



Photo No. 7
L-Profiles Installed

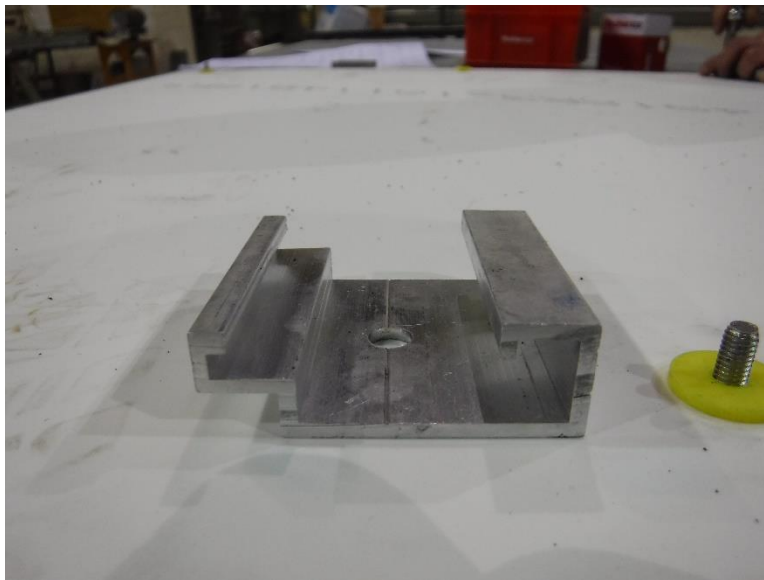


Photo No. 8
Typical Fischer Insert and Clasp

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PHOTOGRAPHS



Photo No. 9

Installation of Horizontal Rails and Tile Cladding

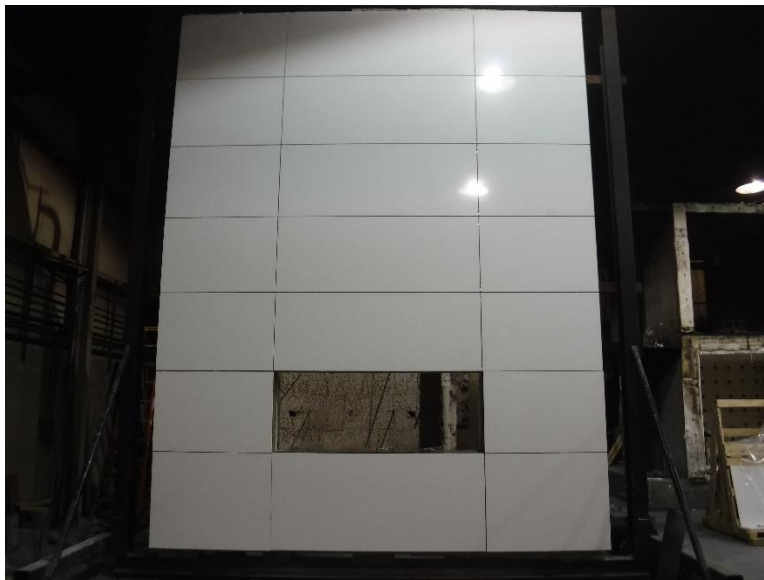


Photo No. 10

Completed Cladding System

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SECTION 11 (CONTINUED)**PHOTOGRAPHS**

Photo No. 11
Safing Installed



Photo No. 12
First Story Interior Gypsum (Pre-test)

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PHOTOGRAPHS



Photo No. 13
Second Story Interior Gypsum (Pre-test)



Photo No. 14
Completed Assembly (Pre-test)

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PHOTOGRAPHS



Photo No. 15
Ignition of Room Burner



Photo No. 16
Ignition of Window Burner

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PHOTOGRAPHS



Photo No. 17
Burners Extinguished

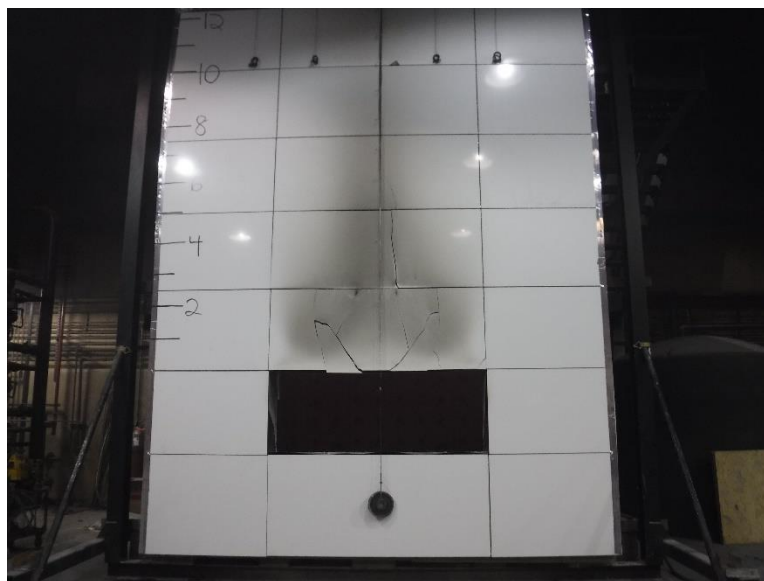


Photo No. 18
Complete Assembly (Post-test)

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PHOTOGRAPHS



Photo No. 19
First Story Interior Gypsum (Post-test)



Photo No. 20
Second Story Interior Gypsum (Post-test)

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PHOTOGRAPHS

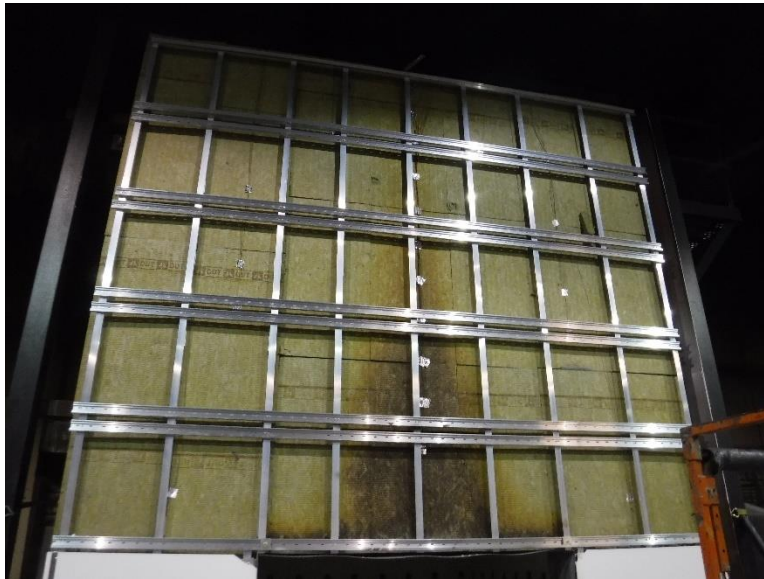


Photo No. 21
Exterior Cladding Removed



Photo No. 22
Unexposed Side of Exterior Cladding

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PHOTOGRAPHS



Photo No. 23
Mineral Wool Removed

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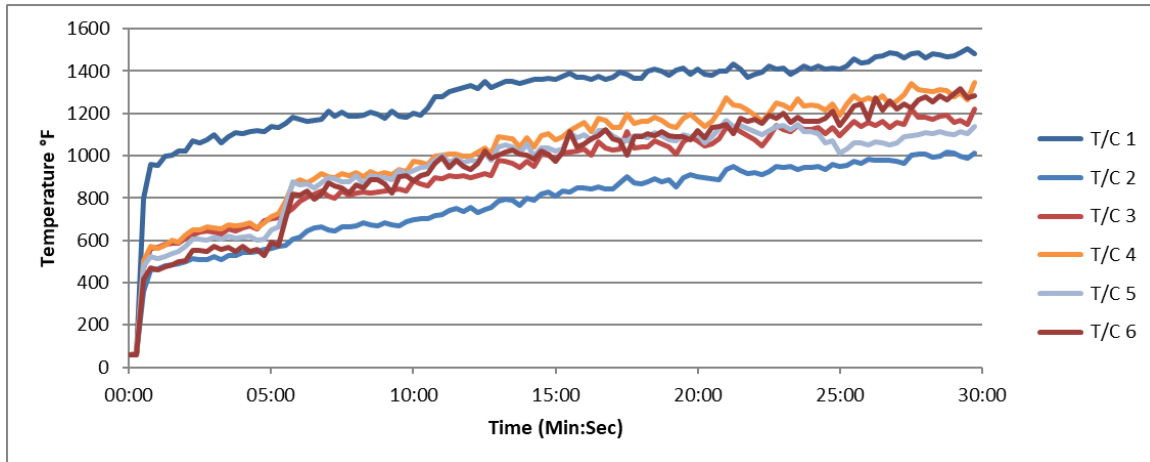
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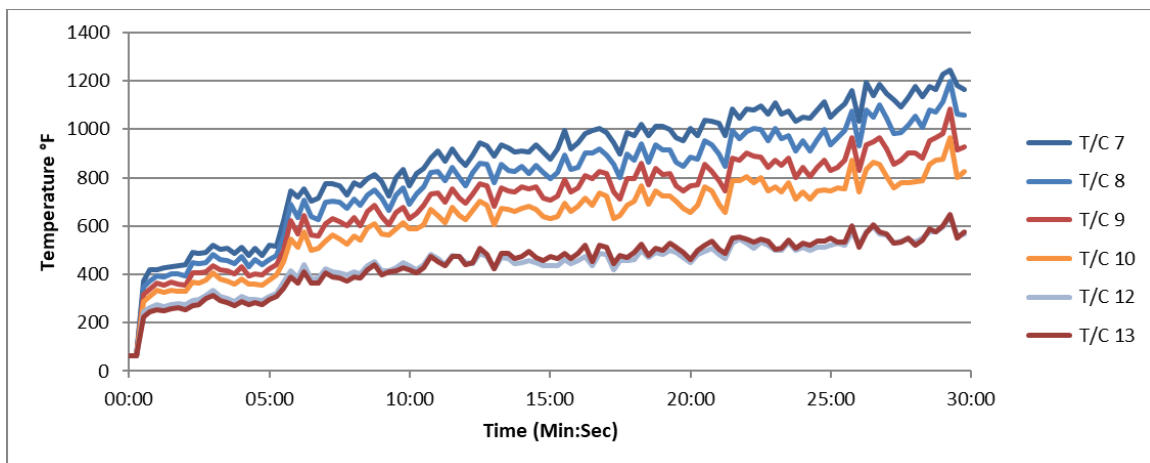
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SECTION 12

GRAPHS



Graph No. 1
Assembly Centerline (Assembly Exterior)



Graph No. 2
Assembly Centerline (Assembly Exterior)

