

# Test Report

## EU facade test 2

<b>Name of sponsor:</b>	NREP A/S		
<b>Product name:</b>	EU facade test draft 6		
<b>File no.:</b>	PGC10026A	<b>Revision no.:</b>	0
<b>Test date:</b>	13-10-2023	<b>Date:</b>	07-12-2023
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<b>Ref:</b>	CHD / CHB		

## Client information

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## Date of test

The test was conducted on 13-10-2023.

## Purpose of test

Examination of the fire performance of a façade using the large fire exposure.

The test specimen has been subjected to a fire test in accordance with the following draft standards:

ASSESSMENT OF FIRE PERFORMANCE OF FACADES USING LARGE FIRE EXPOSURE

Draft revision 6

Draft Date: 2022 – 11 – 18

**The test was not performed accredited.**

## Test specimen

The trade name and sponsors identification mark is stated below:

Trade name: None

Identification mark: None

The components for the test specimen were delivered and mounted by the sponsor.

## Drawings and description

Details of the construction are shown in the enclosed documentation as stated below:

Type	Drawing No.	Dated	Subject
Drawing	ESR_K01_H4_EXX_N3010	09-10-2023	Mock-up facade mod gård til Rig
Drawing	ESR_K01_H4_EXX_N3011	09-10-2023	Trærammer
Drawing	ESR_K01_H4_EXX_N3012	09-10-2023	Gips på trærammer
Drawing	ESR_K01_H4_EXX_N3013	09-10-2023	Gips og flammeafbøjer og inddækninger brandkammer
Drawing	ESR_K01_H4_EXX_N3014	09-10-2023	Underlag for beklædninger (Gård)
Drawing	ESR_K01_H5_EXX_N3010	09-10-2023	Detalje over brandkammer (lodret snit)
Drawing	ESR_K01_H5_EXX_N3011	09-10-2023	Snit i horisontal samling i kassetter
Drawing	ESR_K01_H5_EXX_N3012	09-10-2023	Snit i flammeafbøjer hjørnet
Drawing	ESR_K01_H5_EXX_N3013	09-10-2023	Detalje over brandkammer (vandret snit)
Drawing	GKB-116368	27-09-2023	2 mm plade
Drawing	ESR – Mock - Up	19-09-2023	Kassette

Drawing	ESR – Mock - Up	19-09-2023	Sålbænk
Drawing	ESR – Mock - Up	19-09-2023	Side inddækning med udsparring for sålbænk Højre og venstre
Drawing	ESR – Mock - Up	19-09-2023	Understøtning

The documentation is supplied by the sponsor, and it is stamped by DBI - Danish Institute of Fire and Security Technology

## Description

The test specimen consisted of the components described in the following. DBI inspected the components during mounting, the test and after the test.

The sponsor carried out the selection of the products for the test specimen as well as the mounting.

Test specimen			
External measures:	Height main: 9425 mm	Width main: 3680 mm	Thickness main: 385 mm
	Height wing: 7580 mm	Width wing: 1680 mm	Thickness wing: 353 mm

The test specimen was a ventilated façade. On the main façade, the prefabricated walls were mounted on aerated concrete frame as the first layer. The vertical steel projection, horizontal flame deflector and pressure impregnated formwork were mounted on the prefabricated walls, the wood claddings were mounted on formwork as the surface. On the wing of the façade, the vertical steel projection and horizontal flame deflector were mounted on the 100 mm aerated concrete without wood cladding.

The build-up of the façade system is shown on the attached drawings, supplied by the sponsor. The construction of the wall is described from the first layer on the aerated concrete frame.

**First Layer:** The first layer consisted of prefabricated wooden frame walls. The frame and the studs of the walls were built from untreated construction wood C24 with dimensions 45x95 mm with a nominal density of 480 kg/m<sup>3</sup>. The construction wood was fixed to each other in all ends with 2 nails designated Paslode 2.5 x 50 hot-dip galvanized ring shank. The c/c distance between each vertical stud is shown on drawing ESR\_K01\_H4\_EXX\_N3011.

On the back side of the prefabricated walls there were one layer of 0.2 mm PE vaper and one layer of Isover Insulsafe Blanket both layers were mounted on the construction wood C24 with TJEP BE-80 8 mm staples with a c/c distance of approx. 20 mm. The tape designated Storm yellow-liner with a width of 50 mm was used on the overlap of PE vaper and at the 4 edges of the prefabricated wall to stick the PE vaper on the construction wood.

### Plasterboard in the first layer

One layer of 2400 x 1200 x 9.5 mm Siniat weather defence plasterboard with a nominal density of 860 kg/m<sup>3</sup> was mounted on the front side of prefabricated wall. The weather defence was mounted on the construction wood C24 with the screws designated Spit P-screw HWS 4.2 x 42 with a c/c distance of 180 mm. Two pieces of tape, designated Paroc XST 042 with a width of 50 mm overlap was applied on the joints of 2 plasterboards result in a total width of 80 mm on the joints. The vertical tapes were covered on the top of the horizontal tapes at the cross board joint sections.

### Insulation in the first layer

Insulation designated Isover Insulsafe loose wool L 34, with a nominal density of 30 kg/m<sup>3</sup> was blown in the prefabricated walls frame between Isover Insulsafe Blanket and weather defence boards.

There were 4 walls in total, the size of the wall was 3180 x 105 mm (width x thickness), the height of each wall was 2820 mm, 3190mm, 3190mm and 195 mm from the bottom to the top. They were

mounted with 10 mm horizontal gaps in between. The 4 walls protruded approximately 1810 mm from the top edge of aerated concrete façade. The Isover Tät with the width of 95 mm and thickness of 20 mm was placed in the entire horizontal gap. A z-profile size 20 x 10 x 20 mm with the thickness of 0.55 mm was mounted at the lower edge of 2 walls in the middle of the 4 walls, one side of the z-profile was mounted between the construction wood and weather defence, the other side covered the upper edge of the below wall. The Paroc XST 042 tape was placed on the top of the z-profile. See photo No. 4.

See drawing ESR\_K01\_H4\_EXX\_N3011.

**Fixing of first layer:** The prefabricated walls were fixed to aerated concrete frame with steel angles designated Paslode 90 x 90 x 65 with screws designated Paslode 5.0 x 40 mm with 4 screws in each angle connected to the wood. The Paslode angles was fixed to the aerated concrete with one screw designated Spit ACS CSK  $\varnothing$  8 x 90 mm. The bottom wall was put on 2 ACW 155 Simpson strong-tie console bracket which were fixed to the aerated concrete frame with 4 screws designated Spit ACS CSK  $\varnothing$  10x 160 mm. One screw designated Paslode 5.0 x 40 mm was used to connect the wall and each console bracket.

**Horizontal flame deflector:** The 3 horizontal flame deflectors were mounted on the prefabricated walls with a c/c distance of 3190 mm. The flame deflectors were protruding 500 mm from the prefabricated wall edge.

The 2 mm DS steel L-profile H50 x D253 mm with surface coating was fixed to the walls as the flame deflector with the screws designated Red Horse corona RXB 4.8 x 60 with a c/c distance of 200 mm. The special plate with a size of 253 x 300 x 2 mm was put at the conjunction of 2 L-profiles with the 4 screws at the corner and 6 screws at the joints designated DS stålprofil 5.5 x 25 Boreskrue. See drawing No. GKB-116368 2 mm plade.

The 1 mm DS stålprofil steel bracket profile with size of 175 x 245 x 331 was mounted on the wall with 3 screws designated Red Horse corona RXB 4.8 x 60. The distance between the screws on the vertical direction were 90 mm and 120 mm from the top to the bottom. And fixed on the L-profile with 2 screws designated DS stålprofil LP 5.5 x 25 Boreskrue with a distance of 150 mm. A 10 mm thick 50 mm height conner was cut from front upper side of the bracket profile and an angle designed Paslode 50 x 50 x 1 mm was mounted there with 2 screws designated DS stålprofil 5.5 x 25 Boreskrue. See photo No. 9 and 10. The c/c distance of the brackets was approx. 450 mm. See drawing No. ESR\_K01\_H5\_EXX\_N3010 and drawing No. ESR – Mock - Up Understøtning.

The 0,75 mm DS stålprofil 50  $\mu$ m GreenCoat<sup>®</sup> Pural BT surface coating Z-profile with a size of 30 x 15 x 30 mm was mounted on the bracket profiles with screws designated DS stålprofil 5.5 x 25 Boreskrue with a c/c distance of 300 mm. The distance between the upper edge of Z-profile and the L-profile was 50 mm.

The 0,75 mm DS stålprofil 50  $\mu$ m GreenCoat<sup>®</sup> Pural BT horizontal front profile with a size of 40 x 20 x 250 x 20 was fixed on the angle of the wall with the screw designed DS stålprofil 5.5 x 25 Boreskrue. The bottom u-shape edge of the horizontal front profile was connected with the lower edge of the Z-profile.

The 0,75 mm DS stålprofil 50  $\mu$ m GreenCoat<sup>®</sup> Pural BT horizontal top window bench was mounted on top of the horizontal top window bench on the, the screws designated Red Horse corona RXB 4.8 x 60 were used to fix the horizontal top window bench on the wall with a c/c distance of 450 mm, the screw designated DS stålprofil LP 4.8 x 23 Boreskrue was used to fix the horizontal top window bench on the bracket profiles. See drawing No. ESR – Mock – Up Sålbenk.

See drawing ESR\_K01\_H5\_EXX\_N3010.

- Vertical steel projection:** The 2 Vertical steel projections were mounted on the prefabricated walls and connected with the horizontal flame deflectors.
- Two 1 mm DS steel C-profiles size 70 x 230 x 40 were mounted face to each other on vertical direction with a distance of 325 mm, they were fixed to the wall with screws designated Red Horse corona RXB 4.8 x 60 with a c/c distance of 600 mm.
- The 1 mm DS steel hat profiles were mounted horizontally on C-profiles with 2 screws designated DS stålprofil LP 5.5 x 23 Boreskrue on each side. The width of the hat profile was 130 mm, the height was 25 mm and the width of the top part of the hat profile was 50 mm. The c/c distance of 2 hat profiles was 300 mm.
- The 0,75 mm DS stålprofil 50 µm GreenCoat® Pural BT steel side coverings with recess were mounted on the C-profiles with screws designated DS stålprofil LP 4.8 x 23 Boreskrue with a c/c distance of 300 mm. The distance between the screw and the wall was 70 mm. See drawing No. ESR – Mock – Up Side inddækning med udsparring for sålbænk Højre og venstre.
- The 0,75 mm DS stålprofil 50 µm GreenCoat® Pural BT steel cassettes were mounted on 2 steel side coverings with screws designated DS stålprofil LP 4.8 x 23 Boreskrue with a c/c distance of 300 mm. See drawing No. ESR – Mock – Up Kasette.
- See drawing ESR\_K01\_H5\_EXX\_N3013.
- Formwork:** The pressure impregnated formwork designated Frøslev 25 x 45 mm nominal density of 450 Kg/m<sup>3</sup> was mounted on the prefabricated wall as the substrate for the cladding.
- 583mm length formworks were mounted horizontally at the right side of first vertical steel projection with a c/c distance of 450 mm. Two formworks were mounted under each horizontal flame deflectors with a c/c distance of 400 mm. Two adjustment pieces designated Harpun Justerbrik Reglar 45 size 80 x 45 x 3 mm were put between the horizontal formwork and the prefabricated wall.
- Four vertical formworks were mounted on the prefabricated wall at the right side of the horizontal formworks with a c/c distance of 450mm. See drawing ESR\_K01\_H4\_EXX\_N3014.
- Fixing of formwork:** Nails designated TJEP HDG GR 3.1 x 90 mm ring were used to fix the formwork on the prefabricated wall. On horizontal formworks 2 nails were used and the nails were mounted approx. 80 mm from the end. On the vertical formworks, the c/c distance between the nails was 600 mm.
- Finishing layer (cladding):** The wood cladding designated Moelven Finnforest ThermoWood Profile 330, size 21x 118 mm with groove and tongue and nominal density of 435 Kg/m<sup>3</sup> were mounted on top of the formwork. Vertical claddings were mounted on the horizontal formworks, horizontal claddings were mounted on the vertical formworks.
- The Nordland snow catch pipes were put between the wall and the claddings on the top and bottom of the horizontal flame deflector. Ø 42 mm pipes were put on the horizontal formwork side and Ø32 pipes were put on the vertical formwork side. See photo No. 16.
- Fixing of cladding:** The cladding was fixed with TJEP stainless ZE 2.5 x 50 mm Ring on the formwork with a c/c distance of 450 mm.
- Fire chamber details:** The 0,75 mm DS special coverings with 50 µm GreenCoat® Pural BT were mounted around the fire chamber as the top and side profile. The special coverings were mounted between the construction wood and the weather defence of the prefabricated wall with screws designated Spit P-screw HWS 4.2 x 42 with a c/c distance of 180 mm. The profiles protruding 10 mm from the cladding and 55

mm from the back of the 45 x 95 mm construction wood that they were mounted into. The ends of the profiles were bended connecting the top profile with the side of the fire chamber.

See drawing No. ESR\_K01\_H5\_EXX\_N3010.

**Gap insulation:** The 20 mm gap between the main façade and wing, and the gap between the aerated concrete and prefabricated wall were filled with Rock wool insulation.

**Sealant and ceramic wool:** Between the prefabricated wall and the aerated concrete in the fire chamber ceramic wool was used to close the gap and on top of that a fire sealant was used to close of the airgap.

### Measured by DBI

Product		Isover Insulsafe loose wool L 34	Siniat Weather defence board	Construction wood C24	Finnforest ThermoWood Profile 330	Pressure impregnated formwork
Density	kg/m <sup>3</sup>	44	894	432	431	394
Moisture content	%	0.4	0.6	15.4	6.2	19.5
Organic content	%	1.4				
Sampling method		Extra material	Extra material	Extra material	Extra material	Extra material
Drying temperature	°C	105	55	105	105	105

## Test conditions

### Conditioning

The materials for the test specimen were delivered on the 04-10-2023 to the DBI laboratory and stored under room temperature. On the day of the fire testing the condition of the test specimen was similar with respect to its moisture content as the test specimen would be in normal service.

The installation of the test specimen on the test rig was completed on the 12-10-2023.

### Mounting

The test specimen was mounted on the test rig that had a size of 7990 mm in height and with main surface of 3620 mm and wing 1900 mm wide.

The surface of the test rig was built with 150 mm aerated concrete blocks, with a nominal density of 575 kg/m<sup>3</sup>.

The design and location of the combustion chamber opening in the main face was in accordance with the design details specified in the standard ASSESSMENT OF FIRE PERFORMANCE OF FACADES USING LARGE FIRE EXPOSURE Draft revision 6, Draft Date: 2022 – 11 – 18.

Each of the two vertical sides was closed off with stone wool before the fire test.



## Fire test

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The fire test was conducted in the following conditions:

- Ambient temperature: approx. 15 °C at the start of the test (see Enclosures 3.0 and 3.1)
- Ambient air velocity: Not measured (test undertaken indoor where ambient air speed and/or wind did not affect the test)
- Mechanical exhaust: 80.000 m<sup>3</sup>/h (at ambient temperature) even distributed in the ceiling of the test hall with a combined exhaust duct to the air filter cleaning system.

Observations were made during the test on the general behaviour of the test specimen.

Temperature observations were taken continually during the entire testing time.

The temperatures were measured on the external and internal layers of the test specimen as indicated on DBI drawing enclosure no. 1.0 - 1.2. All thermocouples that were used according to the standard ASSESSMENT OF FIRE PERFORMANCE OF FACADES USING LARGE FIRE EXPOSURE are named I.1.1-1.9, I.2.1-1.2.5, I.3.6 and I.3.7. All other thermocouples are for informative uses.

The temperature was determined by means of type-K sheathed thermocouples specified in, ASSESSMENT OF FIRE PERFORMANCE OF FACADES USING LARGE FIRE EXPOSURE.

The thermocouples named I.1.1-1.9, I.2.1-1.2.5, I.3.6 and I.3.7. were constructed of junctions of nickel chromium/nickel aluminium (type K) wire as defined in EN 60584-1 contained within mineral insulation in a heat resisting alloy sheath of nominal diameter 2.0 mm. Designated as a sheathed thermocouple.

The furnace plate thermocouples were constructed according to EN 1363-1, and all other thermocouples was made from type-k thermocouples wire with 0.5 mm in diameter twisted together in the end.

The wood crib was constructed following the principles in ASSESSMENT OF FIRE PERFORMANCE OF FACADES USING LARGE FIRE EXPOSURE. The dimensions of the spruce sticks were approx. 45x45 mm and the external dimension of the 24-layer wood crib was 1.5m x 1m x 1.08m (width x depth x height). The wood crib was stored at approx. 20°C in dry conditions and was at the time of the fire test in equilibrium with the surroundings. The spruce sticks were nailed together to construct the crib and was installed on a closed bottom surface made of a 20 mm thick calcium silicate board with dimensions of 1300 mm x 1900 mm. The crib was placed 100 mm from the back wall and centred from the sidewalls of the combustion chamber. The average density of the wood was approx. 500 kg/m<sup>3</sup>.

In front of the combustion chamber, a platform was placed which had a size of 1850 x 3200 mm. It was placed with the upper edge 100 mm below the floor of the combustion chamber. This was done to simulate a comparable air flow and buoyancy that will occur if the weight for fallings parts was used. which should have been placed in front of the facade according to ASSESSMENT OF FIRE PERFORMANCE OF FACADES USING LARGE FIRE EXPOSURE section 4.7.4.

The test was terminated after 46 minutes by sponsor.

# Test results

Duration of the test was 46 minutes.