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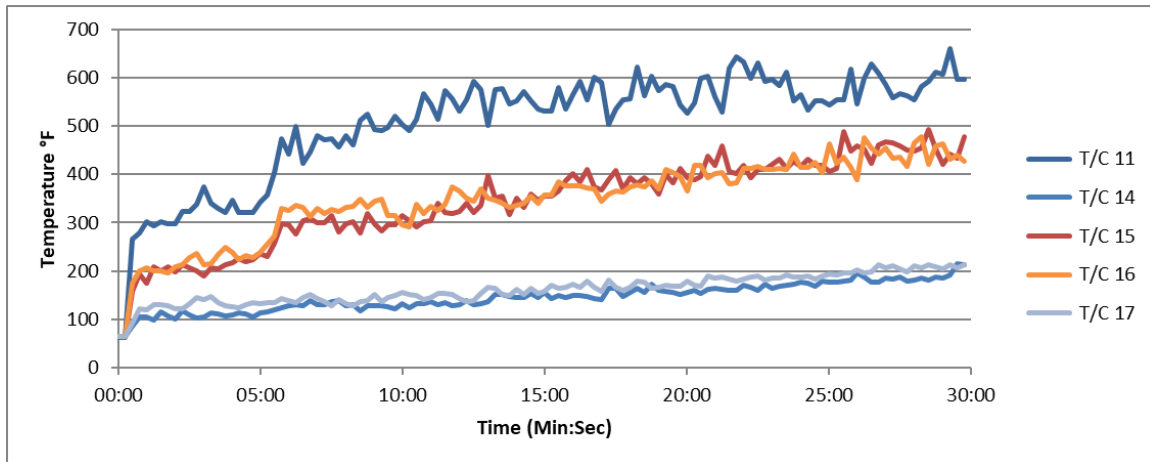
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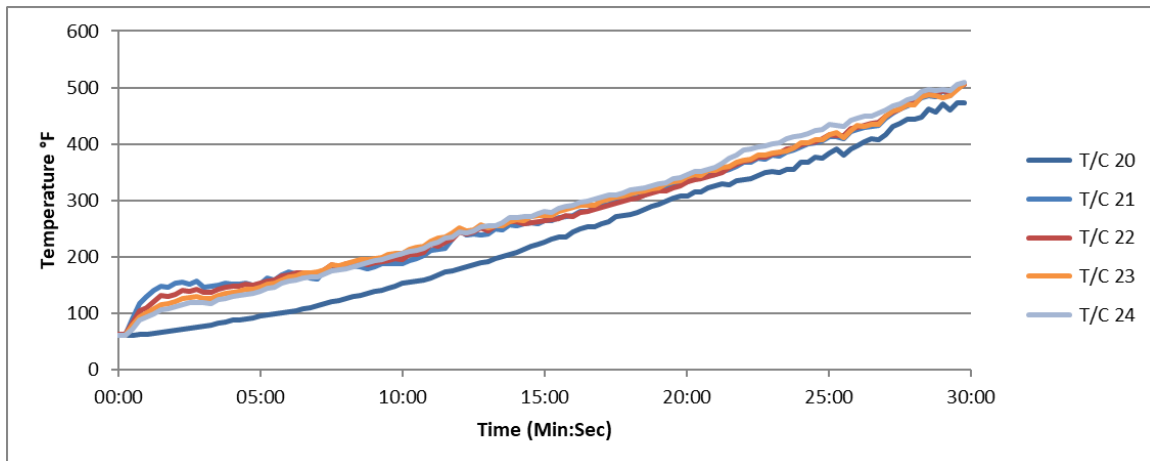
SECTION 12 (CONTINUED)

GRAPHS



Graph No. 3

10 ft. above the Window Opening Header (Assembly Exterior)



Graph No. 4

Assembly Centerline (Air Cavity Space)

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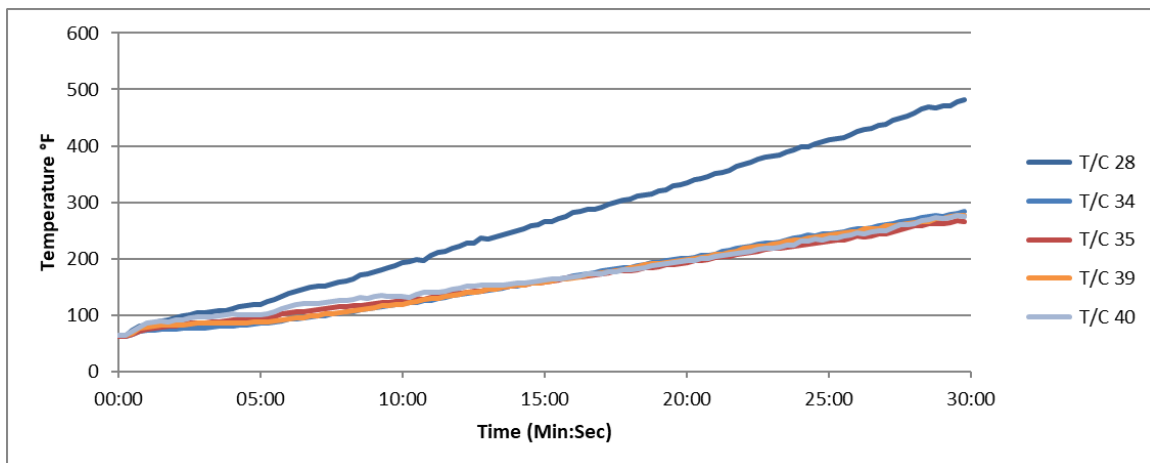
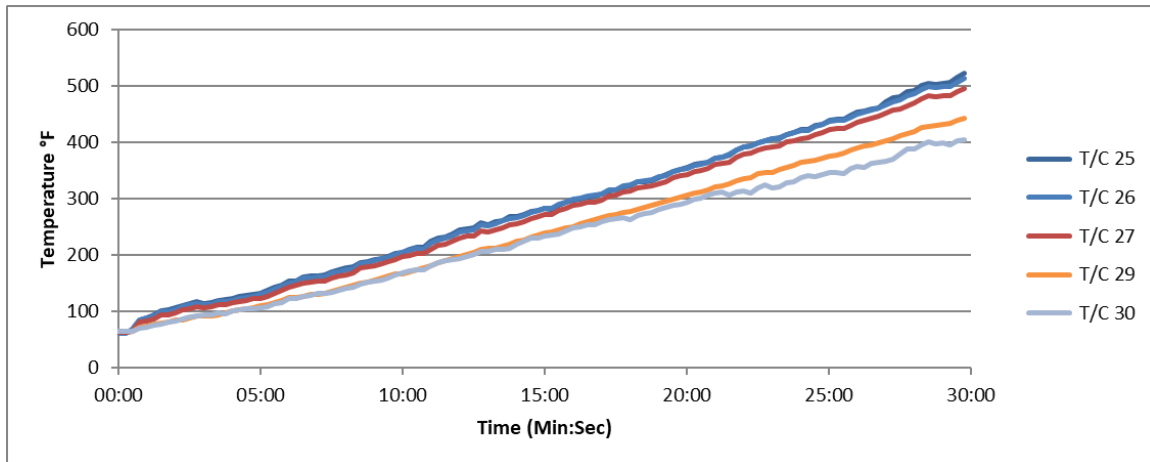
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GRAPHS



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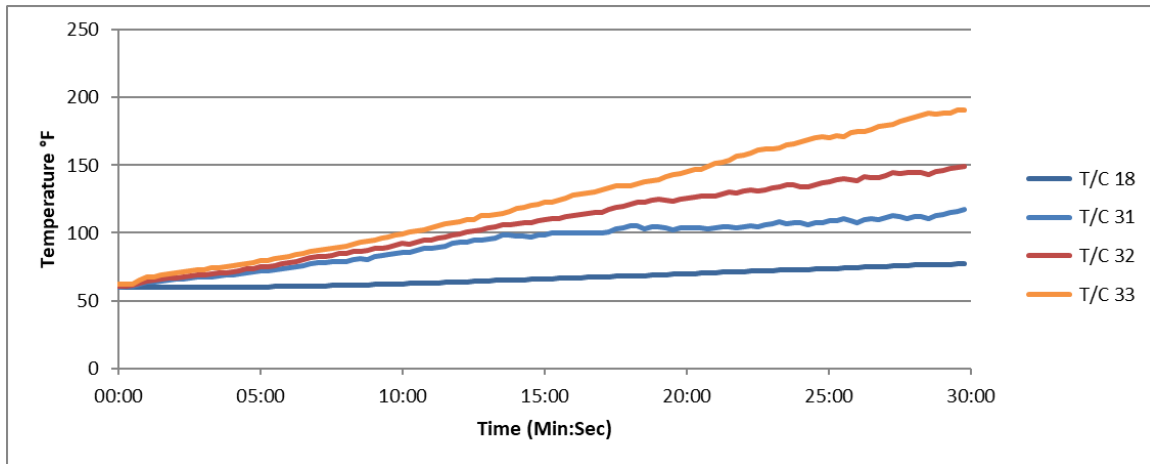
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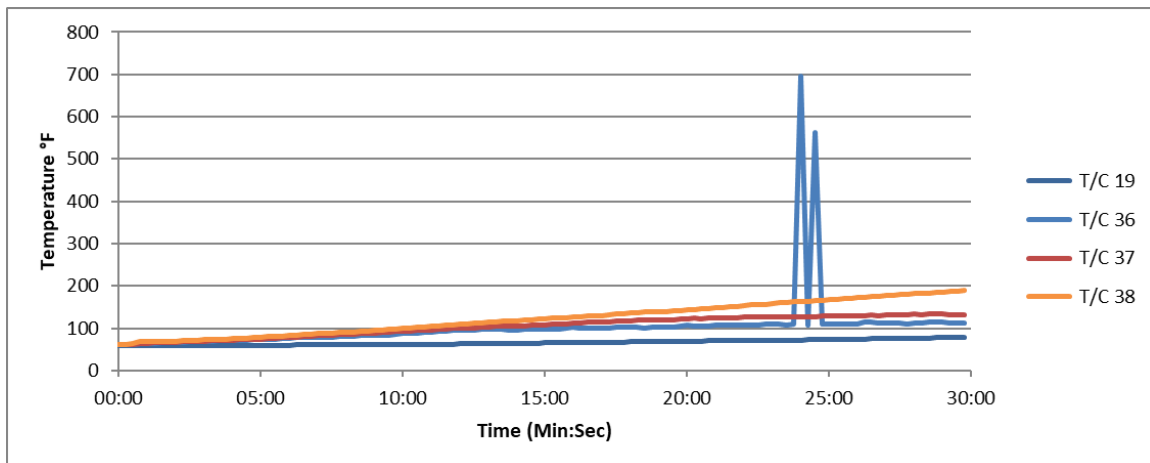
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GRAPHS



Graph No. 7
Left of Assembly Centerline (Air Cavity Space)



Graph No. 8
Right of Assembly Centerline (Air Cavity Space)

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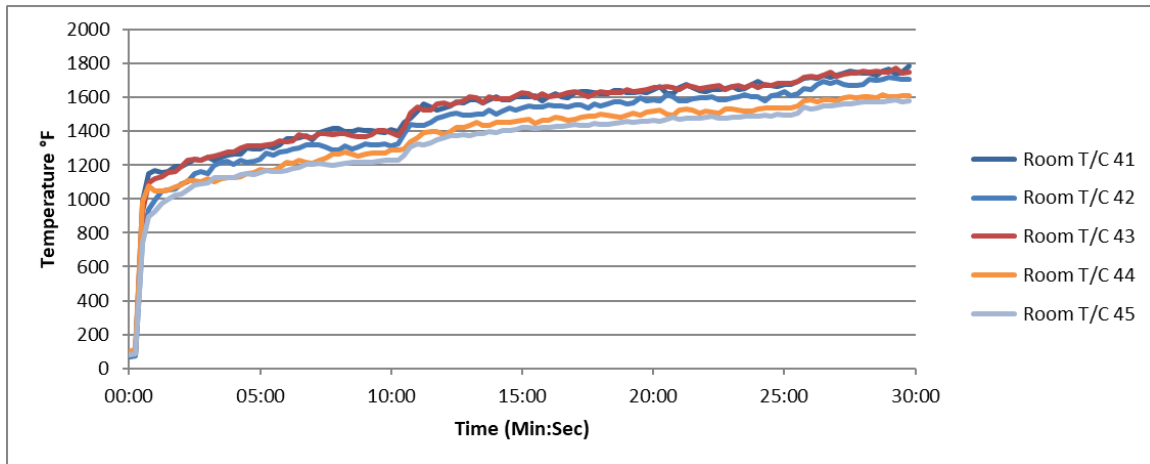
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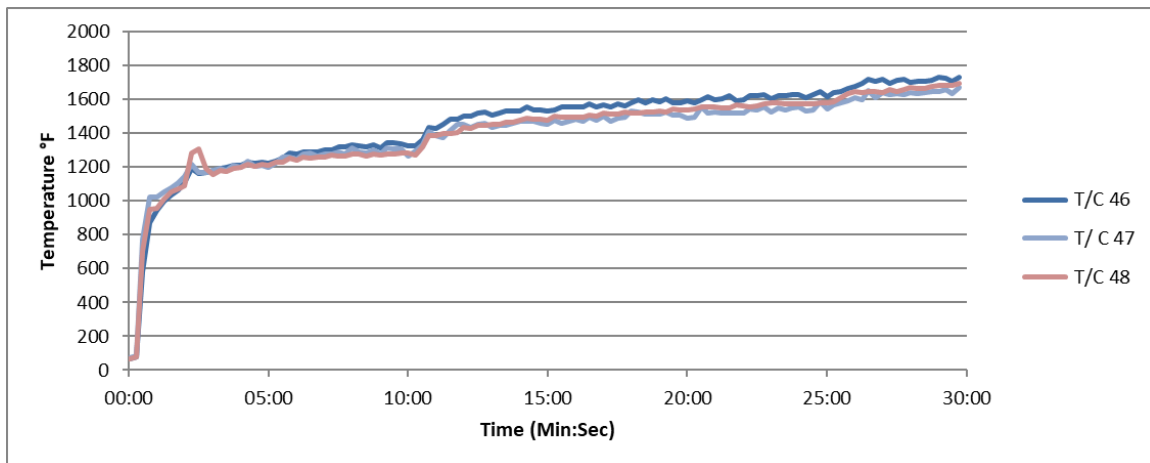
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GRAPHS



Graph No. 9
First-story Test Room Ceiling



Graph No. 10
First-story Interior Wall Surface

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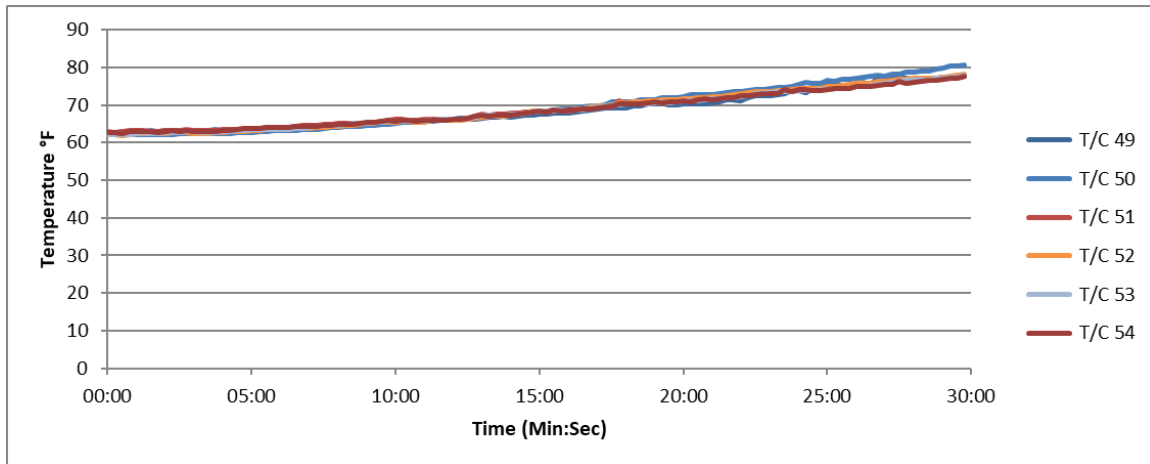
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GRAPHS



Graph No. 11
Second-story Interior Wall Surface

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SECTION 13

NUMERICAL DATA (°F)

TIME (Min:Sec)	ROOM GAS FLOW	WINDOW GAS FLOW	T/C 1	T/C 2	T/C 3	T/C 4	T/C 5	T/C 6	T/C 7	T/C 8	T/C 9
00:00	0.0	0.0	59	59	59	59	59	60	62	62	63
00:15	1.4	0.0	59	63	62	62	61	61	62	62	63
00:30	40.2	0.0	799	359	469	502	479	418	373	348	319
00:45	43.0	0.0	957	462	564	571	526	472	418	374	340
01:00	36.6	0.0	953	464	565	564	512	463	419	393	363
01:15	36.4	0.0	999	479	580	579	523	475	427	387	355
01:30	36.4	0.0	1003	486	585	599	539	485	431	402	369
01:45	36.4	0.0	1020	488	587	592	546	501	437	400	360
02:00	36.4	0.0	1023	497	611	627	571	505	440	395	356
02:15	36.4	0.0	1070	513	623	647	604	554	492	450	407
02:30	36.4	0.0	1063	510	638	649	604	550	488	443	404
02:45	36.4	0.0	1077	508	644	664	600	545	489	449	412
03:00	36.4	0.0	1100	523	640	661	616	573	521	481	437
03:15	36.4	0.0	1062	508	632	652	608	555	505	460	420
03:30	36.4	0.0	1092	527	652	672	618	569	506	458	414
03:45	36.5	0.0	1108	528	645	670	613	549	486	443	402
04:00	36.4	0.0	1106	544	660	674	618	570	511	472	432
04:15	36.4	0.0	1114	541	670	683	621	547	476	433	392
04:30	36.4	0.0	1120	549	655	661	603	557	508	459	403
04:45	36.4	0.0	1116	557	692	683	607	529	477	442	398
05:00	36.4	0.0	1136	564	702	713	647	589	520	462	421
05:15	36.4	0.0	1136	569	708	729	666	578	516	476	440
05:30	36.4	0.6	1151	576	727	783	760	702	624	559	500
05:45	36.4	3.7	1183	605	750	867	877	817	746	691	622
06:00	36.4	4.6	1174	614	786	885	864	815	719	634	567
06:15	36.4	4.4	1164	644	802	874	866	832	754	709	645
06:30	36.4	4.4	1168	657	821	893	848	794	705	641	565
06:45	36.4	4.4	1171	663	832	914	872	819	714	625	560
07:00	36.4	4.4	1210	650	810	899	898	874	775	700	609
07:15	36.4	4.4	1186	645	798	896	894	856	773	701	632
07:30	36.4	4.4	1204	665	832	915	877	849	768	696	620
07:45	36.4	4.4	1189	663	814	906	875	824	729	672	599
08:00	36.4	4.4	1187	670	825	922	907	865	781	709	633
08:15	36.4	4.4	1190	681	826	901	869	846	768	687	602
08:30	36.4	4.4	1207	675	826	925	908	885	796	728	662
08:45	36.4	4.4	1194	667	829	909	902	885	815	747	684
09:00	36.4	4.4	1177	684	835	923	898	868	782	717	640
09:15	36.4	4.4	1211	675	837	908	886	825	726	663	607
09:30	36.4	4.4	1188	670	844	934	929	901	801	729	654
09:45	36.4	4.4	1182	688	832	923	914	904	832	758	679
10:00	36.4	4.3	1202	700	880	975	930	883	766	692	632
10:15	36.4	4.4	1194	703	867	968	944	904	816	731	652