## Measurements

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The enclosed graphs and tables show:

Enclosures 2.0 and 2.1	The temperature in the fire chamber during the test The temperatures are measured with furnace plate thermocouples
Enclosures 3.0 and 3.1	Ambient temperature The ambient temperature in the laboratory during the test
Enclosures 4.0 and 4.1	Flux in Location 1
Enclosures 5.0 and 5.1	Temperature measured in the ventilated cavity
Enclosures 6.0 and 6.1	Temperature measured in the ventilated cavity
Enclosures 7.0 and 7.1	Plate thermocouple Plate TC.1 Location 1 Plate TC.2 Location 2
Enclosures 8.0 and 8.1	Location 1 - TC on PlateTC
Enclosures 9.0 and 9.1	Location 2. 5 m from facade 4.5 m height.
Enclosures 10.0 and 10.1	Thermocouple TC.1 Location 1 TC.2 Location 2
Enclosures 11.0 and 11.1	Flux TC Flux.TC.1 located in window Flux.TC.2 located 3 m from fire chamber
Enclosures 12.0 and 12.1	Temperature rise measured 50mm from the facade
Enclosures 13.0 and 13.1	Temperature rise measured in ventilation layer
Enclosures 14.0 and 14.1	Temperature rise measured in middle of insulation
Enclosures 15.0 and 15.1	Temperature rise measured according to the standard - 50 mm from facade. Minimum of 30 sec

Enclosures 16.0 and 16.1	Temperature rise measured according to the standard - ventilation layer. Minimum of 30 sec
Enclosures 17.0 and 17.1	Temperature rise measured according to the standard - in the middle of the insulation. Minimum of 30 sec
Enclosures 18.0 and 18.1	Vertical measurements on main facade
Enclosures 19.0 and 19.1	Vertical measurements on main facade
Enclosures 20.0 and 20.1	Vertical measurements on the wing
Enclosures 21.0 and 21.1	Vertical measurements on the wing
Enclosures 22.0 and 22.1	Horizontal measurements
Enclosures 23.0 and 23.1	Horizontal measurements
Enclosures 24.0 and 24.1	Plate thermocouple on facade Plate thermocouple on facade

#### Visual observations:

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Time / Minutes	Visual observations:
0	Test commences
0:32	Flame come out and reach to 3 m above the chamber
1:33	Cladding above the first horizontal flame deflector start burning
2	The flame reach to second horizontal flame deflector
3:30	Top profile of the fire chamber bended
3:50	50 x 50 mm pieces fell from the cladding
3:55	Vertical cladding between first and second horizontal flame deflector start burning
4:40	Whole cladding is burning between first and second horizontal flame deflector
5	Small pieces fell (not from the cladding)
5:20	The flame reach to 1.5 m above second horizontal flame deflector
5:40	Large pieces dropped and burning on the ground, approx. 100 x 50 mm
6:20	The flame reach to 2 m above second horizontal flame deflector

7:30	More pieces dropped and burning on the ground
7:50	Cladding 2 m above the first horizontal flame deflector start burning
8:30	More pieces dropped and burning on the ground
9:30	Flame reach to the top of the façade
10	Cladding below the third horizontal flame deflector start burning
12:10	All cladding between second and third horizontal flame deflector is burning
14:20	More pieces dropped from the cladding and burning on the ground
17:40	50% cladding between first and second horizontal flame deflector are burned out
23	More pieces dropped from the cladding and burning on the ground
28:20	Place TC on the lower place has fallen to the floor
28:30	Cladding between first and second horizontal flame deflector is burned out
31:30	Smoke come from the left edge of the prefabricated wall above the first horizontal flame deflector
33:10	Upper plate TC has fallen to the floor
35:35	Almost all cladding is burned out
40	Cracks on weather defence between first and second flame deflector. See photo No.31.
41:10	Almost all formworks are burned out
46	Test stopped by the sponsor

The photographs on the attached photo sheets show the test specimen during the mounting, testing and after the test. See the description in each photo.

## Conclusion

Fire testing according to daft version of: ASSESSMENT OF FIRE PERFORMANCE OF FACADES USING LARGE FIRE EXPOSURE, the construction described in this test report showed that failure according to the performance criteria stated in the test method occurred at the following time:

Performance	Criterion	Test result
<b>Fire spread</b>	Vertical fire spread	4 minutes
	Horizontal fire spread	No failure
	Burning parts	11 minutes
<b>Falling parts – Level 0</b>	Falling parts – (Level 0)	9 minutes
	Falling parts – (Level 1)	No failure
<b>Falling parts – Level 1</b>	Falling parts – (Level 1)	No failure
	Falling parts – (Level 2)	No failure

The test was terminated after 46 minutes by the sponsor.

## Remarks

The test was an Ad-Hoc test, there is no field of application.

This report details the method of construction, the test conditions and the results obtained when the specific element of construction described herein was tested following the procedure outlined in ASSESSMENT OF FIRE PERFORMANCE OF FACADES USING LARGE FIRE EXPOSURE.

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

This report has only been printed in a pdf-version. DBI has not issued a hard copy version.  
All values mentioned in this report are nominal values, production tolerances are not considered.

**The test was not performed accredited.**

### Danish Institute of Fire and Security Technology



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**Chunyang Dong**  
Resistance to Fire Engineer



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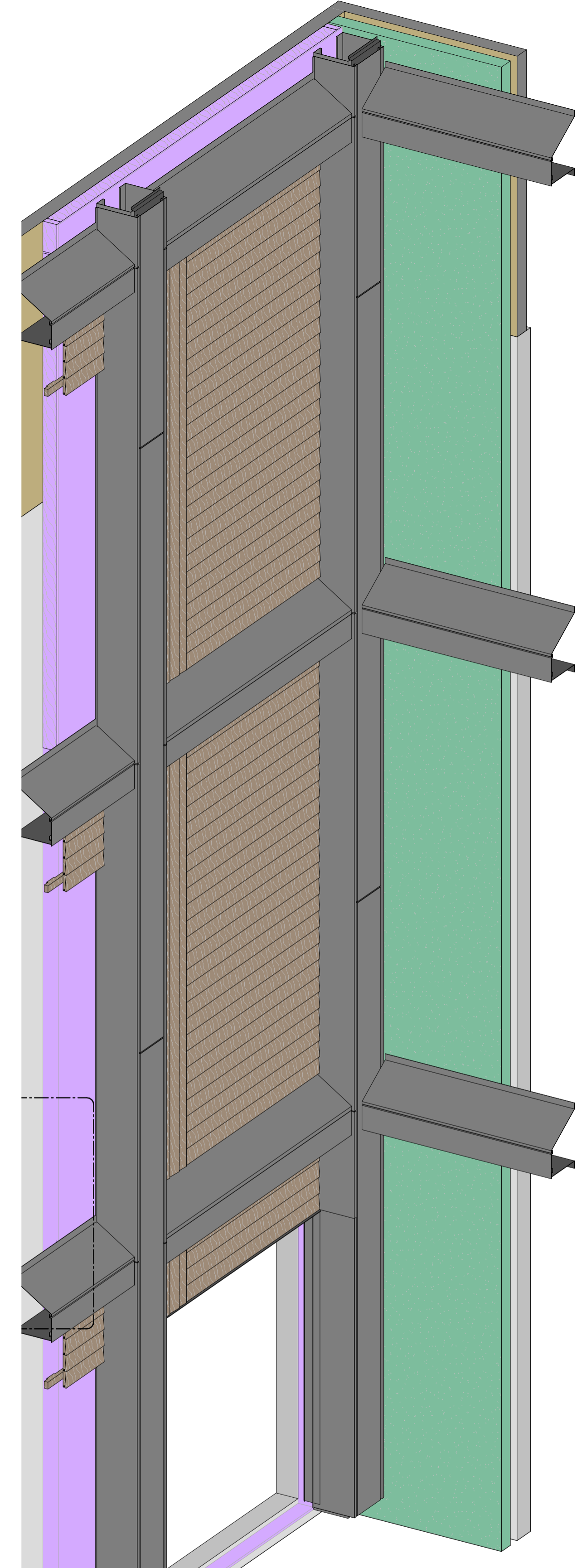
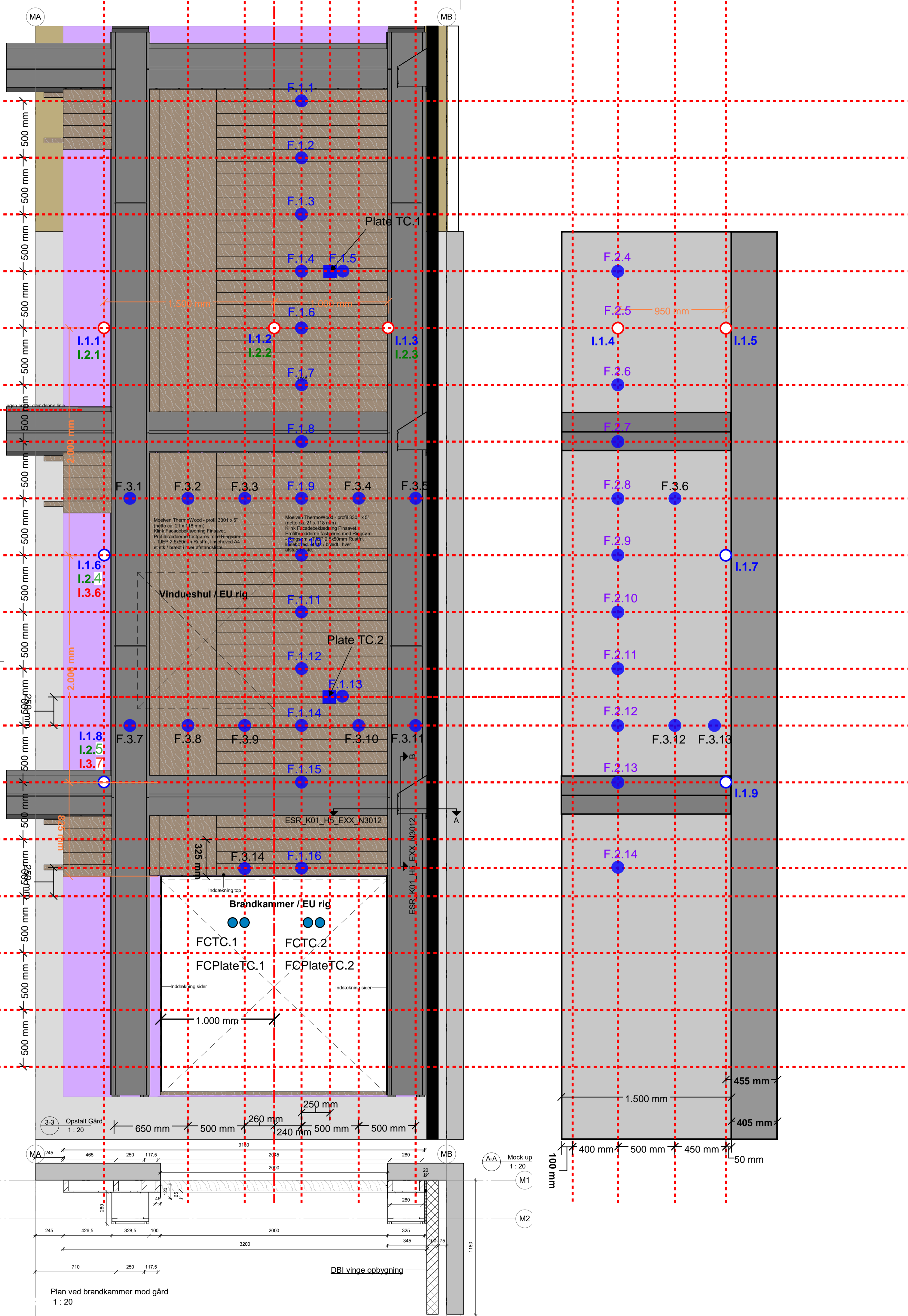
**Christian Basbøll**  
Resistance to Fire Engineer

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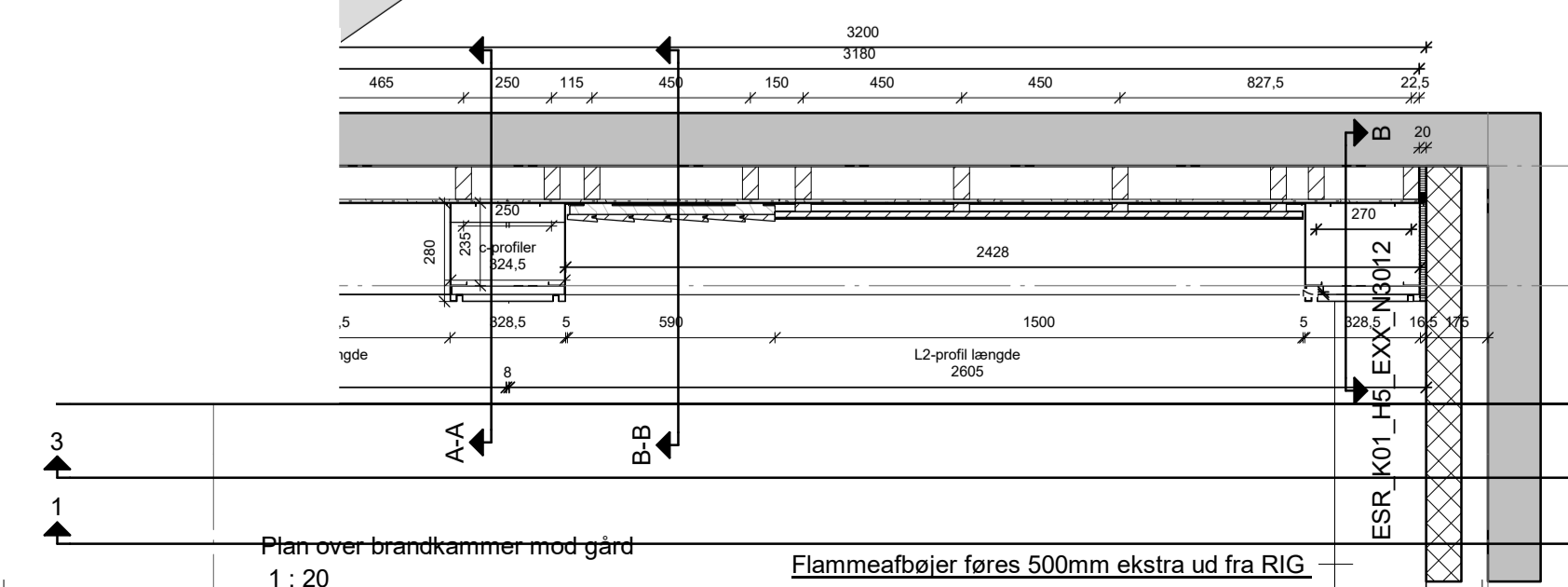
**Distreal NSF III LOG Køge 3 ApS**

c/o NREP A/S  
Southamptongade 4  
2150 Nordhavn  
Denmark

<b>Enclosures:</b>	<b>81</b>
DBI drawings:	3
DBI graphs and tables:	46
Photo sheets:	18
Sponsors drawings:	14

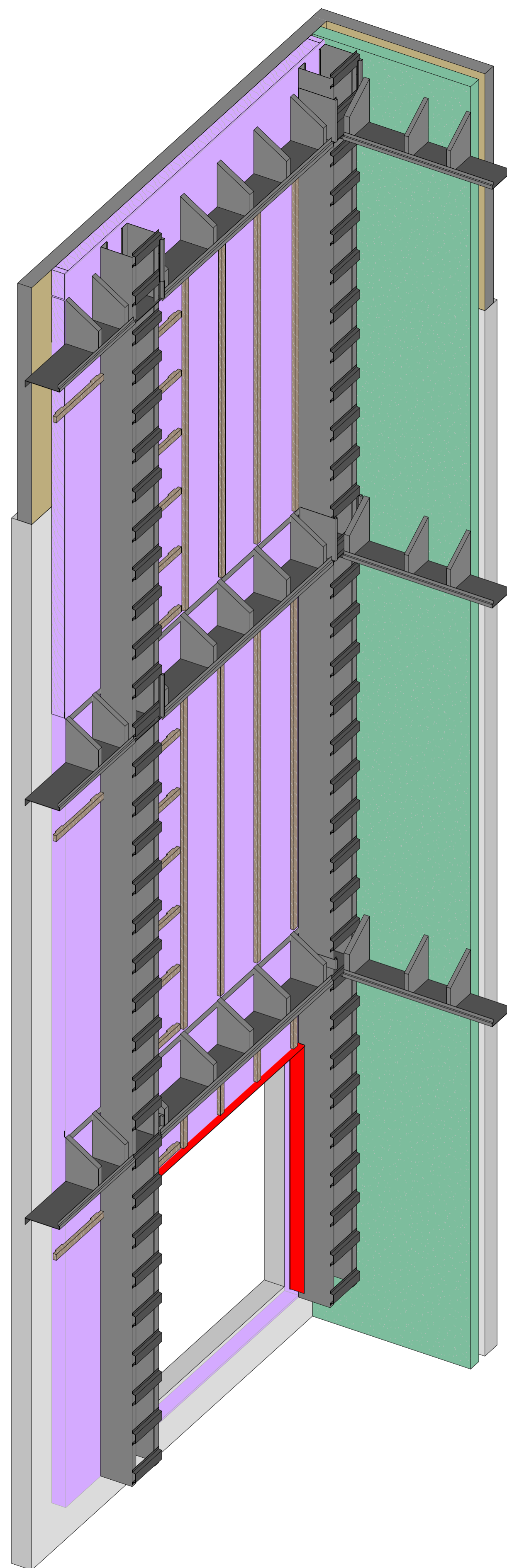
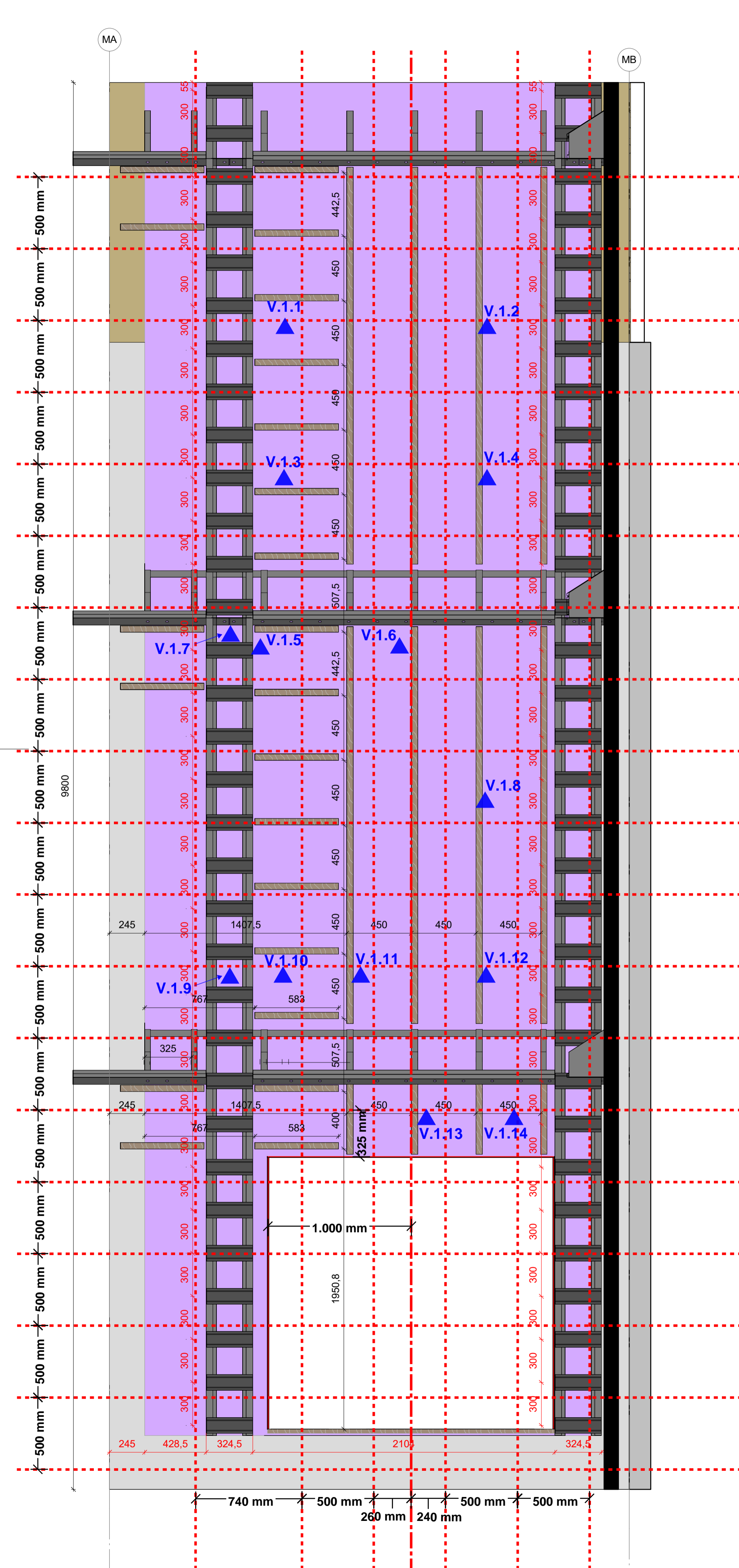


- Thermocouple location on the facade surface proposed by Guoxiang (5 cm from the wood panel surface).
- Thermocouple location on the facade surface required according to the standard (3 measurements: 5 cm out on exposed surface, middle of cavity and center of insulator).
- I.1.6 -> I.1.9 50mm ud igennem facade (Hele vejen igennem)
- I.2.6 + I.2.8 I midten af ventilationslag
- I.3.6 + I.3.8 I midten af isolering
- Thermocouple location on the facade surface required according to the standard (2 measurements: 5 cm out on exposed surface and middle of the cavity)
- I.1.1 -> I.1.5 50mm ud igennem facade (Hele vejen igennem)
- I.2.1 -> I.2.3 I midten af ventilationslag
- ▲ Thermocouple within the ventilated cavity.
- Water cooled heat flux censor at the center of the secondary window.
- Plate thermometer at the surface of the facade, flush to the surface of the facade.