TEST REPORT FOR LAPITEC S.P.A

Report No.: K1436.01-121-24-R1

Date: 02/02/21

Revised Date: 03/10/21

TIME (Min:Sec)	ROOM GAS FLOW	WINDOW GAS FLOW	T/C 1	T/C 2	T/C 3	T/C 4	T/C 5	T/C 6	T/C 7	T/C 8	T/C 9
10:30	38.9	4.8	1226	704	855	960	951	918	839	764	686
10:45	44.2	5.6	1280	715	898	998	980	963	881	819	733
11:00	44.8	5.7	1276	722	893	1001	1001	994	911	826	737
11:15	44.9	5.7	1305	742	904	1007	970	945	867	789	698
11:30	44.8	5.7	1311	751	900	1007	987	981	919	844	752
11:45	44.8	5.7	1321	736	906	999	970	951	876	802	714
12:00	44.8	5.7	1333	755	896	1000	979	934	849	768	695
12:15	44.9	5.7	1317	733	907	1018	972	964	892	822	732
12:30	44.8	5.7	1350	746	918	1036	1013	1020	944	857	776
12:45	44.8	5.7	1325	757	906	1009	980	990	933	854	764
13:00	44.9	5.7	1335	785	980	1089	1043	1004	887	778	680
13:15	44.8	5.7	1352	793	974	1087	1051	1017	938	853	757
13:30	44.8	5.7	1351	788	966	1078	1042	1026	925	830	747
13:45	44.8	5.7	1344	767	944	1043	1014	1007	906	825	740
14:00	44.8	5.7	1351	801	974	1087	1058	1001	911	845	764
14:15	44.8	5.7	1361	788	951	1042	998	985	906	818	755
14:30	44.9	5.7	1362	821	1007	1095	1036	1022	934	852	761
14:45	44.8	5.7	1366	829	1001	1103	1036	1009	905	823	716
15:00	44.9	5.7	1362	810	984	1073	1021	975	874	798	705
15:15	44.9	5.7	1375	832	1011	1090	1031	1017	920	823	725
15:30	44.8	6.6	1391	826	1018	1121	1111	1114	997	895	792
15:45	44.7	8.2	1371	847	1022	1139	1085	1043	920	836	741
16:00	44.7	8.3	1372	847	1034	1155	1099	1055	945	841	759
16:15	44.7	8.2	1360	841	1002	1115	1074	1082	981	904	807
16:30	44.7	8.3	1377	855	1066	1175	1120	1095	995	901	798
16:45	44.6	8.4	1359	844	1035	1168	1121	1122	1005	918	826
17:00	44.7	8.2	1372	842	1026	1135	1094	1082	985	895	815
17:15	44.7	8.1	1395	871	1033	1131	1078	1068	944	857	741
17:30	44.6	8.2	1385	899	1116	1198	1073	1001	896	802	710
17:45	44.6	8.3	1366	873	1035	1152	1095	1091	988	896	794
18:00	44.7	8.3	1365	869	1042	1161	1095	1090	975	874	796
18:15	44.7	8.3	1398	879	1042	1161	1087	1105	1020	939	859
18:30	44.7	8.2	1407	890	1073	1181	1111	1093	975	863	771
18:45	44.7	8.3	1398	879	1058	1166	1096	1113	1010	938	837
19:00	44.7	8.3	1383	886	1043	1142	1075	1093	1013	915	813
19:15	44.7	8.2	1405	854	1006	1133	1070	1091	999	914	816
19:30	44.7	8.3	1416	895	1065	1176	1100	1091	967	862	767
19:45	44.7	8.3	1386	911	1091	1198	1088	1074	951	847	745
20:00	44.7	8.2	1411	902	1069	1166	1103	1118	1002	884	765
20:15	44.7	8.3	1385	896	1048	1139	1058	1083	975	876	770
20:30	44.6	9.4	1381	893	1057	1164	1091	1134	1039	954	855
20:45	44.7	11.1	1399	888	1080	1210	1129	1140	1033	934	827
21:00	44.7	11.3	1399	937	1136	1275	1168	1149	1024	899	789
21:15	44.6	11.2	1435	948	1139	1238	1137	1105	975	845	745
21:30	44.7	11.2	1409	931	1112	1233	1141	1177	1084	994	880

TEST REPORT FOR LAPITEC S.P.A

Report No.: K1436.01-121-24-R1

Date: 02/02/21

Revised Date: 03/10/21

TIME (Min:Sec)	ROOM GAS FLOW	WINDOW GAS FLOW	T/C 1	T/C 2	T/C 3	T/C 4	T/C 5	T/C 6	T/C 7	T/C 8	T/C 9
21:45	44.7	11.2	1372	917	1094	1215	1129	1163	1047	960	872
22:00	44.6	11.2	1386	923	1074	1189	1116	1174	1083	992	903
22:15	44.7	11.2	1395	911	1048	1163	1100	1153	1079	1005	891
22:30	44.7	11.2	1424	926	1088	1200	1121	1193	1096	997	885
22:45	44.7	11.2	1408	950	1142	1248	1140	1177	1062	951	841
23:00	44.7	11.2	1413	944	1122	1240	1143	1201	1108	1003	874
23:15	44.7	11.2	1384	948	1114	1221	1122	1160	1064	961	853
23:30	44.6	11.2	1404	936	1144	1267	1146	1181	1074	974	879
23:45	44.7	11.2	1422	945	1125	1236	1113	1165	1032	909	800
24:00	44.6	11.2	1409	946	1124	1238	1115	1164	1050	952	842
24:15	44.6	11.2	1426	949	1134	1236	1104	1161	1045	912	805
24:30	44.6	11.2	1407	933	1106	1217	1063	1177	1081	959	842
24:45	44.7	11.2	1412	960	1132	1246	1073	1210	1112	1000	873
25:00	44.7	11.2	1411	948	1096	1193	1013	1144	1048	935	830
25:15	44.8	11.3	1424	957	1128	1245	1033	1187	1080	965	842
25:30	46.0	13.3	1459	974	1162	1284	1059	1236	1106	994	872
25:45	48.5	15.8	1441	963	1140	1260	1060	1244	1161	1075	963
26:00	48.5	15.9	1445	981	1160	1274	1051	1170	1033	931	831
26:15	48.6	15.9	1470	980	1145	1260	1064	1273	1193	1079	938
26:30	48.5	15.9	1474	979	1161	1282	1063	1214	1141	1052	949
26:45	48.5	15.9	1488	977	1133	1241	1051	1261	1187	1099	967
27:00	48.5	15.9	1481	974	1158	1262	1061	1223	1146	1046	918
27:15	48.6	16.0	1463	962	1148	1288	1089	1243	1122	983	857
27:30	48.6	15.9	1484	1000	1222	1343	1093	1227	1091	986	874
27:45	48.5	15.9	1487	1007	1180	1311	1102	1264	1129	1016	900
28:00	48.6	15.9	1464	1008	1182	1310	1107	1279	1177	1053	903
28:15	48.6	15.9	1481	993	1173	1303	1105	1253	1133	1006	880
28:30	48.5	15.9	1478	997	1186	1314	1116	1282	1175	1080	951
28:45	48.5	15.9	1466	1017	1190	1310	1104	1264	1165	1073	967
29:00	48.5	15.9	1470	1012	1158	1277	1099	1291	1229	1113	982
29:15	48.5	15.9	1486	1000	1166	1296	1114	1318	1247	1198	1084
29:30	48.5	15.9	1507	987	1148	1265	1105	1276	1181	1064	913
29:45	48.5	15.9	1482	1013	1220	1348	1136	1286	1163	1059	928
30:00	48.5	15.9	1462	1042	1208	1329	1108	1222	1126	1034	919

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Report No.: K1436.01-121-24-R1

Date: 02/02/21

Revised Date: 03/10/21

TIME (Min:Sec)	T/C 10	T/C 11	T/C 12	T/C 13	T/C 14	T/C 15	T/C 16	T/C 17	T/C 18	T/C 19
00:00	64	65	65	64	65	63	65	65	60	60
00:15	63	65	65	64	65	63	65	65	60	60
00:30	288	266	243	223	87	157	176	92	60	60
00:45	309	278	262	244	106	195	201	121	60	60
01:00	335	303	274	254	104	175	206	119	60	60
01:15	325	293	266	248	100	209	201	130	60	60
01:30	333	302	275	256	116	199	201	131	60	60
01:45	328	298	279	261	106	208	195	127	60	60
02:00	330	298	273	252	101	198	210	122	60	60
02:15	367	323	293	272	117	213	213	123	60	60
02:30	366	323	297	274	110	207	228	133	60	60
02:45	376	339	314	298	103	200	236	145	60	60
03:00	407	373	336	315	104	189	212	141	60	60
03:15	381	340	308	291	113	208	215	148	60	60
03:30	374	331	301	283	111	205	234	135	60	60
03:45	359	321	289	272	107	213	250	128	60	60
04:00	382	346	310	289	110	218	238	127	60	60
04:15	360	320	294	276	114	225	225	124	60	60
04:30	360	320	295	283	111	219	232	130	60	60
04:45	356	321	292	276	106	224	228	135	60	60
05:00	377	342	310	295	113	237	238	132	60	60
05:15	399	358	323	307	115	230	255	134	60	60
05:30	451	404	366	341	120	257	272	135	60	60
05:45	547	473	416	390	123	298	330	144	60	60
06:00	511	441	386	365	128	296	326	138	61	60
06:15	574	500	440	409	131	277	335	135	61	60
06:30	498	423	379	363	128	304	332	144	61	60
06:45	507	446	387	364	139	309	314	151	61	60
07:00	539	481	423	406	131	301	330	142	61	60
07:15	562	471	409	387	131	301	319	137	61	61
07:30	547	473	407	384	137	316	328	127	61	61
07:45	527	457	396	373	138	280	323	141	61	61
08:00	557	481	410	388	128	298	331	133	61	61
08:15	540	461	402	386	131	302	334	127	61	61
08:30	594	512	437	419	117	279	349	137	62	61
08:45	611	524	451	440	127	320	332	139	62	61
09:00	568	493	415	398	128	298	345	151	62	61
09:15	561	491	417	412	128	282	349	137	62	61
09:30	587	496	427	414	127	296	314	145	62	61
09:45	615	519	448	428	123	296	315	149	62	61
10:00	586	502	436	419	133	316	295	155	62	61
10:15	588	490	420	408	124	304	291	151	63	62
10:30	606	513	439	429	132	291	337	149	63	62
10:45	669	567	481	475	133	302	320	141	63	62
11:00	644	545	465	454	137	303	334	145	63	62
11:15	616	515	440	437	131	340	325	153	63	62

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TIME (Min:Sec)	T/C 10	T/C 11	T/C 12	T/C 13	T/C 14	T/C 15	T/C 16	T/C 17	T/C 18	T/C 19
11:30	679	572	480	473	135	322	338	154	63	62
11:45	642	556	473	472	129	318	375	151	64	63
12:00	626	531	447	442	131	324	365	144	64	63
12:15	666	555	446	449	139	341	350	137	64	63
12:30	701	593	488	507	131	320	345	139	64	63
12:45	687	575	476	484	132	336	370	154	64	63
13:00	606	502	422	423	136	397	350	166	65	63
13:15	673	576	471	486	151	352	347	165	65	64
13:30	669	577	465	485	152	356	341	151	65	64
13:45	660	546	445	467	147	317	331	150	65	64
14:00	674	553	450	474	145	351	336	162	65	64
14:15	681	572	458	493	144	333	341	151	66	65
14:30	670	553	447	469	155	360	354	164	66	65
14:45	639	535	436	457	145	347	340	154	66	65
15:00	632	532	435	475	155	354	356	157	66	65
15:15	640	530	437	464	143	356	358	170	66	65
15:30	693	580	463	485	150	366	384	165	67	66
15:45	661	536	444	464	145	387	377	166	67	66
16:00	681	564	457	487	149	402	375	172	67	66
16:15	715	592	475	520	149	384	377	167	67	66
16:30	687	554	437	452	147	409	372	179	67	66
16:45	736	601	486	522	142	375	370	166	67	67
17:00	726	590	483	514	141	367	346	159	68	67
17:15	631	504	420	442	165	388	359	180	68	67
17:30	644	534	456	480	165	408	365	166	68	67
17:45	684	555	457	470	148	369	364	160	68	67
18:00	701	556	461	490	156	392	375	166	68	68
18:15	767	621	498	523	165	380	379	179	68	68
18:30	689	562	470	478	156	393	374	177	69	68
18:45	745	603	491	510	173	380	388	165	69	68
19:00	722	573	480	501	159	359	370	167	69	68
19:15	724	587	498	527	159	400	410	170	69	69
19:30	705	581	490	513	156	383	405	168	69	69
19:45	671	544	470	491	152	412	396	169	70	69
20:00	654	527	450	461	157	392	367	180	70	69
20:15	684	548	483	499	160	389	419	171	70	70
20:30	763	599	496	520	153	395	418	170	70	70
20:45	746	602	509	540	163	438	392	190	70	70
21:00	692	561	482	503	164	419	401	185	71	70
21:15	657	529	466	488	162	459	403	187	71	70
21:30	788	620	527	551	161	407	381	183	71	70
21:45	788	644	547	555	161	402	383	180	71	71
22:00	804	633	529	544	171	418	411	184	72	71
22:15	779	598	507	534	166	394	411	188	72	71
22:30	799	630	532	545	159	411	416	189	72	71
22:45	746	591	521	537	174	411	411	181	72	71

TEST REPORT FOR LAPITEC S.P.A

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Date: 02/02/21

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TIME (Min:Sec)	T/C 10	T/C 11	T/C 12	T/C 13	T/C 14	T/C 15	T/C 16	T/C 17	T/C 18	T/C 19
23:00	764	597	500	505	164	420	410	186	72	72
23:15	742	583	501	506	168	432	413	186	72	72
23:30	779	612	534	542	170	412	411	192	73	72
23:45	709	552	498	507	174	427	443	187	73	72
24:00	741	565	511	528	177	416	415	189	73	72
24:15	713	534	500	520	175	430	414	190	73	72
24:30	746	553	513	539	168	419	424	184	73	73
24:45	750	551	513	536	180	418	404	190	73	73
25:00	745	543	522	549	177	407	462	195	74	73
25:15	757	554	529	532	177	413	422	191	74	74
25:30	753	554	520	533	180	489	435	196	74	74
25:45	872	617	575	603	182	448	414	197	74	74
26:00	740	545	520	514	197	460	390	202	75	74
26:15	834	599	574	571	187	453	476	197	75	74
26:30	863	629	596	605	177	423	455	199	75	75
26:45	853	609	567	575	178	460	441	213	75	75
27:00	804	586	563	568	185	467	455	207	75	75
27:15	759	559	529	529	183	464	433	210	76	75
27:30	778	567	538	532	187	459	435	205	76	76
27:45	778	562	544	551	179	451	417	198	76	76
28:00	781	554	534	520	180	449	466	210	76	76
28:15	788	582	550	543	186	456	477	207	76	76
28:30	855	592	576	589	182	493	422	212	77	77
28:45	873	610	577	575	188	452	458	208	77	77
29:00	874	607	595	602	186	422	462	205	77	77
29:15	966	660	637	647	192	442	431	212	77	77
29:30	801	597	558	550	215	434	439	208	77	78
29:45	824	596	569	575	212	478	427	213	77	78
30:00	811	597	567	564	207	470	428	222	78	78

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TIME (Min:Sec)	T/C 20	T/C 21	T/C 22	T/C 23	T/C 24	T/C 25	T/C 26	T/C 27	T/C 28	T/C 29
00:00	61	62	62	60	61	61	62	63	63	64
00:15	61	62	62	61	61	61	62	63	63	64
00:30	61	90	83	79	71	69	68	65	73	65
00:45	62	118	105	93	87	85	84	80	81	72
01:00	63	129	110	100	93	89	87	83	83	73
01:15	65	140	121	108	99	94	92	87	85	77
01:30	66	148	131	115	106	101	99	93	90	80
01:45	68	146	131	116	109	102	99	94	91	81
02:00	70	154	133	121	112	106	103	97	94	84
02:15	71	155	141	125	115	110	108	102	99	85
02:30	73	152	139	127	118	113	111	105	101	89
02:45	75	157	142	131	120	117	114	108	105	93
03:00	77	147	136	125	118	114	111	107	103	92
03:15	79	148	136	126	118	115	113	109	106	93
03:30	82	149	142	132	124	119	118	112	108	94
03:45	85	154	147	136	127	120	118	112	108	97
04:00	87	152	147	137	129	123	120	115	112	101
04:15	89	152	149	139	131	126	122	117	114	103
04:30	91	153	151	142	134	128	125	119	116	104
04:45	92	150	149	143	135	130	127	122	119	107
05:00	95	152	152	146	139	133	130	124	119	109
05:15	98	162	157	152	144	137	133	127	124	112
05:30	99	159	158	153	146	142	139	133	128	116
05:45	100	167	166	159	153	147	144	137	133	120
06:00	103	173	168	164	156	153	150	143	139	124
06:15	105	170	171	166	159	154	153	145	142	125
06:30	108	171	171	172	163	161	158	150	146	126
06:45	111	163	168	172	165	162	160	152	149	130
07:00	113	161	171	173	165	162	161	154	151	129
07:15	117	177	177	178	169	165	162	154	151	132
07:30	120	185	186	185	175	170	168	159	155	136
07:45	123	180	183	185	177	174	171	163	158	139
08:00	126	182	188	188	178	177	174	165	160	144
08:15	129	184	190	191	182	179	176	167	163	146
08:30	132	182	189	195	185	187	184	176	172	149
08:45	135	179	187	194	190	189	187	178	174	152
09:00	139	182	189	197	192	192	190	182	177	156
09:15	140	188	191	198	195	194	193	184	180	159
09:30	144	188	193	204	199	198	196	188	183	162
09:45	148	189	197	206	203	203	200	192	187	167
10:00	153	188	195	207	205	205	205	197	192	166
10:15	155	194	204	213	209	210	208	199	195	170
10:30	156	197	204	217	211	214	212	203	199	174
10:45	159	203	207	219	215	213	211	202	196	176
11:00	163	212	221	228	223	224	221	211	206	182
11:15	168	213	219	233	227	230	226	217	212	186

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TIME (Min:Sec)	T/C 20	T/C 21	T/C 22	T/C 23	T/C 24	T/C 25	T/C 26	T/C 27	T/C 28	T/C 29
11:30	173	216	226	235	233	232	229	220	214	190
11:45	175	231	231	242	235	237	234	224	219	194
12:00	179	247	244	251	243	245	241	229	223	198
12:15	182	238	240	247	243	247	243	233	227	201
12:30	185	241	245	247	245	248	244	233	228	204
12:45	190	239	251	257	254	257	253	242	236	209
13:00	191	240	246	252	254	254	252	241	235	212
13:15	196	249	255	256	255	258	256	244	238	212
13:30	200	248	255	255	261	262	261	249	243	216
13:45	203	257	262	263	269	268	265	253	246	219
14:00	208	256	262	266	270	269	267	255	249	224
14:15	212	258	258	264	271	271	270	259	252	226
14:30	218	260	261	270	272	277	276	265	259	232
14:45	222	259	263	273	277	279	278	267	261	235
15:00	226	264	265	273	281	283	283	272	265	238
15:15	231	264	265	272	279	281	282	272	266	240
15:30	234	269	268	280	286	288	289	278	272	244
15:45	236	271	273	284	289	293	294	282	275	248
16:00	245	273	272	287	291	297	299	288	282	251
16:15	249	281	279	291	298	300	301	290	284	255
16:30	253	281	280	290	298	303	305	294	287	259
16:45	254	286	285	291	303	305	306	294	287	262
17:00	258	291	288	298	305	308	309	298	291	266
17:15	262	293	292	302	310	314	315	304	297	270
17:30	271	299	295	306	309	315	316	305	300	272
17:45	274	301	298	308	314	321	322	311	304	276
18:00	274	304	303	311	319	323	324	313	306	278
18:15	279	307	304	314	321	329	329	318	311	282
18:30	284	310	309	316	322	330	331	320	313	285
18:45	290	317	312	320	325	332	333	322	314	287
19:00	292	322	317	323	329	337	338	327	320	292
19:15	298	321	317	329	331	342	341	330	323	295
19:30	305	327	323	333	338	348	349	337	330	299
19:45	308	329	326	335	340	351	351	340	332	303
20:00	308	334	333	342	346	355	354	342	334	306
20:15	315	340	336	345	351	360	359	348	340	311
20:30	314	340	339	344	352	362	361	349	342	311
20:45	322	344	341	353	355	365	365	353	345	316
21:00	326	346	345	354	359	372	372	360	351	321
21:15	330	351	350	359	365	374	374	362	353	323
21:30	328	356	358	360	375	378	378	365	356	326
21:45	334	360	363	368	380	386	386	373	364	331
22:00	337	367	370	372	389	392	392	378	368	336
22:15	339	368	372	373	390	394	394	380	371	338
22:30	344	375	377	379	394	399	399	386	377	343
22:45	350	373	377	380	396	402	402	389	380	346

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TIME (Min:Sec)	T/C 20	T/C 21	T/C 22	T/C 23	T/C 24	T/C 25	T/C 26	T/C 27	T/C 28	T/C 29
23:00	351	380	382	383	400	405	406	392	382	347
23:15	350	379	383	386	402	409	407	394	384	351
23:30	354	385	391	388	409	413	413	400	390	354
23:45	355	389	393	394	413	417	417	403	393	359
24:00	367	395	398	402	415	422	420	407	398	363
24:15	368	400	401	402	419	422	421	408	399	366
24:30	376	403	404	408	423	429	427	414	404	368
24:45	374	406	409	408	426	432	431	417	408	372
25:00	384	412	417	417	434	439	437	422	412	375
25:15	391	414	414	420	432	441	438	424	413	378
25:30	381	409	415	411	432	440	439	425	414	381
25:45	391	421	427	423	443	448	444	430	420	385
26:00	397	426	429	433	446	454	450	436	425	390
26:15	404	429	433	431	450	455	454	439	428	393
26:30	408	431	437	434	449	458	456	442	431	395
26:45	407	433	438	435	455	461	460	446	436	399
27:00	416	446	449	450	461	471	466	451	439	402
27:15	431	455	456	459	467	478	472	457	445	406
27:30	437	462	462	462	471	481	475	459	448	411
27:45	444	468	471	469	479	489	482	465	453	416
28:00	444	473	473	470	482	492	487	470	458	419
28:15	447	483	487	484	493	500	494	478	465	425
28:30	462	486	490	487	496	504	498	482	469	429
28:45	457	483	488	485	494	502	496	480	467	430
29:00	470	495	494	483	496	504	498	483	470	432
29:15	460	486	490	485	495	505	498	483	471	433
29:30	472	499	502	496	506	515	507	490	477	438
29:45	472	507	506	507	509	523	512	495	481	441
30:00	482	512	514	512	517	527	517	500	486	447