File No.: PGC10026A  
 Test date: 13-10-2023  
 Enclosure: 1.0

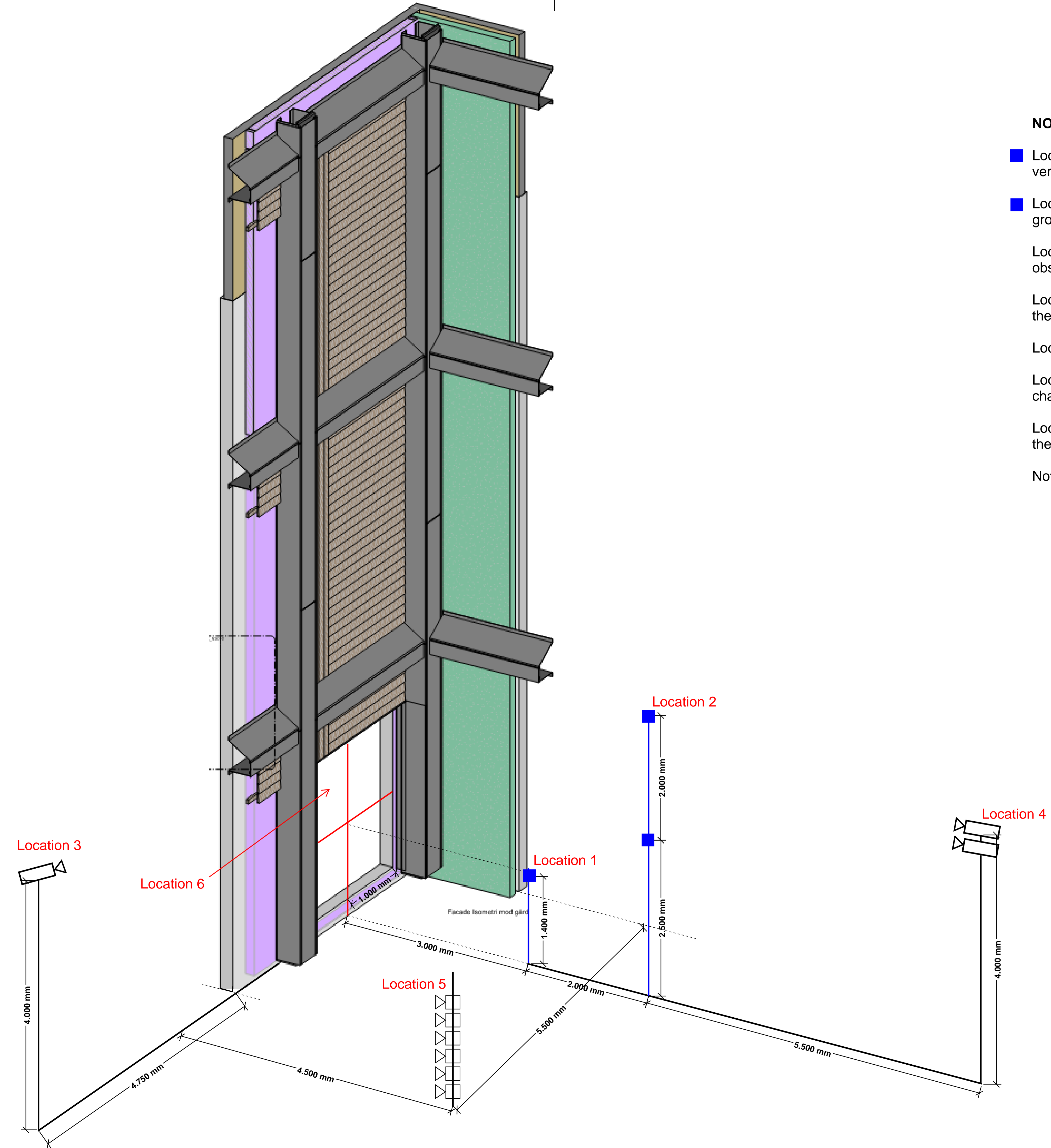
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 Sponsor: DBI  
 Subject: EU Facade test 2



- Thermocouple location on the facade surface proposed by Guoxiang (5 cm from the wood panel surface).
- Thermocouple location on the facade surface required according to the standard (3 measurements: 5 cm out on exposed surface, middle of cavity and center of insulator).
- Thermocouple location on the facade surface required according to the standard (2 measurements: 5 cm out on exposed surface and middle of the cavity)
- ▲ Thermocouple within the ventilated cavity.
- Water cooled heat flux sensor at the center of the secondary window.
- Plate thermometer at the surface of the facade, flush to the surface of the facade.

File No.: PGC10026A  
 Test date: 13-10-2023  
 Enclosure: 1.1

Danish Institute of Fire and security Technology  
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**NOTE:**

- Location 1: 3 m away to the center of the combustion chamber (both horizontally and vertically), a plate thermometer, a thermocouple and a water cooled heat flux sensor.
- Location 2: 5 m away from the facade wall, 2.5 m above the ground and 4.5 m above the ground, a plate thermometer and a thermocouple.

Location 3 : 1 camera from the side view, 4 meters high, mounted on the SP-FIRE rig, observing the test from the side.

Location 4: 1 camera from front view, 4 meters high, mounted on the gas-beton rig, at the opposite end of the facadehall in the corner.

Location 5: 6 blue LED lights, light should focus on the second section of the facade.

Location 6: two plate thermometers + two wire thermocouples inside the combustion chamber.

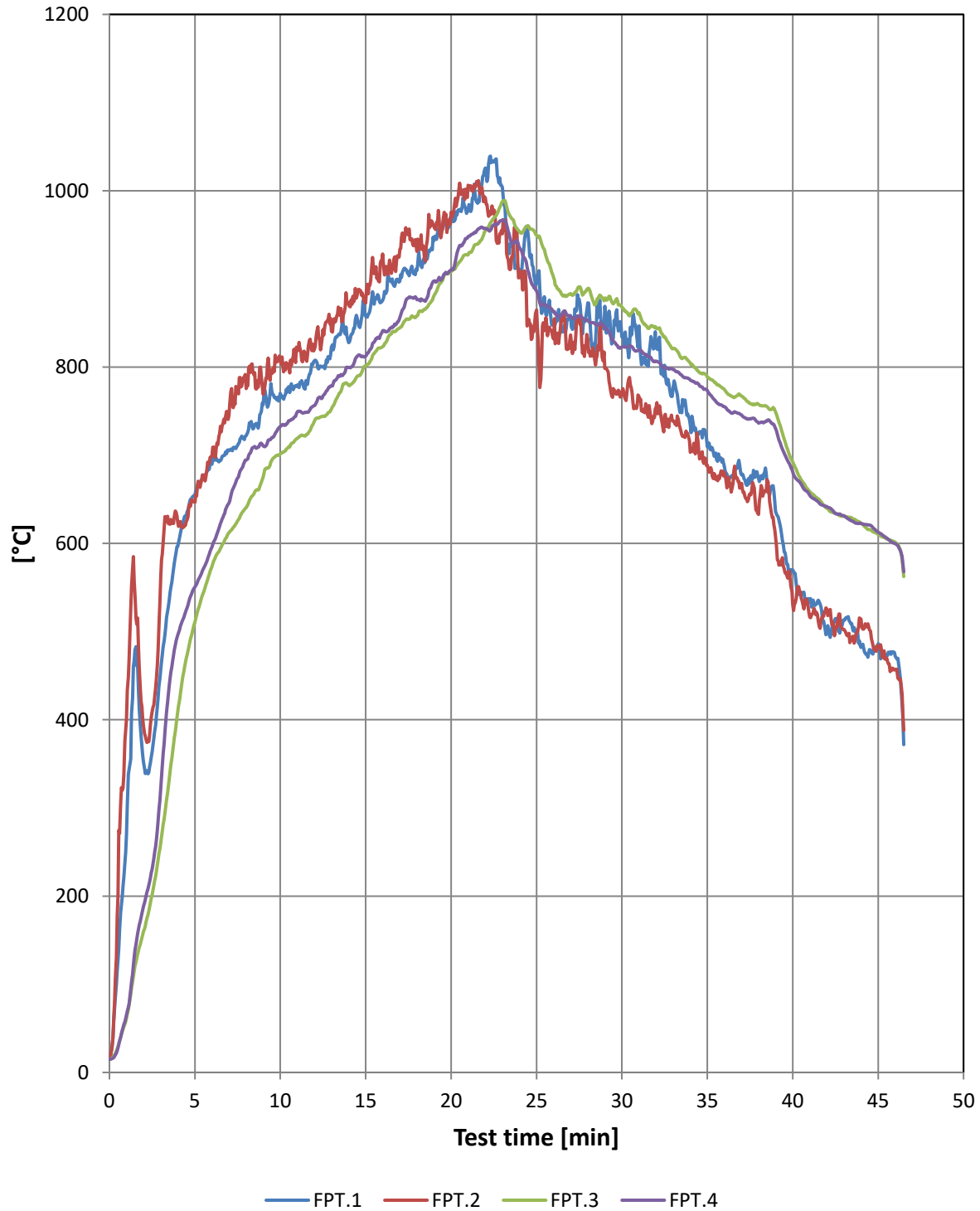
Location 7 and 8: bi-direction velocity tube together with a wire temperature thermocouple to measure the measuring the flow speed towards the wood crib

Note: height indicator every 500 mm at two edges of the facade.



## The temperature in the fire chamber during the test

The temperatures are measured with furnace plate thermocouples



FireChamberPlateTC.1 FireChamberPlateTC.2  
FireChamberTC.1 FirechamberTC.2

## The temperature in the fire chamber during the test

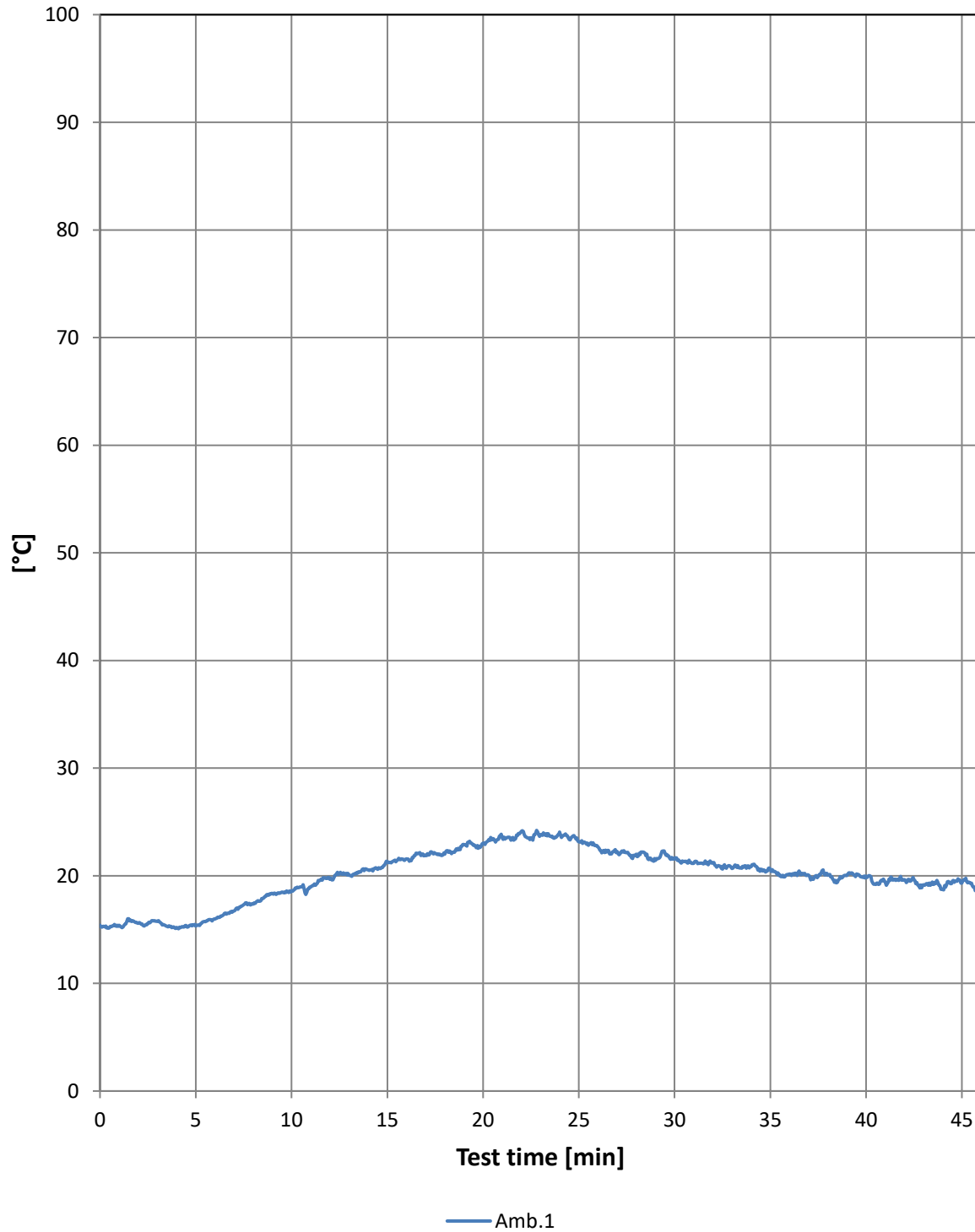
*The temperatures are measured with furnace plate thermocouples*

Min. / °C	FPT.1	FPT.2	FPT.3	FPT.4
0	15	15	15	15
2	352	393	160	188
4	597	624	409	496
6	690	699	574	596
8	722	776	641	695
10	770	807	702	733
12	807	821	738	756
14	828	871	779	800
15	858	873	801	812
16	875	928	823	841
18	910	931	858	876
20	965	976	908	910
22	1026	992	955	957
24	910	903	954	935
26	850	832	901	862
28	873	832	889	853
30	834	772	868	823
32	821	754	844	807
34	734	703	804	785
36	688	681	775	755
38	674	633	758	737
40	570	530	692	681
42	503	525	640	642
44	482	514	623	623
46	472	457	601	600

*FireChamberPlateTC.1 FireChamberPlateTC.2  
FireChamberTC.1 FirechamberTC.2*

## Ambient temperature

*The ambient temperature in the laboratory during the test*

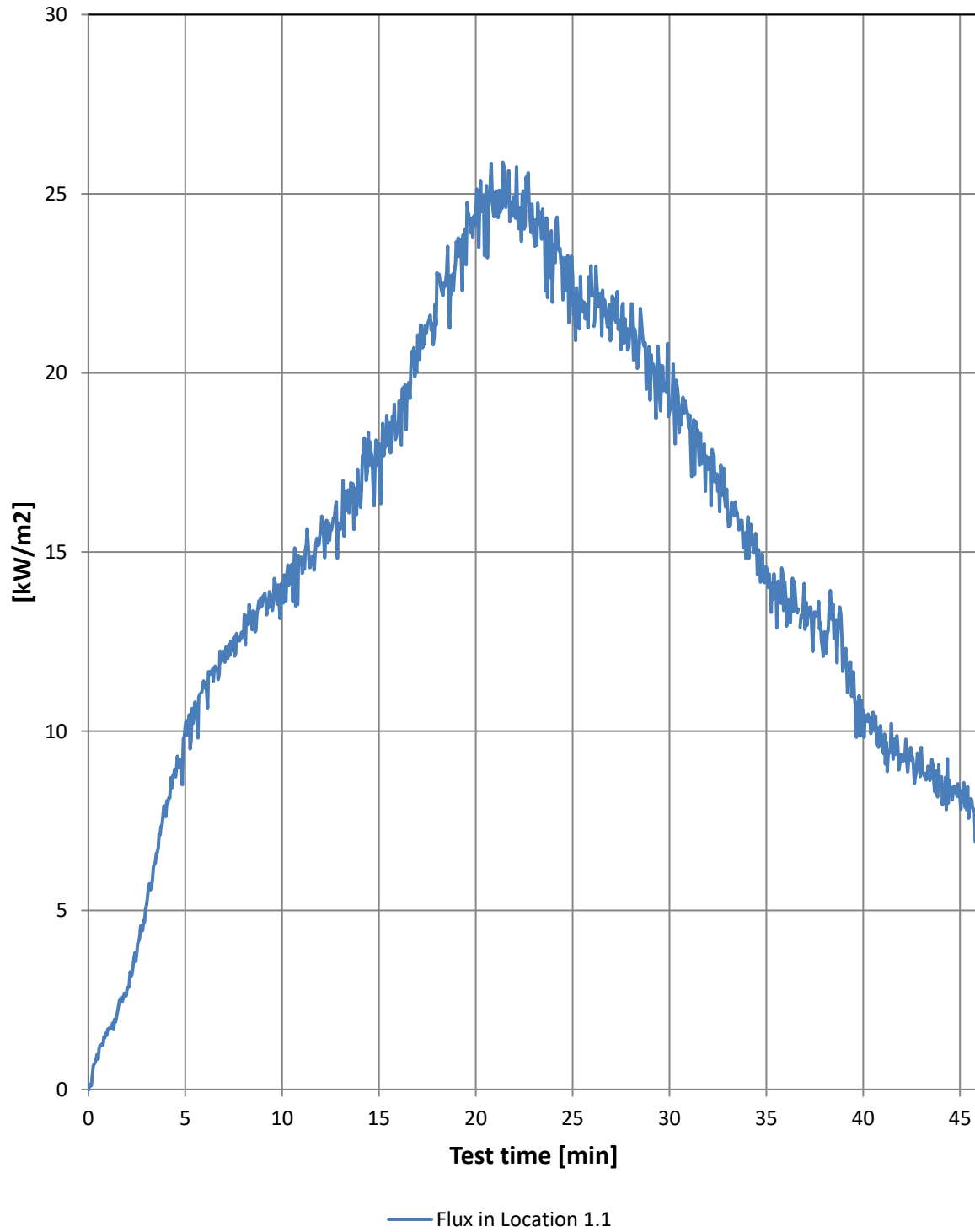


## Ambient temperature

*The ambient temperature in the laboratory during the test*

Min. / °C	Amb.1
0	15
2	16
4	15
6	16
8	17
10	19
12	20
14	21
15	21
16	22
18	22
20	23
22	24
24	24
26	23
28	22
30	22
32	21
34	21
36	20
38	20
40	20
42	20
44	19
46	19