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TIME (Min:Sec)	T/C 30	T/C 31	T/C 32	T/C 33	T/C 34	T/C 35	T/C 36	T/C 37	T/C 38	T/C 39
00:00	64	60	60	62	63	62	60	61	62	65
00:15	64	60	60	62	63	62	61	61	62	65
00:30	65	61	61	62	66	67	61	61	64	69
00:45	69	62	63	65	72	72	63	63	68	78
01:00	73	63	64	67	73	75	64	64	68	79
01:15	75	64	65	68	74	77	65	65	68	81
01:30	78	65	66	69	76	79	66	66	69	82
01:45	80	65	66	70	75	81	66	67	69	83
02:00	84	66	67	70	75	81	66	67	70	83
02:15	86	66	68	71	78	84	67	68	70	82
02:30	89	67	68	72	78	85	68	68	71	84
02:45	92	67	69	73	78	86	68	69	72	86
03:00	93	67	69	73	78	87	69	70	73	86
03:15	95	68	70	74	79	88	69	70	73	87
03:30	97	68	70	74	80	89	70	71	74	86
03:45	96	69	71	75	80	90	70	71	74	86
04:00	100	69	71	76	81	91	71	72	75	86
04:15	102	70	72	77	82	92	71	73	76	85
04:30	104	71	73	78	83	92	72	73	77	86
04:45	105	71	74	78	84	93	73	74	78	88
05:00	107	72	75	79	85	93	73	75	79	88
05:15	108	72	75	80	87	95	74	75	80	89
05:30	113	73	76	81	88	97	74	76	81	90
05:45	116	74	77	82	90	102	75	77	81	91
06:00	122	74	78	83	93	104	76	78	82	93
06:15	123	75	79	84	94	105	77	79	84	94
06:30	126	76	81	85	95	106	78	80	85	96
06:45	129	77	82	86	97	108	79	81	86	99
07:00	132	78	83	87	99	110	79	82	87	99
07:15	131	78	83	88	99	111	79	82	88	102
07:30	133	79	83	88	102	114	80	83	89	103
07:45	136	79	85	89	103	115	81	85	90	105
08:00	142	79	85	90	105	115	81	85	90	106
08:15	142	80	86	92	107	116	81	86	92	108
08:30	148	81	86	93	109	117	82	87	92	109
08:45	152	81	87	94	111	119	83	88	94	111
09:00	154	82	88	95	112	120	84	89	95	113
09:15	156	83	89	96	115	122	84	89	96	116
09:30	160	84	89	97	117	123	84	91	97	118
09:45	165	85	91	98	119	124	86	92	98	119
10:00	168	86	92	99	121	128	88	93	99	120
10:15	171	86	92	101	122	129	88	93	100	121
10:30	174	87	93	102	123	129	89	94	102	124
10:45	174	89	95	102	125	128	89	95	103	127
11:00	180	89	95	104	126	132	90	96	104	129
11:15	187	89	96	105	129	134	92	97	105	130

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11:30	189	90	97	107	132	136	93	98	107	133
11:45	192	92	99	108	134	138	94	100	108	135
12:00	194	93	100	108	137	139	95	100	109	137
12:15	197	94	101	110	138	141	95	100	110	140
12:30	201	95	101	110	140	142	96	101	112	141
12:45	207	94	102	113	142	143	97	103	112	143
13:00	206	96	104	113	144	146	97	103	114	145
13:15	210	97	104	113	147	147	98	104	115	146
13:30	211	98	106	114	148	149	97	104	116	149
13:45	212	98	106	116	151	151	95	104	117	151
14:00	219	98	107	118	152	153	96	105	117	152
14:15	224	98	107	119	155	153	97	106	118	154
14:30	230	97	108	120	156	156	98	107	120	156
14:45	230	98	109	121	158	157	98	108	121	157
15:00	234	99	110	123	160	159	99	108	122	159
15:15	235	100	111	122	162	160	98	109	124	161
15:30	237	100	111	124	165	163	99	110	125	164
15:45	243	100	112	126	167	166	100	111	126	164
16:00	247	100	113	128	170	167	102	113	127	166
16:15	251	100	114	129	171	169	101	113	128	169
16:30	253	100	114	130	174	170	101	114	129	171
16:45	254	100	115	130	176	171	100	114	130	173
17:00	259	100	115	132	179	174	100	114	130	174
17:15	263	101	117	133	180	175	101	115	131	177
17:30	264	103	119	135	182	178	103	117	133	179
17:45	265	104	120	135	185	178	102	117	134	181
18:00	262	106	121	135	185	179	103	118	135	184
18:15	270	106	123	136	187	181	102	119	136	186
18:30	274	103	123	138	190	184	101	119	138	189
18:45	275	104	124	138	192	184	102	119	138	191
19:00	281	104	125	139	194	186	103	120	139	191
19:15	284	104	124	142	196	189	104	120	140	194
19:30	288	103	123	143	198	190	103	120	141	195
19:45	290	104	125	144	200	192	104	121	142	196
20:00	293	104	126	145	201	194	107	122	143	198
20:15	299	104	127	147	203	196	106	124	144	200
20:30	301	104	127	147	205	197	106	123	145	202
20:45	305	103	127	150	206	199	105	123	147	205
21:00	309	104	127	151	209	202	107	124	148	207
21:15	311	104	128	152	213	204	108	125	149	209
21:30	307	104	131	154	215	205	107	125	151	211
21:45	311	104	129	157	219	207	107	125	151	213
22:00	313	104	131	157	221	209	107	126	153	218
22:15	310	105	132	159	223	211	107	126	155	221
22:30	318	105	131	161	225	213	108	127	155	221
22:45	324	106	132	162	227	216	109	128	156	223

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TIME (Min:Sec)	T/C 30	T/C 31	T/C 32	T/C 33	T/C 34	T/C 35	T/C 36	T/C 37	T/C 38	T/C 39
23:00	319	107	133	162	228	218	109	128	158	225
23:15	321	108	134	163	229	219	109	127	160	228
23:30	328	107	135	165	233	221	108	127	162	231
23:45	331	107	135	166	236	222	109	127	163	233
24:00	337	108	134	168	239	224	696	127	163	233
24:15	341	106	134	169	242	226	109	128	164	236
24:30	339	107	135	170	241	228	563	128	165	238
24:45	342	108	137	171	243	230	111	129	166	239
25:00	346	109	138	170	244	232	110	130	167	242
25:15	345	109	139	172	246	233	110	129	169	244
25:30	344	111	140	171	248	233	111	129	170	246
25:45	353	109	139	174	251	236	110	128	171	247
26:00	357	108	139	175	253	240	110	130	172	248
26:15	356	110	141	175	254	238	114	130	174	252
26:30	362	110	141	176	256	240	115	131	174	253
26:45	363	110	141	179	259	243	113	130	176	254
27:00	366	111	143	179	261	244	112	131	177	258
27:15	369	113	145	180	262	247	112	131	178	259
27:30	379	112	144	182	265	252	112	131	179	260
27:45	387	111	144	184	268	255	111	133	179	262
28:00	389	112	144	185	269	258	112	133	182	264
28:15	396	112	144	187	273	259	112	133	182	266
28:30	400	111	143	188	275	262	114	134	183	266
28:45	397	113	145	188	277	261	114	134	184	270
29:00	400	113	146	189	276	262	114	133	185	271
29:15	395	115	147	188	278	263	113	132	186	275
29:30	402	116	148	191	281	267	113	132	187	276
29:45	404	117	149	191	283	266	112	133	189	278
30:00	412	117	148	191	284	269	115	134	190	280

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TIME (Min:Sec)	T/C 40	T/C 41	T/C 42	T/C 43	T/C 44	T/C 45	T/C 46	T/C 47	T/C 48	T/C 49
00:00	64	77	66	79	98	77	67	73	68	63
00:15	64	87	76	92	113	88	75	85	76	63
00:30	72	985	771	925	989	738	583	773	703	63
00:45	79	1150	937	1098	1075	896	871	1023	948	63
01:00	85	1170	994	1122	1050	928	943	1024	953	63
01:15	88	1155	1048	1133	1049	976	1001	1050	1011	63
01:30	89	1161	1052	1157	1056	1001	1033	1077	1053	63
01:45	88	1191	1060	1162	1072	1021	1067	1105	1069	63
02:00	91	1193	1089	1193	1084	1030	1106	1143	1090	63
02:15	92	1212	1105	1227	1107	1054	1192	1216	1282	63
02:30	95	1233	1151	1233	1107	1083	1161	1166	1309	63
02:45	96	1228	1163	1227	1101	1089	1170	1165	1189	63
03:00	96	1248	1152	1244	1121	1094	1177	1181	1156	63
03:15	97	1229	1198	1251	1102	1123	1190	1191	1181	63
03:30	99	1250	1215	1268	1120	1126	1197	1182	1172	63
03:45	100	1262	1225	1279	1124	1128	1207	1211	1189	63
04:00	101	1266	1206	1275	1125	1125	1210	1199	1195	63
04:15	101	1267	1227	1304	1134	1142	1228	1234	1219	63
04:30	101	1302	1215	1311	1148	1152	1220	1203	1203	64
04:45	101	1297	1220	1312	1157	1147	1226	1210	1217	64
05:00	101	1295	1237	1312	1175	1158	1221	1200	1210	64
05:15	102	1316	1269	1318	1168	1170	1235	1222	1227	64
05:30	105	1301	1262	1326	1167	1163	1253	1257	1231	64
05:45	112	1322	1276	1347	1190	1162	1283	1259	1251	64
06:00	115	1356	1283	1339	1216	1168	1275	1249	1238	64
06:15	118	1358	1298	1345	1214	1179	1289	1274	1258	64
06:30	121	1362	1300	1382	1230	1186	1288	1281	1253	64
06:45	121	1373	1321	1367	1216	1203	1289	1262	1259	64
07:00	120	1352	1317	1362	1209	1205	1302	1277	1258	64
07:15	123	1390	1323	1387	1229	1211	1303	1277	1273	64
07:30	124	1405	1311	1389	1243	1206	1316	1289	1263	64
07:45	126	1418	1289	1378	1264	1201	1319	1275	1265	65
08:00	126	1416	1288	1389	1268	1203	1332	1315	1278	65
08:15	127	1397	1316	1388	1275	1212	1323	1286	1278	65
08:30	131	1400	1297	1374	1263	1218	1321	1285	1267	65
08:45	129	1408	1308	1371	1256	1214	1334	1302	1275	65
09:00	133	1404	1329	1369	1269	1218	1314	1279	1268	65
09:15	135	1402	1321	1382	1271	1216	1344	1310	1279	65
09:30	134	1397	1320	1404	1269	1225	1341	1306	1275	65
09:45	134	1395	1328	1404	1272	1231	1336	1309	1283	65
10:00	133	1412	1312	1395	1288	1228	1326	1267	1281	65
10:15	132	1396	1329	1377	1290	1229	1323	1296	1273	65
10:30	137	1454	1386	1425	1296	1257	1363	1328	1317	66
10:45	140	1475	1443	1507	1335	1308	1434	1408	1383	66
11:00	140	1519	1436	1546	1364	1329	1429	1386	1384	66
11:15	141	1561	1433	1528	1390	1320	1451	1375	1400	66