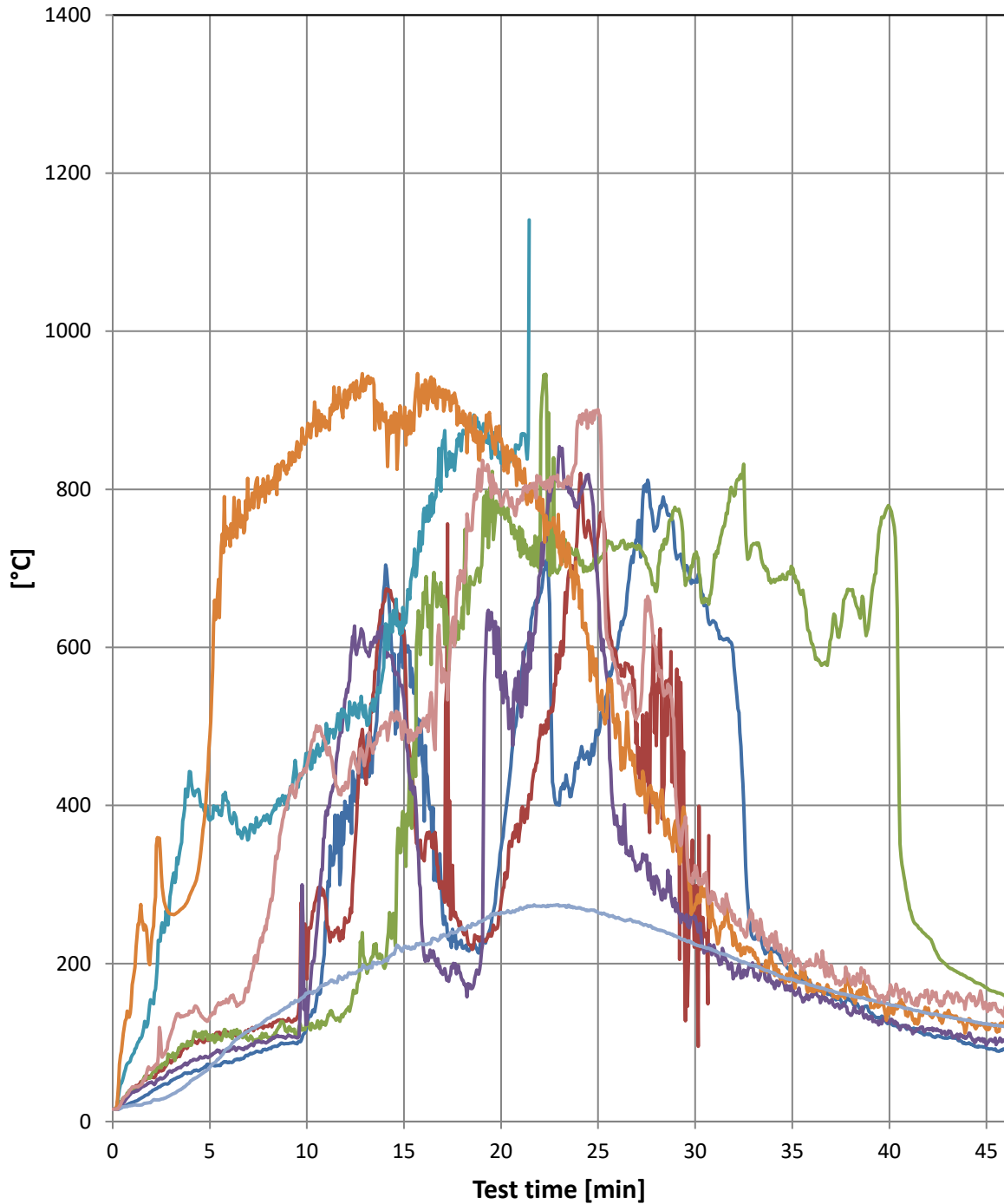
### Flux in Location 1



## Flux in Location 1

Min. / kW/m <sup>2</sup>	Flux in Location 1.1
0	0
2	3
4	8
6	11
8	13
10	14
12	16
14	16
15	18
16	18
18	23
20	24
22	25
24	23
26	22
28	21
30	19
32	17
34	15
36	14
38	13
40	11
42	9
44	8
46	8

## Temperature measured in the ventilated cavity



— V.1.1 — V.1.2 — V.1.3 — V.1.4 — V.1.5 — V.1.6 — V.1.7 — V.1.8

*Thermocouple V.1.2 malfunctioned after 30 minutes of testing. Thermocouple V.1.5 malfunctioned after 20 minutes of testing.*

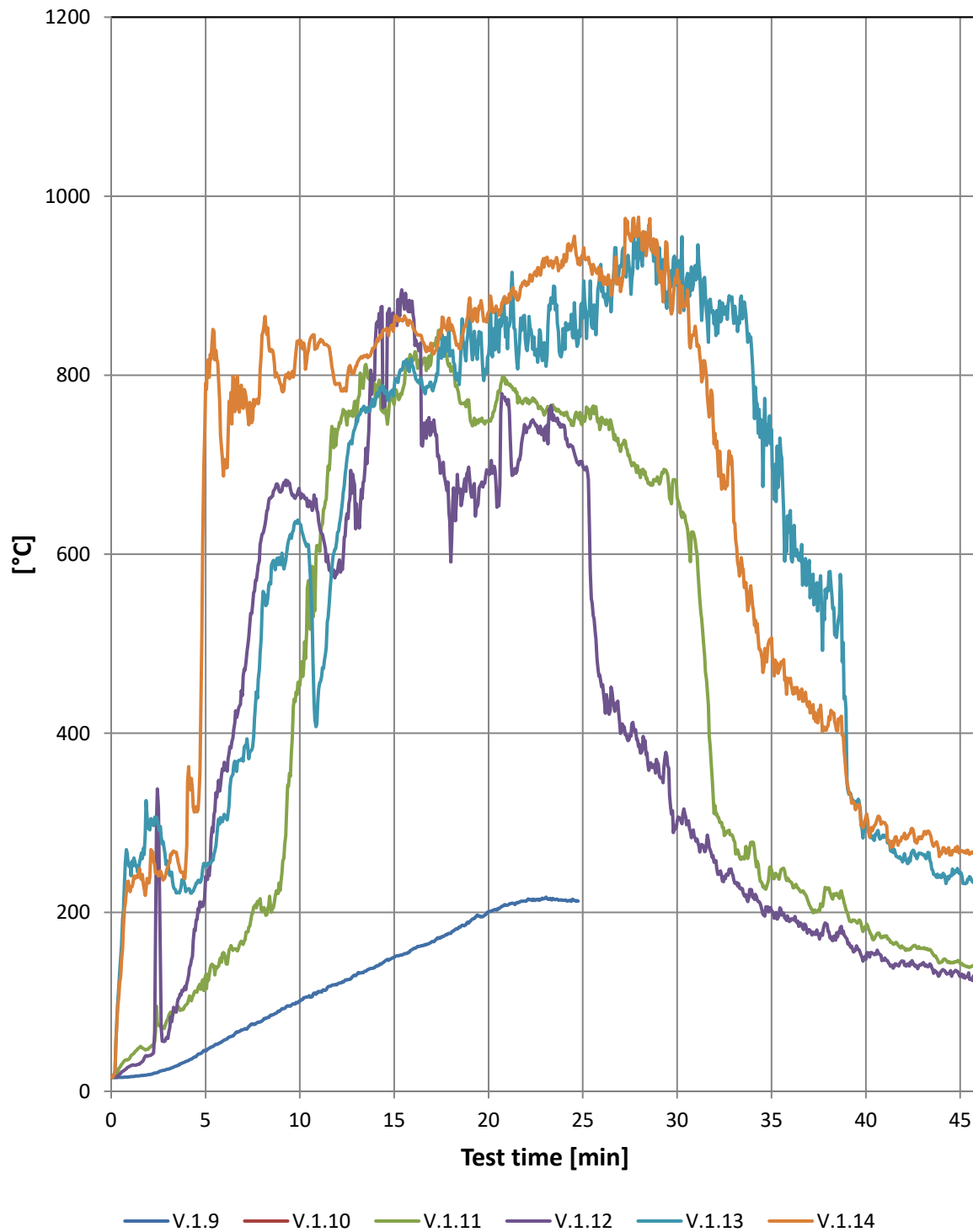
## Temperature measured in the ventilated cavity

Min. / °C	V.1.1	V.1.2	V.1.3	V.1.4	V.1.5	V.1.6	V.1.7	V.1.8
0	15	15	15	16	16	16	16	16
2	38	58	60	50	152	232	25	66
4	61	101	100	77	442	288	51	139
6	75	110	110	89	391	750	94	153
8	92	120	106	101	387	817	131	258
10	119	180	122	123	456	870	162	450
12	398	252	140	537	514	915	183	429
14	679	659	194	612	610	886	203	504
15	621	620	349	534	627	890	221	507
16	447	334	669	218	769	932	224	510
18	220	243	651	179	868	884	246	691
20	346	278	768	546	833	864	265	779
22	668	488	695	693	0	790	273	816
24	460	788	714	782	0	678	271	886
26	599	577	725	374	0	515	258	567
28	751	476	671	311	0	415	244	587
30	683	260	713	259	0	275	224	324
32	576	0	791	185	0	239	206	262
34	217	0	684	177	0	199	188	234
36	173	0	605	161	0	165	172	198
38	154	0	673	135	0	163	160	176
40	125	0	778	125	0	137	148	163
42	110	0	233	118	0	144	137	157
44	99	0	182	107	0	123	128	157
46	91	0	159	103	0	126	120	147

*Thermocouple V.1.2 malfunctioned after 30 minutes of testing. Thermocouple V.1.5 malfunctioned after 20 minutes of testing.*



## Temperature measured in the ventilated cavity



*Thermocouple V.1.9 malfunctioned after 24 minutes of testing. Thermocouple V.1.10 malfunctioned in beginning of test.*

## Temperature measured in the ventilated cavity

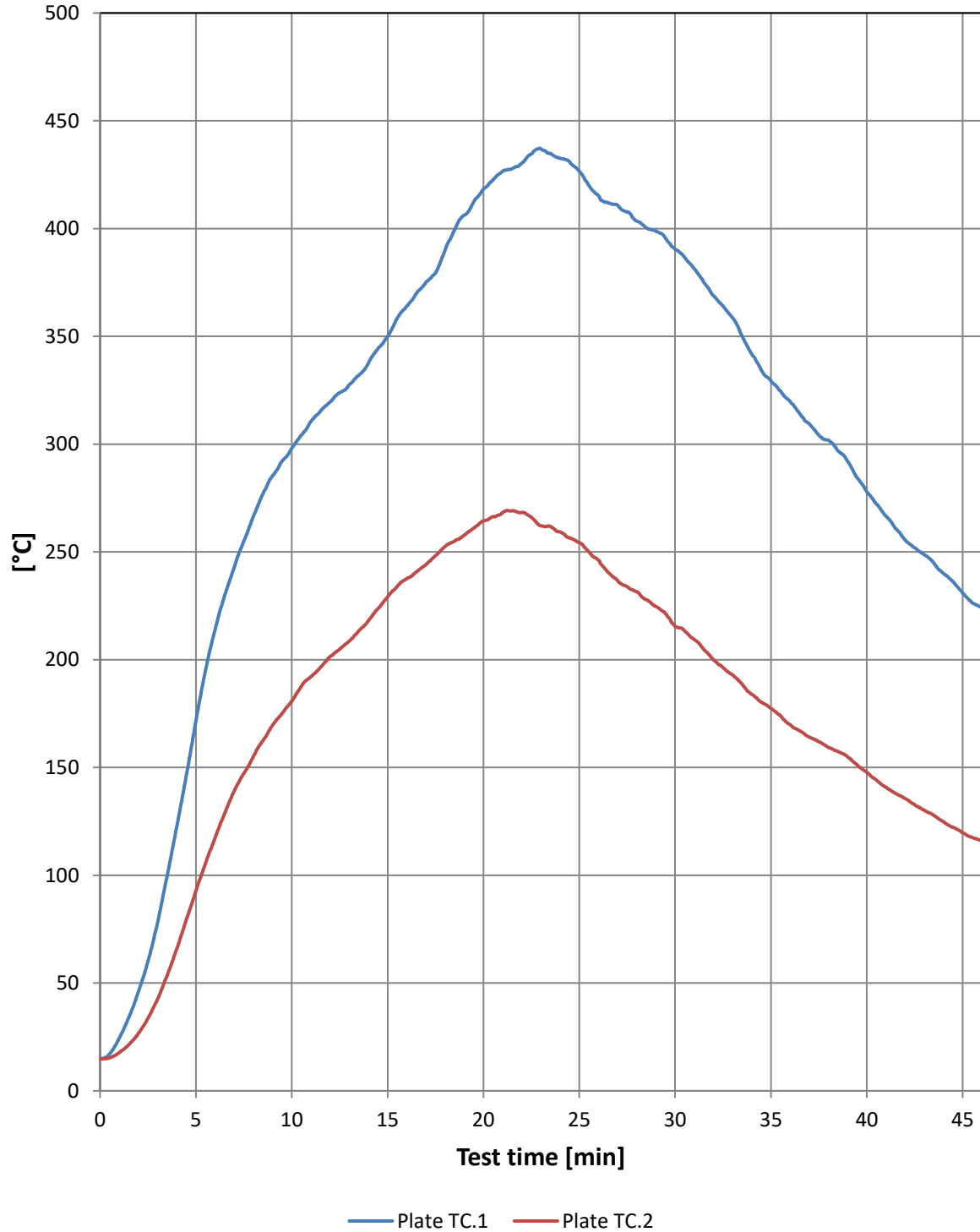
Min. / °C	V.1.9	V.1.10	V.1.11	V.1.12	V.1.13	V.1.14
0	15	0	16	16	16	16
2	19	0	48	40	293	233
4	34	0	97	121	225	274
6	57	0	154	368	310	706
8	78	0	200	622	537	845
10	101	0	453	668	634	839
12	120	0	739	582	624	791
14	139	0	773	838	771	833
15	150	0	767	855	785	856
16	159	0	816	867	810	853
18	177	0	804	591	822	850
20	201	0	748	691	823	870
22	213	0	774	736	829	900
24	214	0	755	744	844	935
26	0	0	753	452	893	914
28	0	0	691	387	943	956
30	0	0	663	302	900	918
32	0	0	319	257	870	735
34	0	0	279	217	810	542
36	0	0	234	191	649	462
38	0	0	227	179	559	409
40	0	0	183	148	298	307
42	0	0	161	145	261	284
44	0	0	144	134	239	265
46	0	0	142	128	234	265

*Thermocouple V.1.9 malfunctioned after 24 minutes of testing. Thermocouple V.1.10 malfunctioned in beginning of test.*

## Plate thermocouple

Plate TC.1 Location 1

Plate TC.2 Location 2



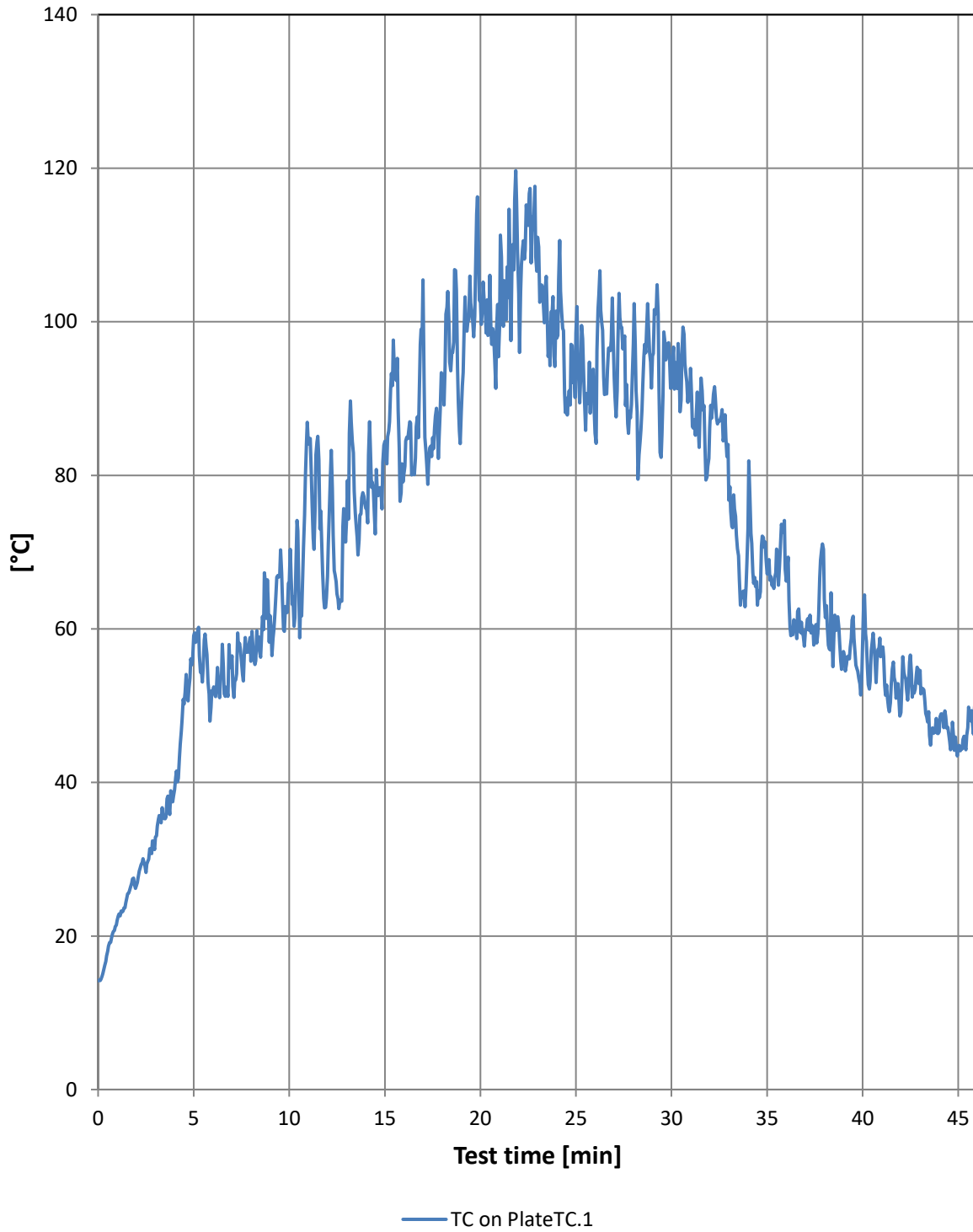
## Plate thermocouple

*Plate TC.1 Location 1*

*Plate TC.2 Location 2*

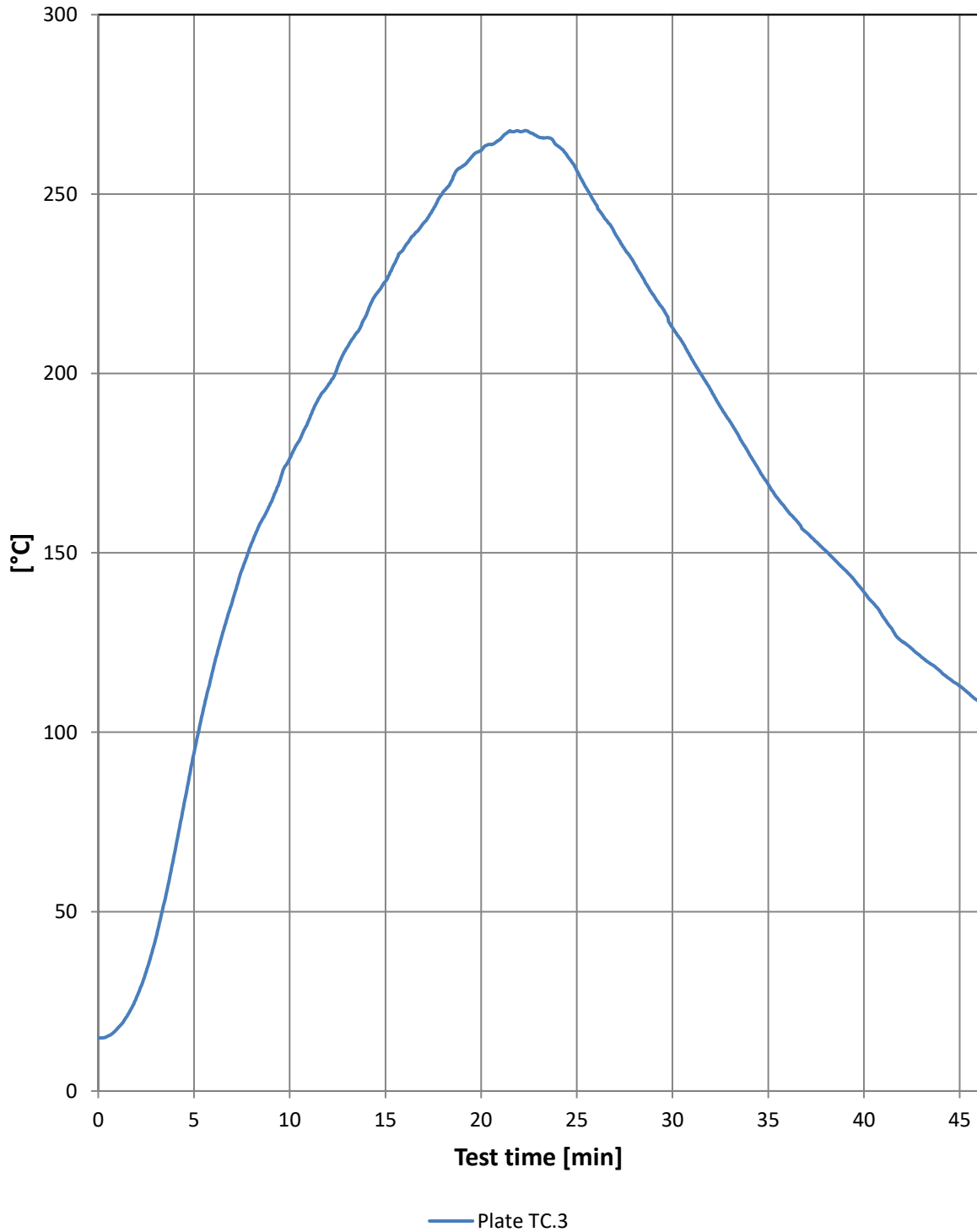
Min. / °C	Plate TC.1	Plate TC.2
0	15	15
2	46	27
4	123	66
6	214	117
8	266	155
10	298	181
12	319	201
14	338	218
15	350	229
16	364	238
18	390	253
20	418	264
22	430	268
24	433	259
26	415	246
28	404	231
30	390	216
32	369	200
34	342	184
36	320	170
38	302	159
40	278	148
42	256	136
44	240	125
46	224	116

### Location 1 - TC on PlateTC



**Location 1 - TC on PlateTC**

Min. / °C	TC on PlateTC.1
0	14
2	27
4	39
6	52
8	56
10	66
12	67
14	76
15	84
16	80
18	93
20	103
22	104
24	98
26	85
28	97
30	93
32	86
34	73
36	66
38	64
40	58
42	49
44	47
46	50

**Location 2. 5 m from facade 4.5 m height.**

**Location 2. 5 m from facade 4.5 m height.**

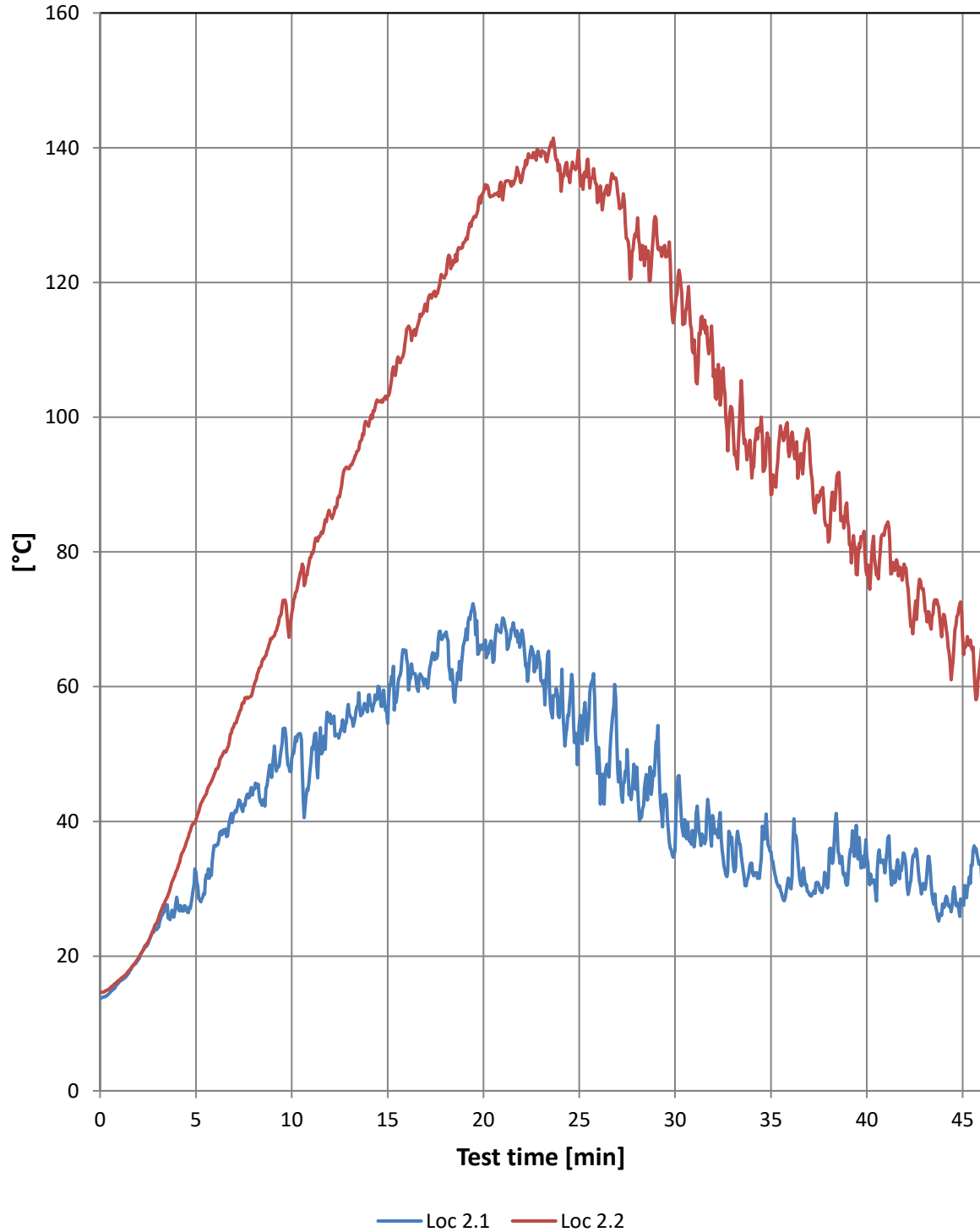
Min. / °C	Plate TC.3
0	15
2	26
4	67
6	118
8	153
10	176
12	197
14	216
15	226
16	235
18	250
20	262
22	267
24	263
26	247
28	231
30	213
32	195
34	178
36	162
38	151
40	139
42	125
44	117
46	109



## Thermocouple

TC.1 Location 1

TC.2 Location 2



## Thermocouple

*TC.1 Location 1*

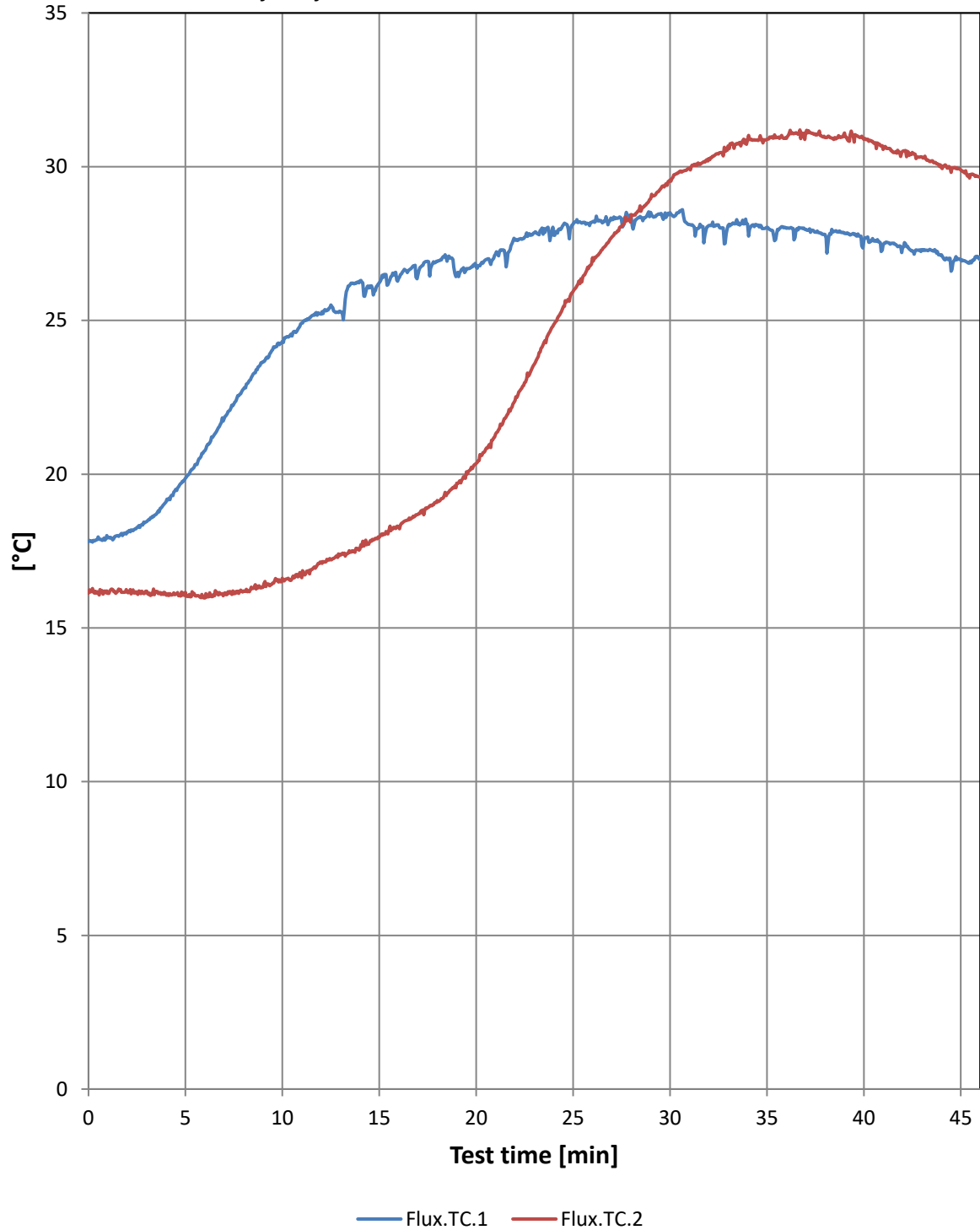
*TC.2 Location 2*

Min. / °C	Loc 2.1	Loc 2.2
0	14	15
2	20	20
4	29	33
6	36	47
8	45	60
10	49	71
12	56	86
14	59	99
15	55	103
16	64	113
18	68	121
20	66	133
22	68	135
24	58	137
26	51	132
28	48	128
30	36	116
32	40	106
34	34	91
36	30	95
38	31	81
40	35	77
42	34	78
44	27	71
46	31	66

## Flux TC

*Flux.TC.1 located in window*

*Flux.TC.2 located 3 m from fire chamber*



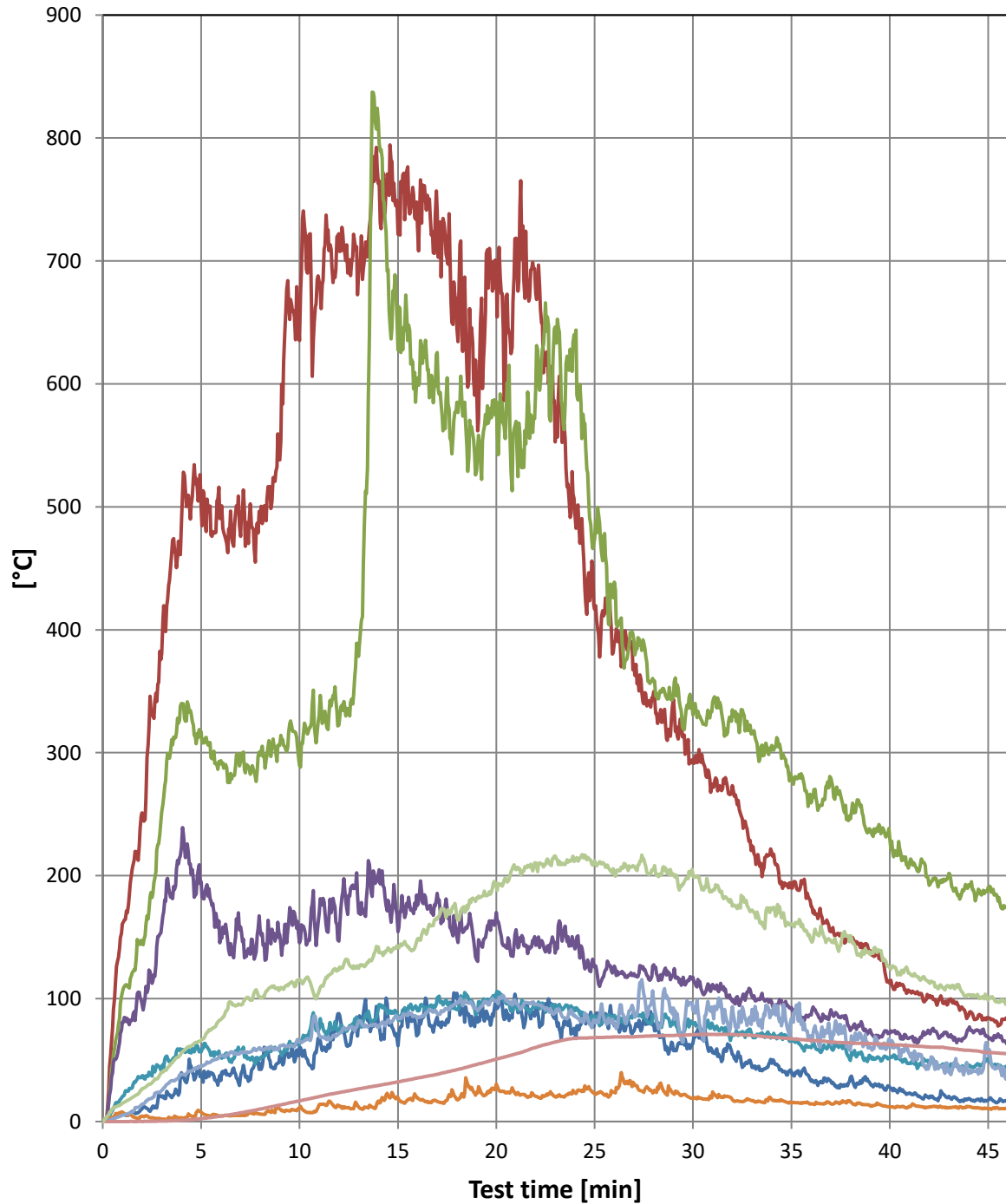
## Flux TC

*Flux.TC.1 located in window*

*Flux.TC.2 located 3 m from fire chamber*

Min. / °C	Flux.TC.1	Flux.TC.2
0	18	16
2	18	16
4	19	16
6	21	16
8	23	16
10	24	17
12	25	17
14	26	18
15	26	18
16	26	18
18	27	19
20	27	20
22	28	22
24	28	25
26	28	27
28	28	28
30	29	30
32	28	30
34	28	31
36	28	31
38	28	31
40	28	31
42	27	31
44	27	30
46	27	30

## Temperature rise measured 50mm from the facade

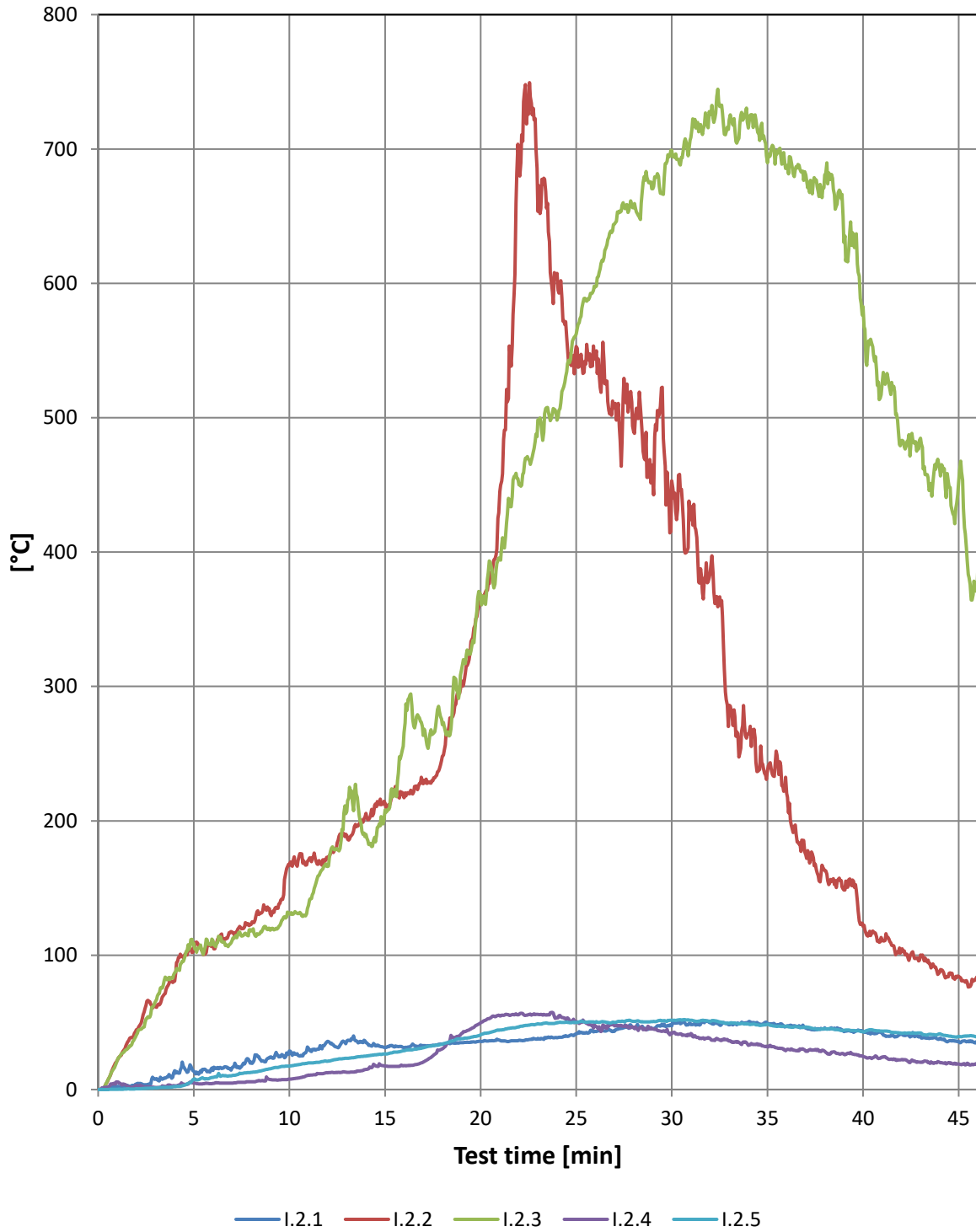


I.1.1 I.1.2 I.1.3 I.1.4 I.1.5 I.1.6 I.1.7 I.1.8 I.1.9

## Temperature rise measured 50mm from the facade

Min. / °C	I.1.1	I.1.2	I.1.3	I.1.4	I.1.5	I.1.6	I.1.7	I.1.8	I.1.9
0	0	0	0	0	0	0	0	0	0
2	10	251	147	96	37	4	14	0	27
4	40	487	340	223	56	3	38	1	56
6	33	495	294	151	53	5	54	4	83
8	47	488	298	157	51	6	60	10	101
10	61	635	290	145	63	11	65	17	116
12	88	722	323	147	72	12	72	24	123
14	79	763	813	201	91	17	77	29	142
15	62	722	628	154	83	19	83	32	142
16	70	728	605	176	90	19	85	35	149
18	104	645	585	150	91	18	97	42	166
20	95	691	586	170	104	30	98	51	191
22	91	673	597	143	93	21	95	60	210
24	71	495	634	140	90	23	85	68	213
26	78	390	439	126	87	24	79	69	202
28	79	350	358	128	87	24	97	70	206
30	63	292	331	117	80	19	90	71	201
32	55	273	335	98	71	18	93	71	175
34	47	219	306	97	69	18	90	69	172
36	33	175	259	87	60	14	69	66	147
38	36	148	246	74	50	17	58	64	151
40	28	112	231	72	52	12	61	63	125
42	19	102	192	73	47	12	45	61	113
44	19	86	193	75	45	12	39	58	103
46	16	84	175	63	45	11	40	55	101