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TIME (Min:Sec)	T/C 40	T/C 41	T/C 42	T/C 43	T/C 44	T/C 45	T/C 46	T/C 47	T/C 48	T/C 49
11:30	142	1545	1455	1528	1401	1329	1483	1413	1397	66
11:45	146	1525	1477	1560	1402	1351	1481	1450	1403	66
12:00	148	1536	1490	1567	1382	1364	1500	1453	1436	66
12:15	152	1551	1500	1559	1398	1373	1500	1434	1426	66
12:30	152	1572	1507	1571	1425	1372	1518	1450	1447	66
12:45	153	1566	1498	1578	1420	1381	1526	1458	1448	66
13:00	153	1589	1498	1602	1438	1376	1506	1436	1455	67
13:15	152	1584	1504	1600	1451	1386	1518	1445	1454	67
13:30	153	1571	1505	1568	1436	1388	1531	1447	1465	67
13:45	155	1586	1528	1605	1437	1399	1528	1459	1467	67
14:00	157	1604	1502	1594	1451	1395	1531	1468	1479	67
14:15	157	1589	1521	1594	1454	1407	1553	1468	1490	67
14:30	158	1587	1536	1594	1453	1402	1537	1471	1485	67
14:45	160	1604	1528	1608	1456	1409	1538	1461	1482	67
15:00	162	1605	1541	1629	1464	1422	1533	1453	1479	68
15:15	165	1602	1548	1622	1468	1420	1534	1478	1498	68
15:30	165	1613	1543	1596	1450	1416	1557	1459	1496	68
15:45	166	1579	1543	1620	1467	1421	1556	1472	1492	68
16:00	168	1603	1554	1604	1468	1424	1552	1485	1496	68
16:15	169	1621	1550	1611	1486	1428	1554	1473	1491	68
16:30	173	1605	1548	1617	1476	1429	1575	1493	1505	68
16:45	174	1599	1542	1626	1466	1436	1555	1474	1503	69
17:00	174	1627	1554	1633	1471	1441	1566	1502	1519	69
17:15	176	1633	1558	1621	1482	1438	1556	1469	1511	69
17:30	178	1633	1536	1605	1492	1435	1571	1487	1512	69
17:45	180	1629	1564	1626	1491	1447	1561	1496	1523	69
18:00	181	1622	1548	1637	1502	1441	1579	1531	1521	69
18:15	183	1621	1563	1627	1493	1444	1595	1524	1520	70
18:30	184	1642	1573	1628	1490	1446	1581	1510	1526	70
18:45	187	1644	1572	1631	1485	1454	1598	1514	1526	70
19:00	189	1629	1564	1645	1497	1460	1588	1515	1531	70
19:15	191	1627	1568	1637	1509	1454	1606	1525	1522	71
19:30	193	1632	1601	1639	1495	1460	1580	1505	1544	70
19:45	195	1629	1582	1648	1511	1462	1579	1507	1539	70
20:00	196	1644	1585	1662	1518	1465	1593	1490	1539	70
20:15	197	1663	1579	1660	1525	1458	1581	1497	1545	70
20:30	200	1625	1619	1665	1503	1474	1599	1557	1556	70
20:45	201	1622	1603	1657	1493	1482	1617	1521	1553	70
21:00	204	1659	1582	1646	1523	1471	1597	1526	1553	70
21:15	207	1677	1582	1672	1533	1477	1603	1517	1551	71
21:30	208	1660	1590	1665	1523	1474	1624	1519	1552	71
21:45	210	1641	1597	1656	1507	1477	1590	1518	1566	71
22:00	212	1634	1599	1659	1517	1481	1598	1517	1561	71
22:15	213	1648	1606	1668	1516	1488	1622	1545	1556	72
22:30	216	1647	1589	1672	1511	1479	1624	1537	1559	72
22:45	219	1655	1588	1648	1530	1478	1630	1555	1573	72

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TIME (Min:Sec)	T/C 40	T/C 41	T/C 42	T/C 43	T/C 44	T/C 45	T/C 46	T/C 47	T/C 48	T/C 49
23:00	219	1667	1597	1666	1529	1485	1601	1525	1578	73
23:15	221	1648	1607	1672	1526	1486	1620	1548	1579	73
23:30	224	1653	1617	1657	1521	1487	1619	1535	1570	73
23:45	224	1675	1602	1678	1518	1492	1629	1547	1574	74
24:00	231	1694	1605	1661	1530	1491	1625	1555	1575	74
24:15	232	1669	1583	1678	1537	1493	1611	1532	1571	73
24:30	234	1671	1608	1669	1539	1491	1627	1534	1573	74
24:45	234	1667	1619	1685	1539	1505	1643	1584	1578	75
25:00	237	1679	1633	1684	1539	1498	1617	1541	1581	76
25:15	237	1680	1613	1686	1537	1498	1640	1564	1587	75
25:30	239	1693	1624	1695	1551	1507	1648	1581	1609	75
25:45	242	1712	1655	1719	1578	1541	1664	1593	1634	75
26:00	245	1718	1650	1723	1588	1532	1676	1607	1643	76
26:15	244	1711	1678	1721	1573	1539	1693	1596	1642	76
26:30	248	1730	1696	1731	1584	1552	1720	1649	1647	75
26:45	250	1722	1685	1751	1587	1550	1704	1611	1644	77
27:00	250	1734	1695	1728	1579	1557	1718	1637	1642	77
27:15	254	1743	1678	1740	1599	1562	1697	1628	1657	77
27:30	260	1754	1672	1741	1605	1561	1715	1634	1647	78
27:45	259	1752	1674	1742	1598	1566	1716	1626	1656	77
28:00	262	1743	1680	1755	1603	1573	1703	1640	1668	77
28:15	267	1743	1705	1749	1603	1576	1705	1631	1662	77
28:30	269	1733	1699	1754	1600	1573	1708	1637	1665	77
28:45	273	1758	1707	1750	1619	1574	1711	1646	1673	77
29:00	272	1767	1719	1750	1605	1577	1728	1643	1680	77
29:15	273	1736	1713	1777	1605	1587	1726	1658	1680	77
29:30	277	1750	1708	1743	1610	1572	1706	1633	1683	78
29:45	275	1783	1709	1750	1609	1581	1728	1669	1693	78
30:00	277	1774	1706	1752	1622	1585	1708	1637	1671	78

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TIME (Min:Sec)	T/C 50	T/C 51	T/C 52	T/C 53	T/C 54
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00:15	62	63	62	62	63
00:30	62	63	62	62	63
00:45	62	63	62	62	63
01:00	62	63	62	62	63
01:15	62	63	62	63	63
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10:45	66	66	66	66	66
11:00	66	66	66	66	66
11:15	66	66	66	66	66

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TIME (Min:Sec)	T/C 50	T/C 51	T/C 52	T/C 53	T/C 54
11:30	66	66	66	66	66
11:45	66	66	66	66	66
12:00	66	66	66	66	66
12:15	67	66	66	66	66
12:30	67	67	66	66	67
12:45	67	67	67	67	67
13:00	67	67	67	67	67
13:15	67	67	67	67	67
13:30	67	68	67	67	67
13:45	67	68	67	67	67
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15:45	69	68	69	69	69
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16:45	70	69	69	69	69
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18:45	71	71	71	70	70
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19:15	72	71	71	71	71
19:30	72	71	71	71	71
19:45	72	71	71	71	71
20:00	72	71	72	71	71
20:15	73	71	72	71	71
20:30	73	71	72	71	71
20:45	73	72	72	71	72
21:00	73	72	72	72	72
21:15	73	72	72	72	72
21:30	73	72	73	72	72
21:45	74	72	73	72	72
22:00	74	72	73	72	73
22:15	74	73	73	73	72
22:30	74	73	74	73	73
22:45	74	73	74	73	73

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TIME (Min:Sec)	T/C 50	T/C 51	T/C 52	T/C 53	T/C 54
23:00	74	73	74	73	73
23:15	75	73	74	74	73
23:30	75	74	74	73	74
23:45	75	74	74	74	74
24:00	75	74	74	74	74
24:15	76	74	74	74	74
24:30	76	74	74	74	74
24:45	76	75	74	74	74
25:00	77	75	75	74	74
25:15	76	75	75	74	74
25:30	77	75	75	74	74
25:45	77	75	75	74	75
26:00	77	75	76	75	75
26:15	77	75	76	75	75
26:30	78	75	76	75	75
26:45	78	75	76	76	75
27:00	78	76	76	76	75
27:15	78	76	77	76	75
27:30	78	76	77	76	76
27:45	79	76	77	77	76
28:00	79	76	77	77	76
28:15	79	76	77	77	76
28:30	79	77	77	77	76
28:45	79	77	77	77	77
29:00	80	77	77	77	77
29:15	80	77	78	77	77
29:30	81	77	78	78	77
29:45	81	78	78	78	78
30:00	81	77	79	78	78



Total Quality. Assured.

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SECTION 14

DRAWINGS

The test specimen drawings which follow have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

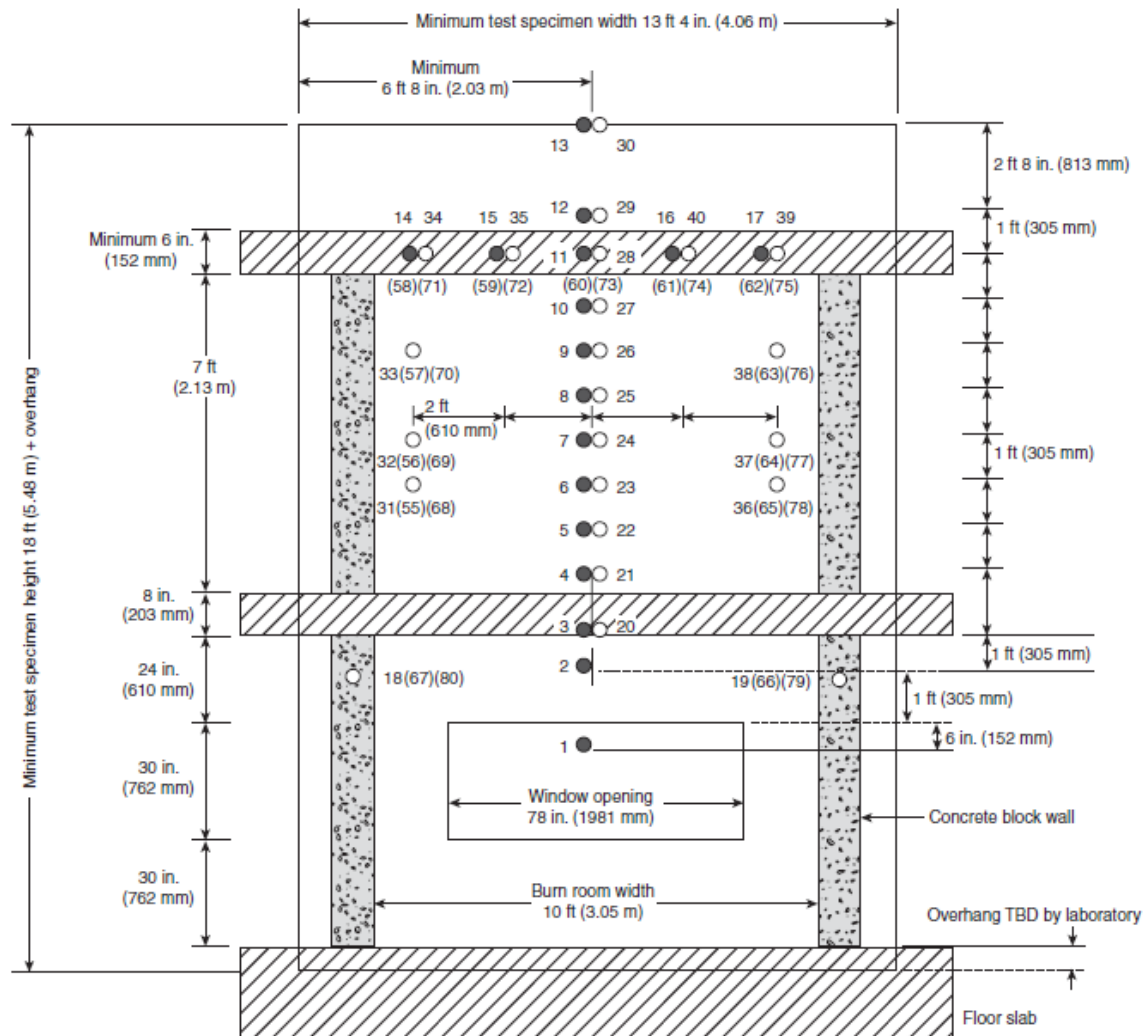
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Standard TC Locations



● Thermocouples — 1 in. (25 mm) from exterior wall surface

○ Thermocouples — In the wall cavity air space or the insulation, or both, as shown in Figure 6.1(b) Details A through I.