## Temperature rise measured in ventilation layer

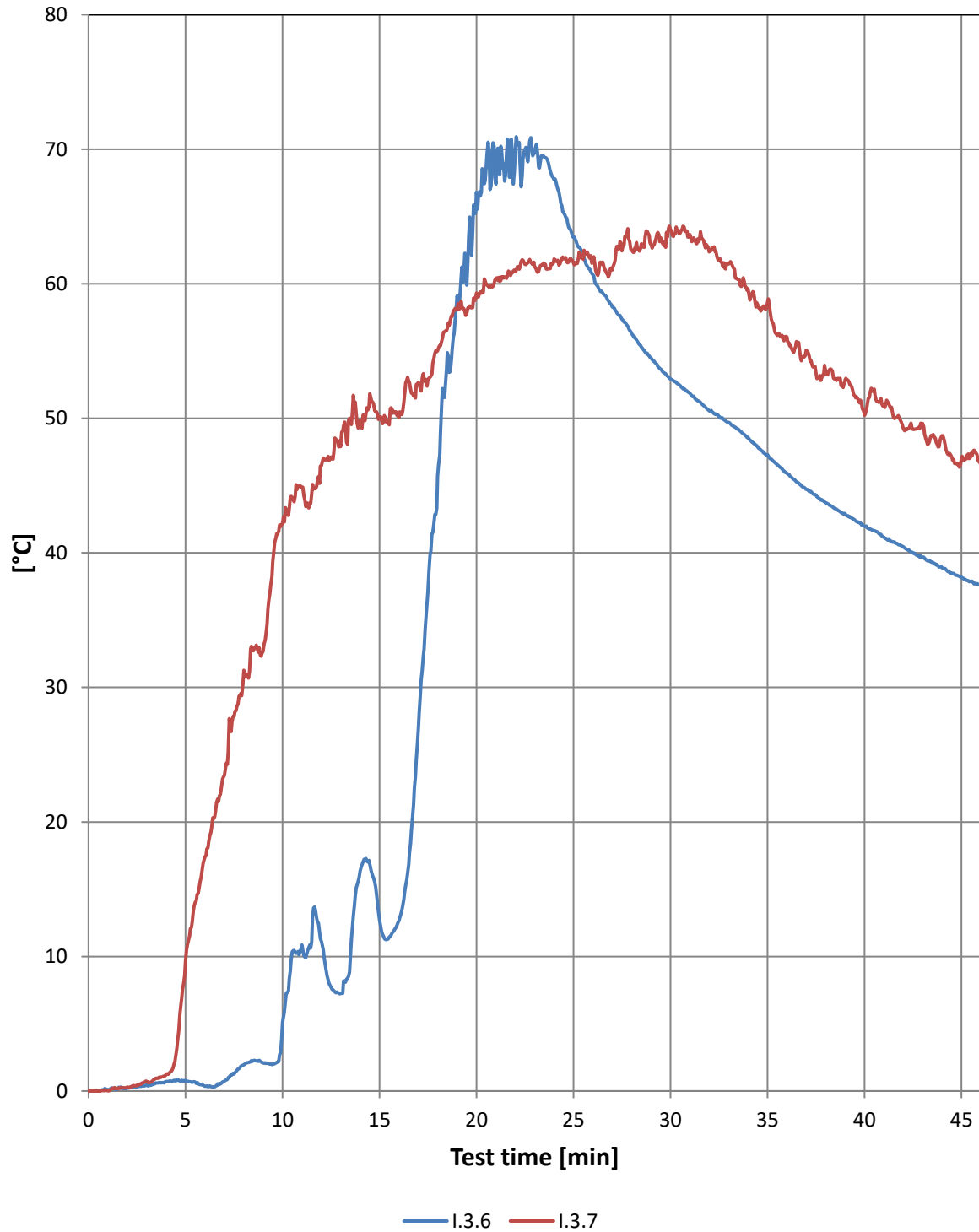


## Temperature rise measured in ventilation layer

Min. / °C	I.2.1	I.2.2	I.2.3	I.2.4	I.2.5
0	0	0	0	0	0
2	4	44	41	3	0
4	14	81	87	3	2
6	14	107	111	4	9
8	20	123	118	6	13
10	29	167	131	8	17
12	36	172	166	12	21
14	35	205	190	15	25
15	31	213	208	18	27
16	31	217	266	18	29
18	34	248	272	30	34
20	36	364	368	50	41
22	37	687	450	56	47
24	39	608	498	53	50
26	43	547	597	47	50
28	46	490	656	46	51
30	47	453	699	41	52
32	50	384	726	38	51
34	49	265	716	33	49
36	47	220	688	30	47
38	46	163	681	28	45
40	43	121	583	25	43
42	41	103	483	22	42
44	38	87	462	20	41
46	34	82	385	19	39



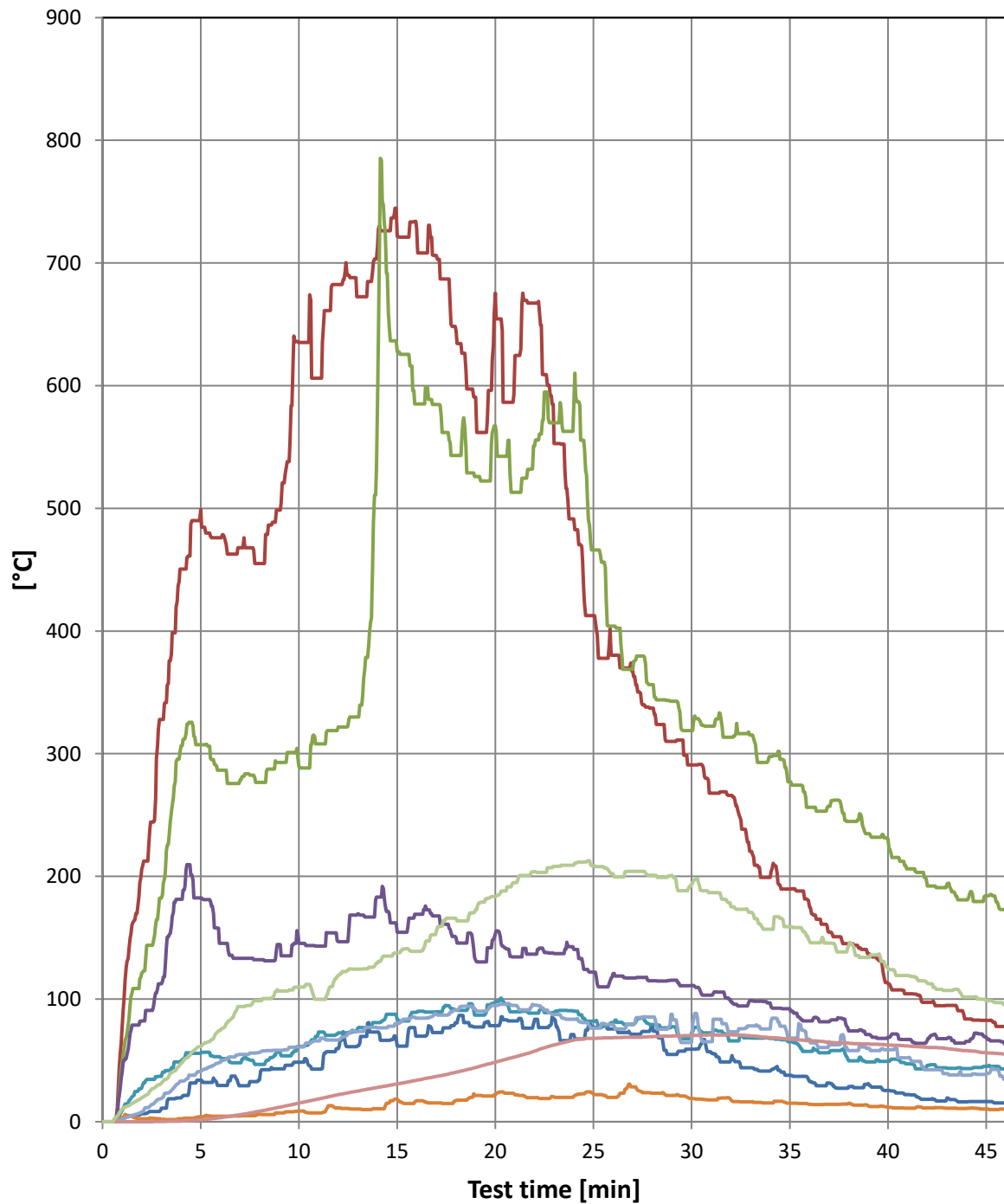
## Temperature rise measured in middle of insulation



## Temperature rise measured in middle of insulation

Min. / °C	I.3.6	I.3.7
0	0	0
2	0	0
4	1	1
6	0	17
8	2	31
10	5	42
12	11	46
14	16	50
15	13	50
16	13	50
18	46	55
20	67	59
22	70	61
24	68	62
26	61	62
28	56	63
30	53	64
32	51	62
34	49	60
36	46	56
38	44	54
40	42	50
42	40	49
44	39	49
46	38	47

## Temperature rise measured according to the standard - 50 mm from facade. Minimum of 30 sec



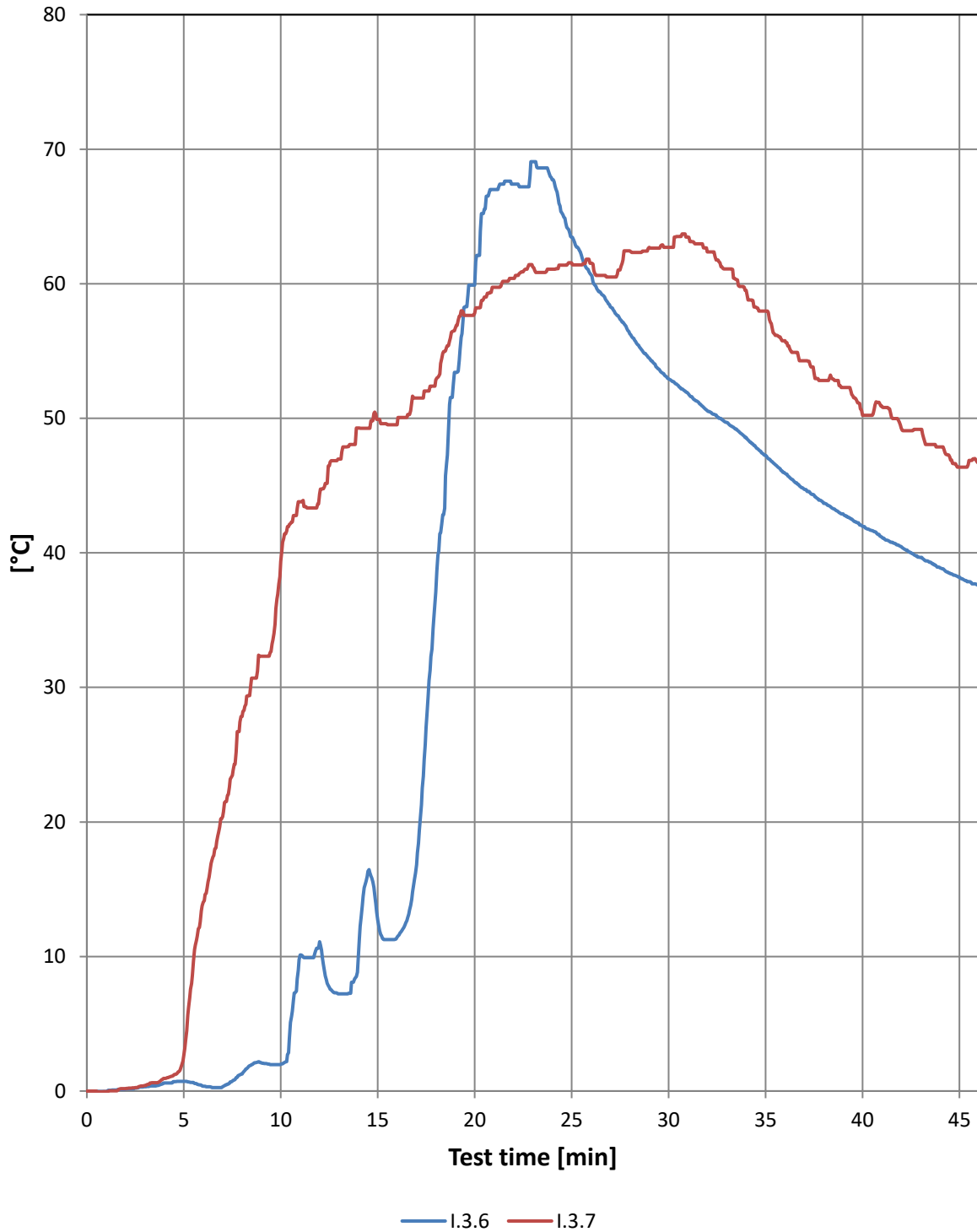
I.1.1 I.1.2 I.1.3 I.1.4 I.1.5 I.1.6 I.1.7 I.1.8 I.1.9

### Temperature rise measured according to the standard - 50 mm from facade. Minimum of 30 sec

Min. / °C	I.1.1	I.1.2	I.1.3	I.1.4	I.1.5	I.1.6	I.1.7	I.1.8	I.1.9	I.1.Max
0	0	0	0	0	0	0	0	0	0	0
2	6	206	121	82	27	3	8	0	20	206
4	19	450	306	181	49	2	33	1	48	450
6	29	476	287	145	53	5	49	3	75	476
8	34	455	277	132	47	6	57	9	99	455
10	49	635	290	145	61	8	61	15	110	635
12	60	682	322	147	72	11	67	22	119	682
14	73	714	589	183	81	11	77	28	129	714
15	62	722	628	154	83	19	80	31	138	722
16	70	728	585	169	89	17	85	34	139	728
18	81	645	543	150	91	17	91	40	166	645
20	78	676	567	153	98	22	95	49	184	676
22	84	667	551	137	88	20	95	58	204	667
24	71	491	583	140	90	21	84	67	209	583
26	76	380	404	121	81	20	79	68	202	404
28	79	337	356	115	79	23	85	69	201	356
30	59	291	319	111	73	19	65	70	193	319
32	50	266	313	98	66	18	73	71	175	313
34	41	199	298	97	68	15	76	69	157	298
36	33	175	256	82	57	14	67	66	147	256
38	29	145	245	74	50	15	58	64	143	245
40	25	112	231	69	49	12	59	63	125	231
42	18	97	192	67	46	11	42	61	113	192
44	16	84	181	65	43	11	38	58	102	181
46	16	78	173	63	43	10	35	55	95	173

Failure [min]	-	9.05	13.80	-	-	-	-	-	-	9.05
Failure °C	500	500	500	500	500	500	500	500	500	500

## Temperature rise measured according to the standard - in the middle of the insulation. Minimum of 30 sec

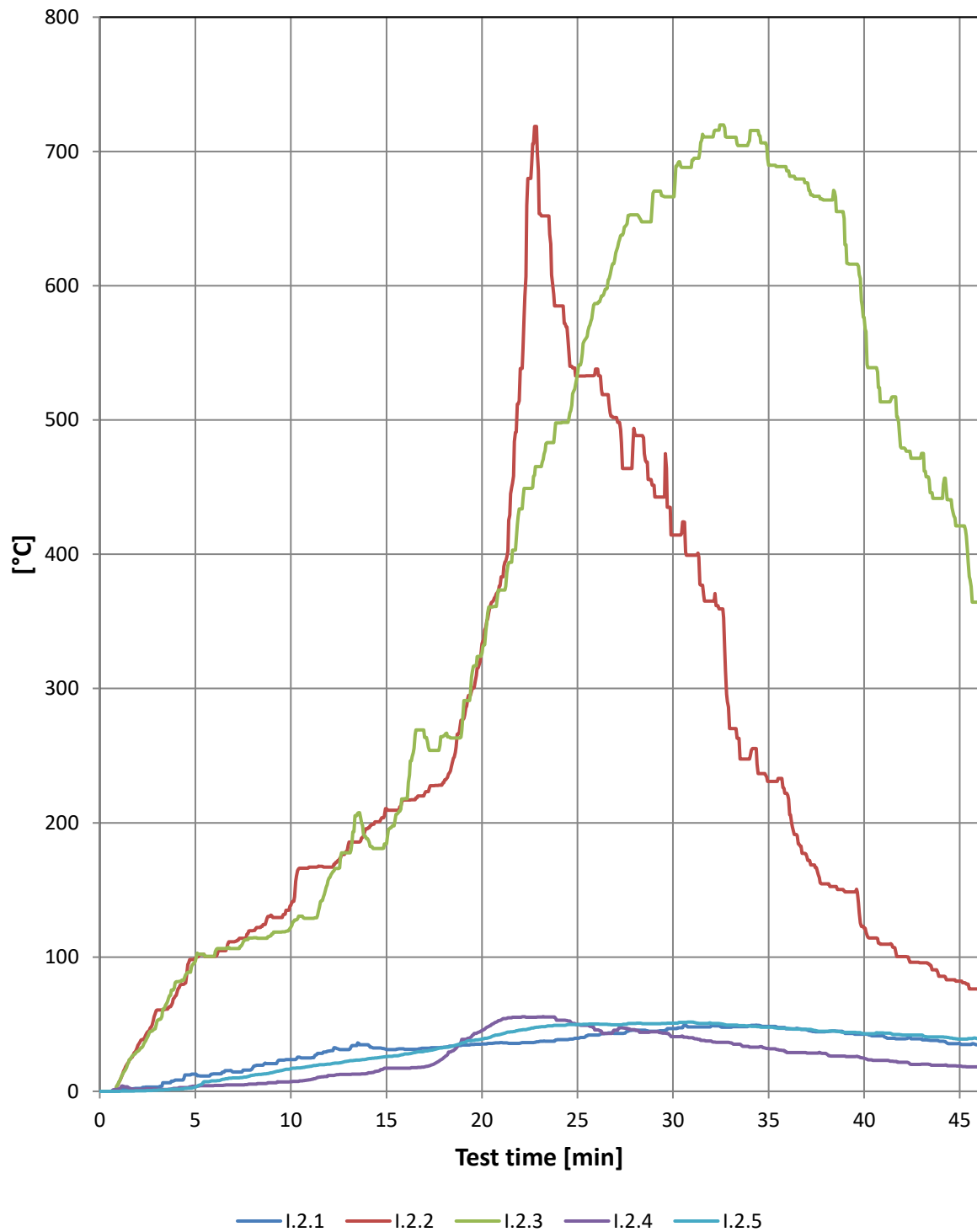


**Temperature rise measured according to the standard - in the middle of the insulation. Minimum of 30 sec**

Min. / °C	I.3.6	I.3.7	I.3.Max
0	0	0	0
2	0	0	0
4	1	1	1
6	0	14	14
8	1	28	28
10	2	39	39
12	11	44	44
14	10	49	49
15	13	50	50
16	11	50	50
18	37	53	53
20	60	58	60
22	67	60	67
24	68	61	68
26	61	62	62
28	56	62	62
30	53	63	63
32	51	62	62
34	49	60	60
36	46	56	56
38	44	53	53
40	42	50	50
42	40	49	49
44	39	48	48
46	38	47	47