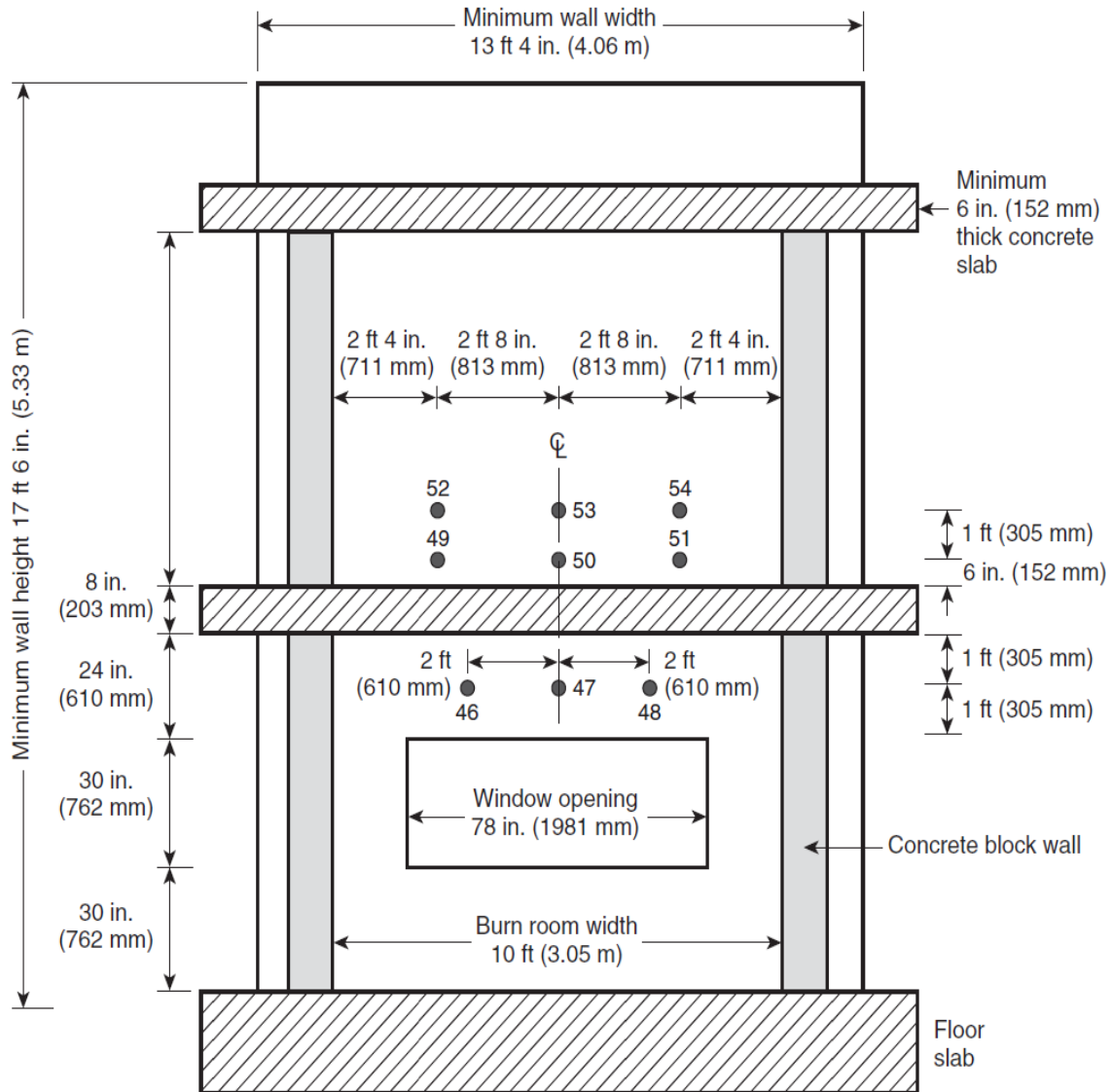
() Thermocouples — Additional thermocouples in the insulation or the stud cavity, or both, where required for the test specimen construction being tested, as shown in Figure 6.1(b) Details C through I.

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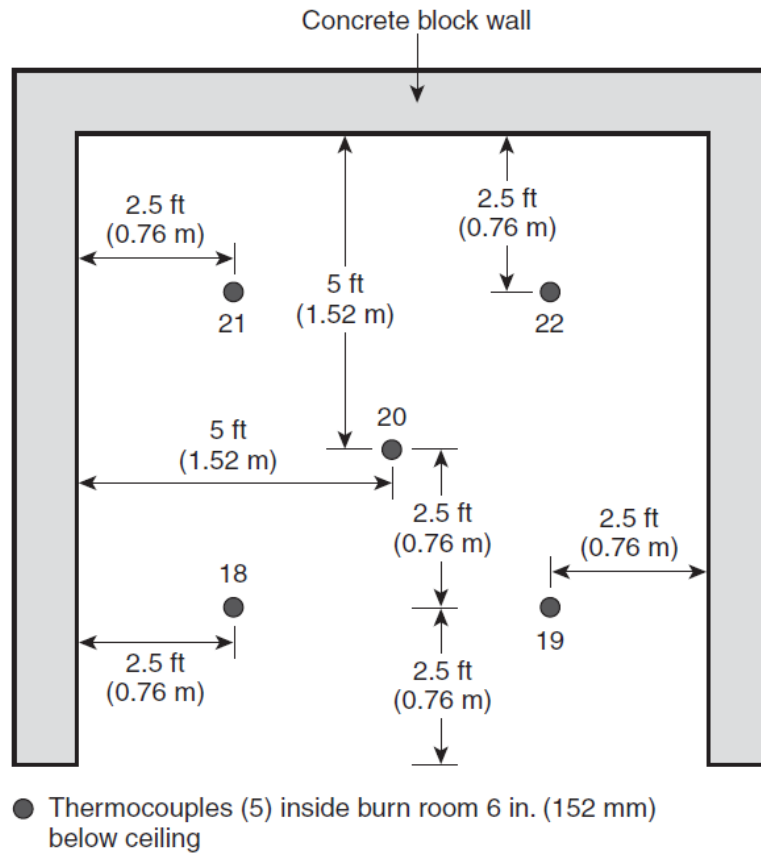
● Thermocouples — 1 in. (25 mm) from interior wall surface

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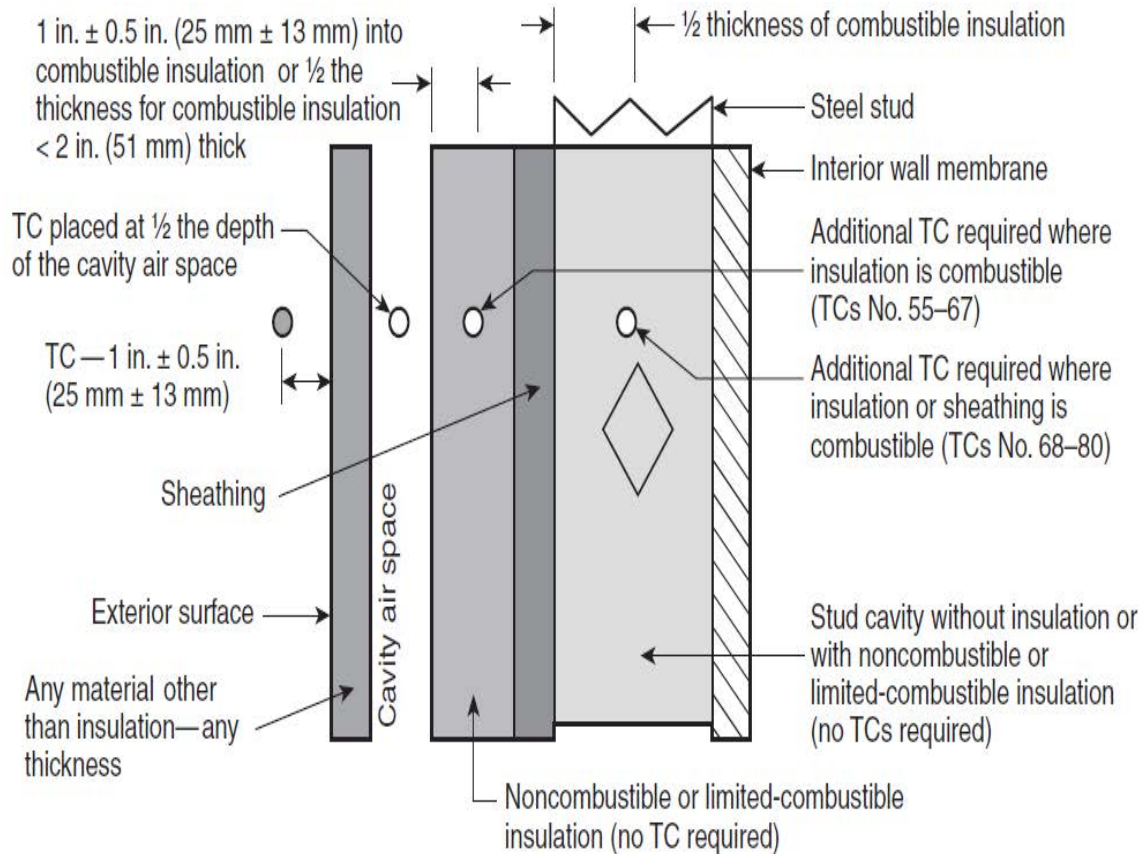


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SECTION 15

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	02/02/21	N/A	Original Report Issue
1	03/10/21	1,2	Replaced ceramic with Sintered Stone