Failure [min]	-	-	-
Failure °C	500	500	500

## Temperature rise measured according to the standard - ventilation layer. Minimum of 30 sec



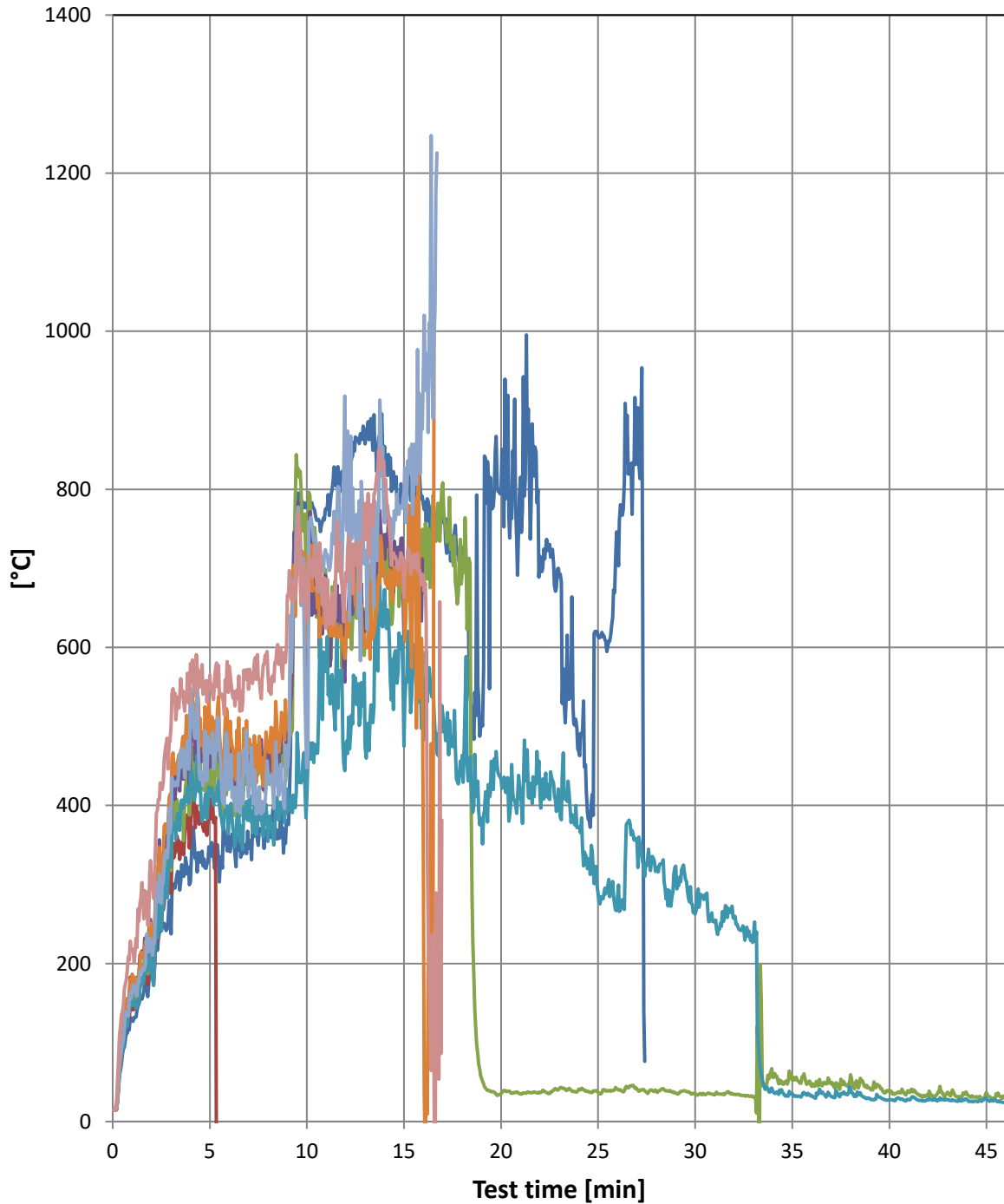
**Temperature rise measured according to the standard - ventilation layer.  
Minimum of 30 sec**

Min. / °C	I.2.1	I.2.2	I.2.3	I.2.4	I.2.5	I.2.Max
0	0	0	0	0	0	0
2	2	34	30	2	0	34
4	8	71	82	2	2	82
6	13	100	101	4	8	101
8	17	120	114	5	12	120
10	24	138	122	7	17	138
12	30	167	159	12	20	167
14	35	196	188	13	24	196
15	31	211	184	17	26	211
16	31	217	218	17	28	218
18	33	230	265	25	33	265
20	35	333	326	45	39	333
22	36	538	434	55	46	538
24	38	585	498	53	49	585
26	42	538	587	46	50	587
28	46	490	653	46	50	653
30	47	414	666	41	51	666
32	48	365	711	37	51	711
34	49	248	708	33	49	708
36	47	220	685	29	47	685
38	44	155	664	28	45	664
40	42	121	577	25	43	577
42	39	100	479	22	42	479
44	37	86	442	19	40	442
46	34	76	364	18	39	364

Failure [min]	-	21.80	24.50	-	-	21.80
Failure °C	500	500	500	500	500	500



## Vertical measurements on main facade



— F.1.1 — F.1.2 — F.1.3 — F.1.4 — F.1.5 — F.1.6 — F.1.7 — F.1.8

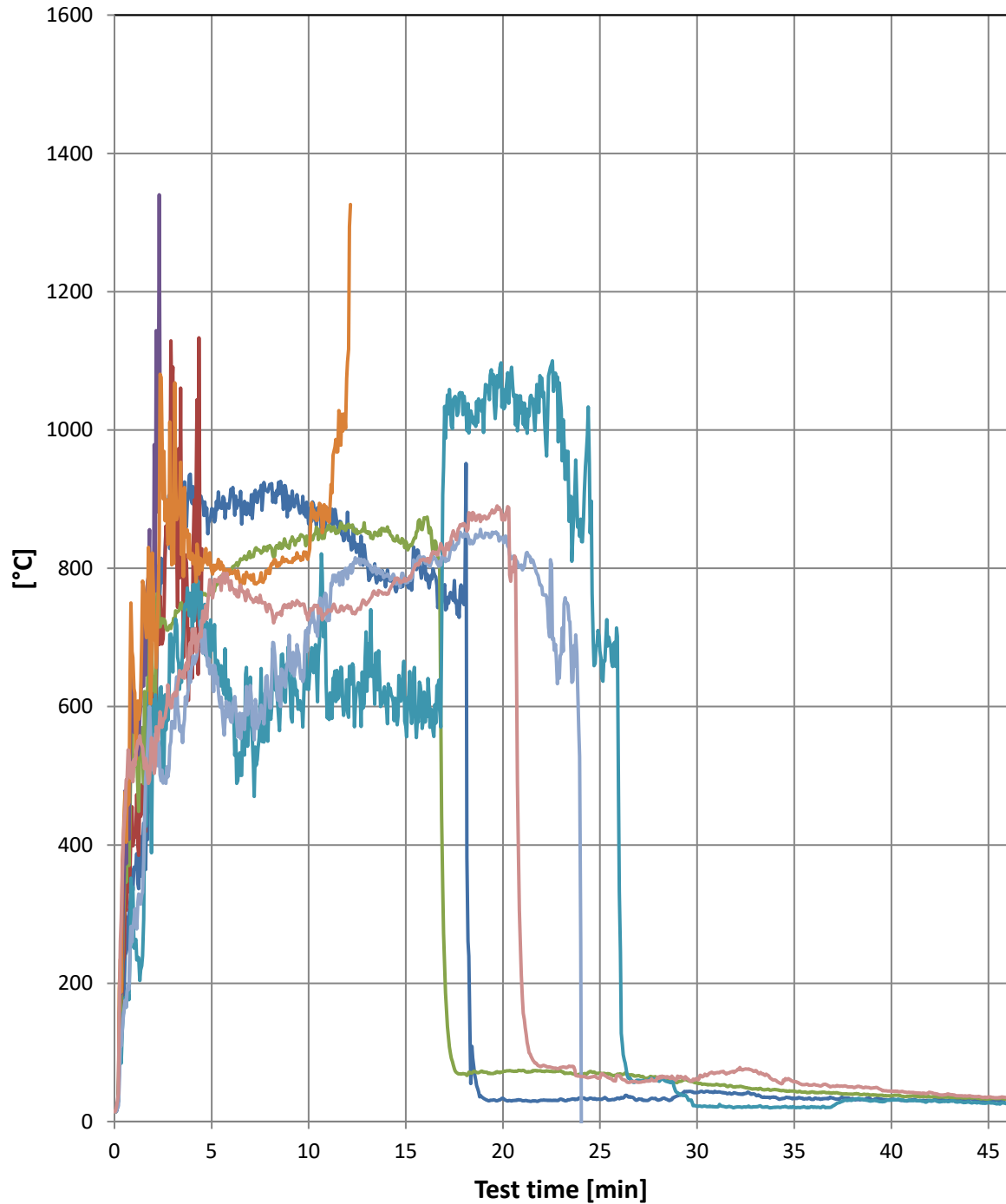
*Thermocouple F.1.1, F.1.2, F.1.4, F.1.6-7-8 malfunctioned during testing.*

## Vertical measurements on main facade

Min. / °C	F.1.1	F.1.2	F.1.3	F.1.4	F.1.5	F.1.6	F.1.7	F.1.8
0	15	14	14	14	14	14	15	14
2	186	196	217	225	188	240	221	298
4	304	366	411	473	442	533	548	579
6	343	0	428	460	384	483	455	576
8	368	0	452	468	355	479	441	566
10	777	0	704	593	409	617	447	632
12	823	0	619	622	475	600	789	694
14	854	0	691	712	673	692	758	809
15	802	0	632	609	475	663	796	663
16	780	0	669	0	539	316	953	692
18	715	0	694	0	463	0	0	0
20	796	0	36	0	433	0	0	0
22	715	0	36	0	413	0	0	0
24	468	0	41	0	373	0	0	0
26	732	0	41	0	283	0	0	0
28	0	0	38	0	321	0	0	0
30	0	0	35	0	262	0	0	0
32	0	0	34	0	258	0	0	0
34	0	0	56	0	38	0	0	0
36	0	0	44	0	33	0	0	0
38	0	0	59	0	41	0	0	0
40	0	0	39	0	27	0	0	0
42	0	0	34	0	27	0	0	0
44	0	0	35	0	28	0	0	0
46	0	0	29	0	24	0	0	0

*Thermocouple F.1.1, F.1.2, F.1.4, F.1.6-7-8 malfunctioned during testing.*

## Vertical measurements on main facade



— F.1.9 — F.1.10 — F.1.11 — F.1.12 — F.1.13 — F.1.14 — F.1.15 — F.1.16

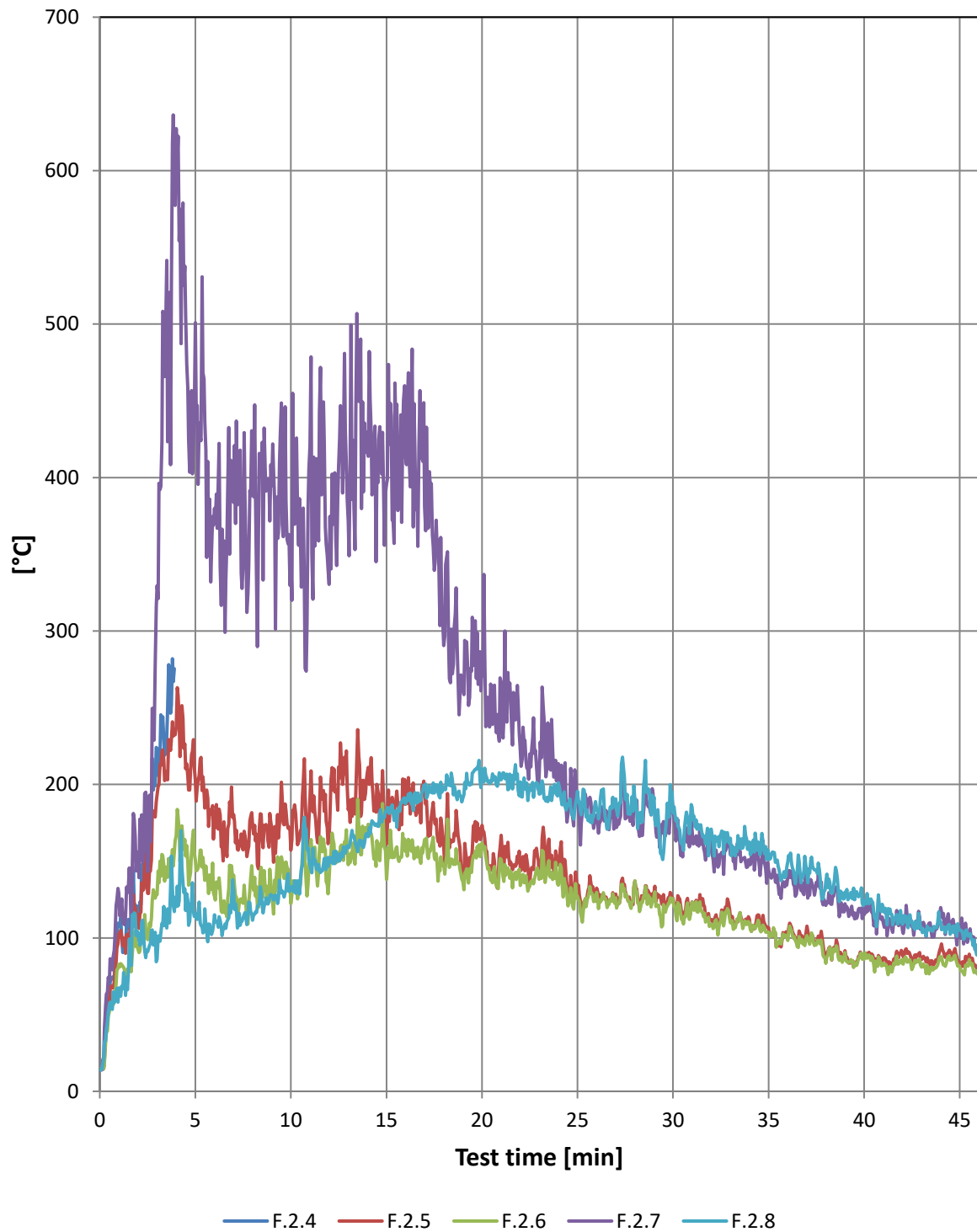
*Thermocouple F.1.10, F.1.12, F.1.14, F.1.15 malfunctioned during testing.*

## Vertical measurements on main facade

Min. / °C	F.1.9	F.1.10	F.1.11	F.1.12	F.1.13	F.1.14	F.1.15	F.1.16
0	14	14	14	14	14	14	14	14
2	533	606	624	698	610	768	544	531
4	894	641	751	0	708	821	663	712
6	915	0	795	0	615	794	578	782
8	921	0	833	0	588	792	598	747
10	864	0	840	0	625	820	706	730
12	881	0	862	0	592	1099	785	746
14	786	0	855	0	602	0	789	762
15	786	0	839	0	571	0	779	782
16	804	0	872	0	578	0	807	812
18	748	0	69	0	1049	0	847	865
20	34	0	72	0	1059	0	843	870
22	31	0	73	0	1075	0	773	80
24	34	0	69	0	871	0	262	65
26	33	0	68	0	332	0	0	66
28	31	0	62	0	59	0	0	65
30	42	0	56	0	22	0	0	62
32	41	0	50	0	21	0	0	73
34	35	0	47	0	21	0	0	60
36	32	0	42	0	20	0	0	54
38	33	0	39	0	32	0	0	50
40	32	0	37	0	31	0	0	44
42	30	0	36	0	30	0	0	42
44	32	0	34	0	28	0	0	37
46	33	0	33	0	26	0	0	35

*Thermocouple F.1.10, F.1.12, F.1.14, F.1.15 malfunctioned during testing.*

## Vertical measurements on the wing



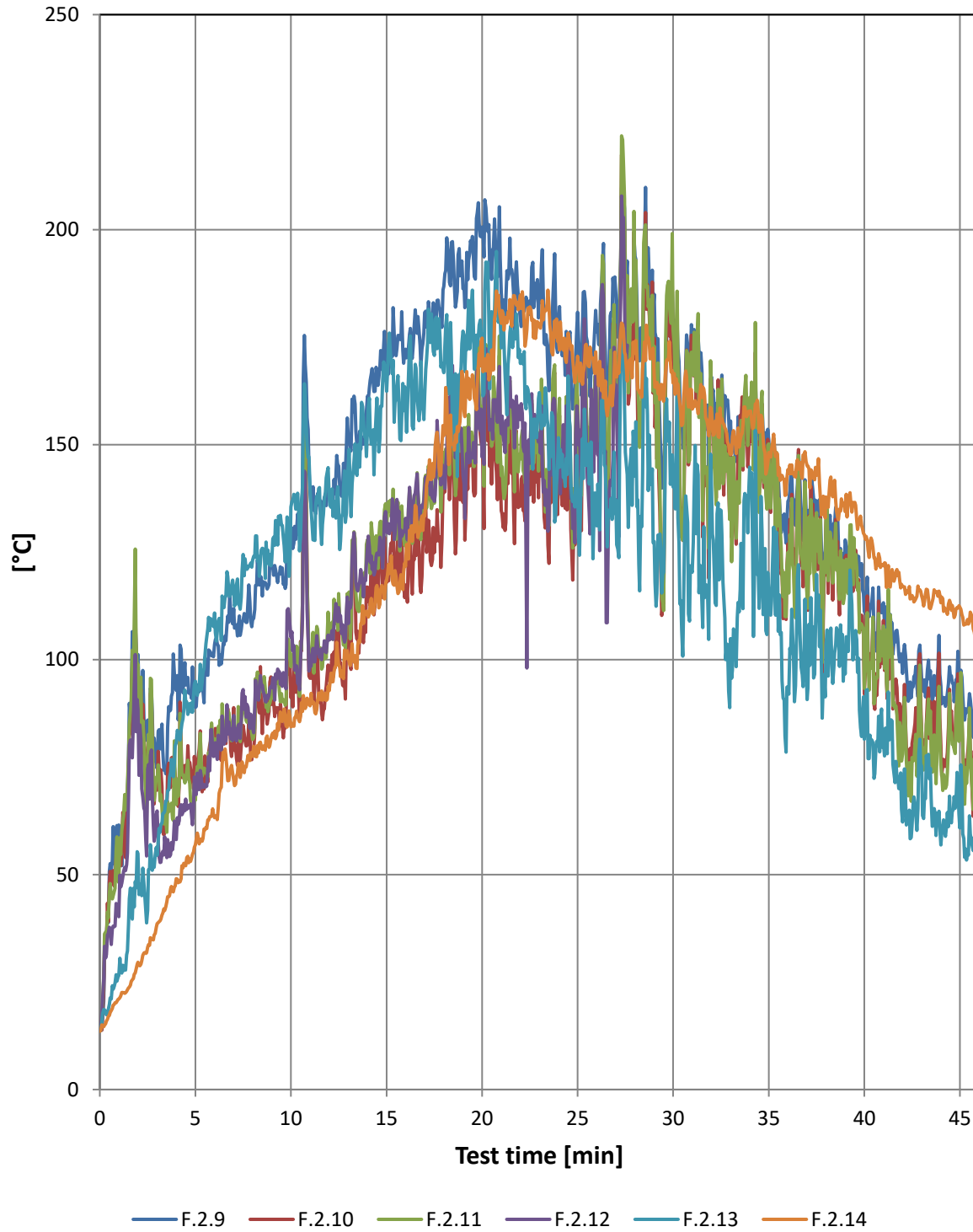
*Thermocouple F.4 malfunctioned after 2 minutes of testing.*

## Vertical measurements on the wing

Min. / °C	F.2.4	F.2.5	F.2.6	F.2.7	F.2.8
0	14	14	15	14	14
2	114	113	93	152	103
4	0	237	167	627	121
6	0	179	127	380	115
8	0	174	136	402	112
10	0	157	122	350	132
12	0	164	139	330	152
14	0	208	169	430	167
15	0	161	138	396	183
16	0	187	156	415	187
18	0	159	148	291	197
20	0	173	162	281	210
22	0	146	134	222	202
24	0	148	134	214	201
26	0	132	130	180	183
28	0	137	137	189	189
30	0	126	126	184	182
32	0	111	108	164	171
34	0	112	110	150	162
36	0	102	98	140	150
38	0	87	83	121	136
40	0	87	86	115	124
42	0	90	83	105	109
44	0	94	86	120	111
46	0	79	76	95	94

*Thermocouple F.4 malfunctioned after 2 minutes of testing.*

## Vertical measurements on the wing



*Thermocouple F.2.12 malfunctioned after 26 minutes of testing.*

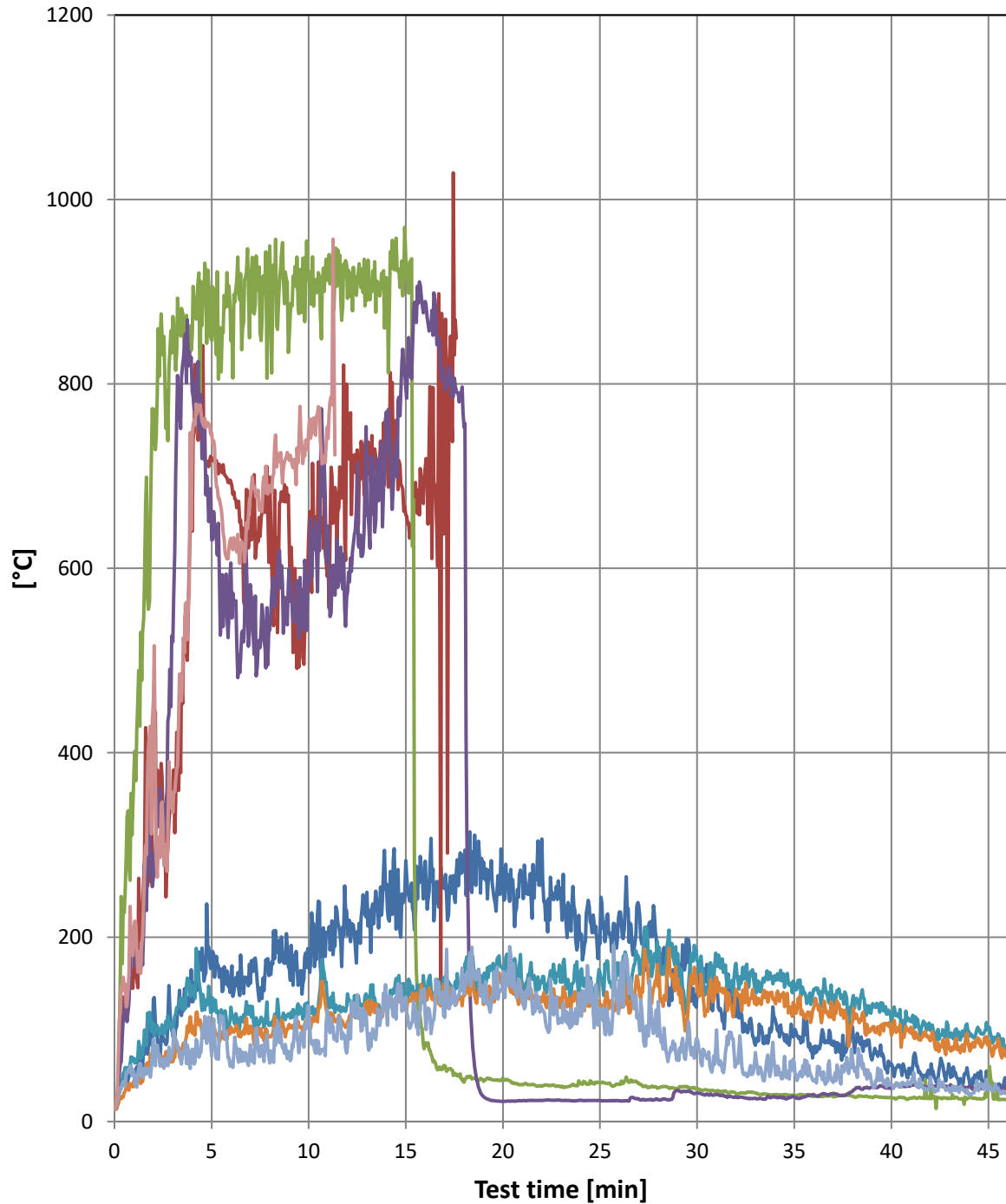
## Vertical measurements on the wing

Min. / °C	F.2.9	F.2.10	F.2.11	F.2.12	F.2.13	F.2.14
0	14	14	14	14	14	14
2	101	96	99	88	55	30
4	93	69	66	58	81	49
6	103	78	80	78	111	63
8	109	78	81	84	123	77
10	127	91	98	105	135	84
12	139	95	105	105	138	93
14	161	117	128	126	154	110
15	167	118	131	130	162	119
16	172	117	131	133	159	122
18	187	139	148	142	167	152
20	201	149	155	147	175	175
22	179	136	147	156	169	185
24	179	152	155	143	152	174
26	176	154	159	151	131	167
28	194	181	184	0	143	173
30	176	170	177	0	140	164
32	166	165	163	0	141	158
34	158	155	161	0	145	157
36	137	127	125	0	94	144
38	130	132	134	0	103	138
40	111	92	93	0	82	129
42	97	81	78	0	62	117
44	94	80	75	0	57	113
46	81	68	69	0	58	107

*Thermocouple F.2.12 malfunctioned after 26 minutes of testing.*



## Horizontal measurements



— F.3.1 — F.3.2 — F.3.3 — F.3.4 — F.3.5 — F.3.6 — F.3.7 — F.3.8

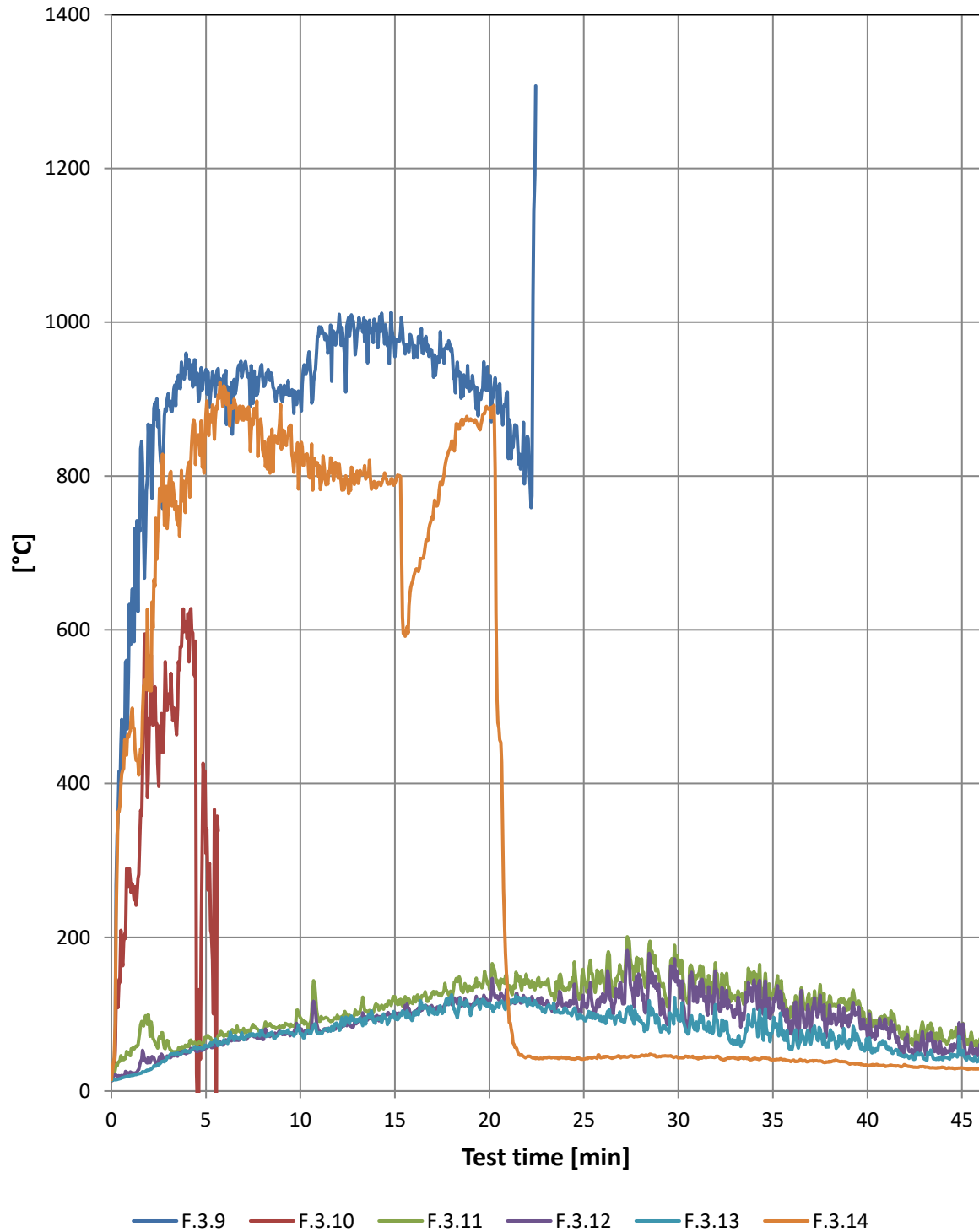
*Thermocouple F.3.2 malfunctioned after 16 minutes of testing. Thermocouple F.3.8 malfunctioned after 10 minutes of testing.*

## Horizontal measurements

Min. / °C	F.3.1	F.3.2	F.3.3	F.3.4	F.3.5	F.3.6	F.3.7	F.3.8
0	13	14	14	14	14	13	13	13
2	133	404	735	265	107	77	89	456
4	130	640	853	791	147	96	79	743
6	159	694	847	606	124	103	61	632
8	163	699	950	533	106	92	64	687
10	177	633	923	581	117	108	125	751
12	202	728	893	574	138	109	82	0
14	258	767	915	769	134	127	122	0
15	283	658	937	797	132	120	135	0
16	282	709	85	890	139	131	114	0
18	275	0	43	753	158	137	139	0
20	274	0	47	22	166	156	161	0
22	306	0	38	23	151	130	122	0
24	204	0	41	23	163	131	115	0
26	227	0	41	22	160	122	153	0
28	171	0	37	23	180	147	130	0
30	139	0	36	31	174	142	90	0
32	114	0	31	27	172	144	66	0
34	112	0	29	27	158	130	60	0
36	81	0	28	29	143	124	44	0
38	103	0	28	33	133	109	67	0
40	63	0	25	36	106	93	41	0
42	49	0	25	38	99	88	48	0
44	46	0	25	38	97	81	29	0
46	36	0	24	36	83	74	32	0

*Thermocouple F.3.2 malfunctioned after 16 minutes of testing. Thermocouple F.3.8 malfunctioned after 10 minutes of testing.*

## Horizontal mesurments



*Thermocouple F.3.9 malfunctioned after 22 minutes of testing. Thermocouple F.3.10 malfunctioned after 10 minutes of testing.*

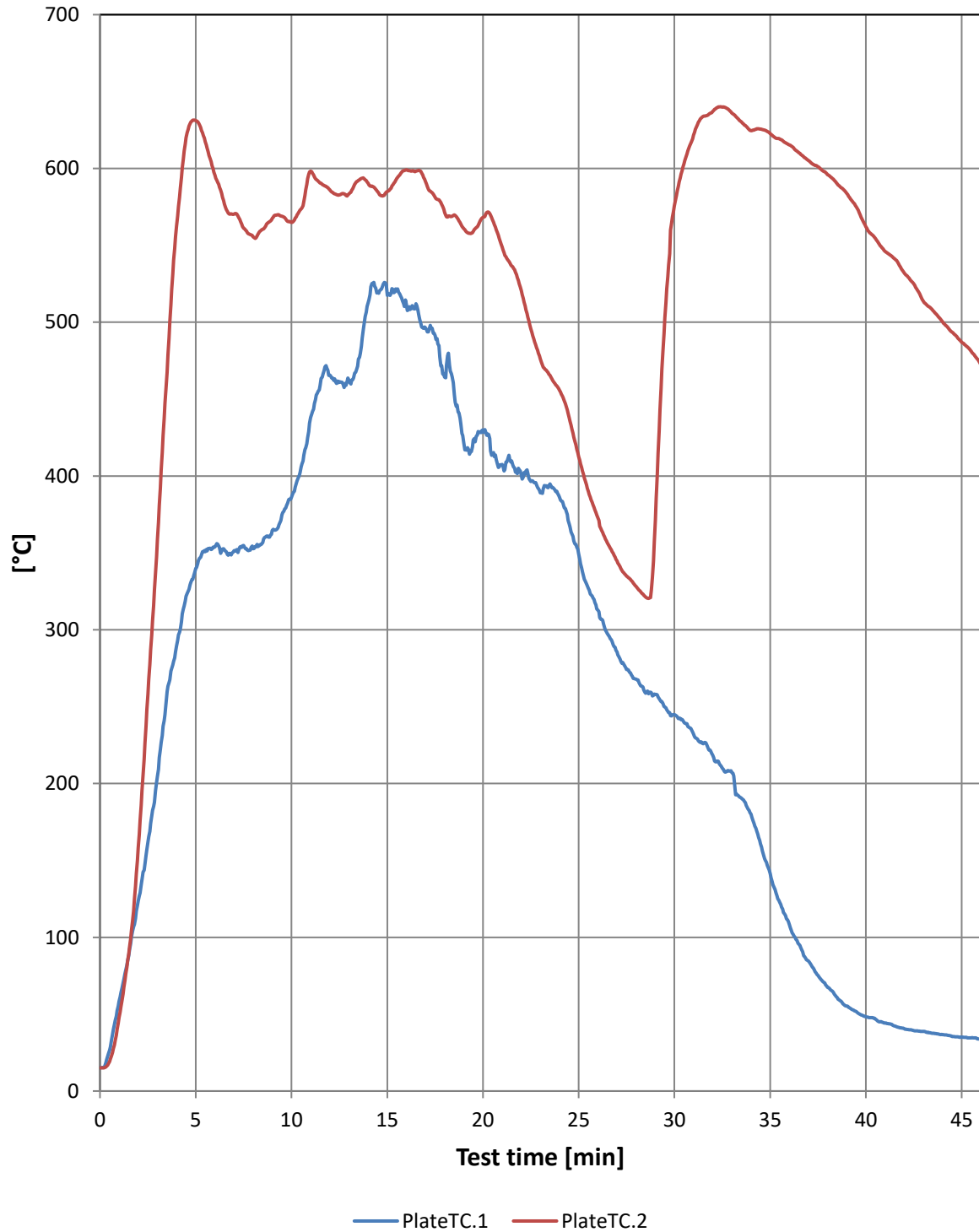
## Horizontal mesurments

Min. / °C	F.3.9	F.3.10	F.3.11	F.3.12	F.3.13	F.3.14
0	13	14	14	14	14	15
2	833	485	89	41	27	521
4	945	589	58	50	52	804
6	908	0	72	62	63	915
8	929	0	77	67	75	835
10	900	0	95	79	75	826
12	990	0	94	84	84	797
14	989	0	114	97	94	784
15	955	0	123	102	94	791
16	953	0	123	100	103	670
18	966	0	129	113	125	846
20	916	0	133	119	115	888
22	852	0	140	117	110	45
24	0	0	130	111	108	44
26	0	0	149	127	92	44
28	0	0	167	146	93	46
30	0	0	162	137	92	43
32	0	0	152	131	94	45
34	0	0	156	144	107	42
36	0	0	100	74	54	39
38	0	0	124	112	75	39
40	0	0	85	68	56	34
42	0	0	72	69	46	34
44	0	0	65	45	41	31
46	0	0	58	51	41	29

*Thermocouple F.3.9 malfunctioned after 22 minutes of testing. Thermocouple F.3.10 malfunctioned after 10 minutes of testing.*

## Plate thermocouple on facade

*Plate thermocouple on facade*



*FacadePlateTC.1 Top*

*FacadePlateTC.2 Bottom*

## Plate thermocouple on facade

*Plate thermocouple on facade*

Min. / °C	PlateTC.1	PlateTC.2
0	15	15
2	124	158
4	290	563
6	354	596
8	353	556
10	386	565
12	466	586
14	513	590
15	518	585
16	512	599
18	464	571
20	430	568
22	400	521
24	386	456
26	313	373
28	268	328
30	245	576
32	218	637
34	180	625
36	108	615
38	68	596
40	48	562
42	41	532
44	37	500
46	34	473

*FacadePlateTC.1 Top*  
*FacadePlateTC.2 Bottom*



Photo No. 1 Prefabricated wall back side.



Photo No. 2 Prefabricated wall front side.

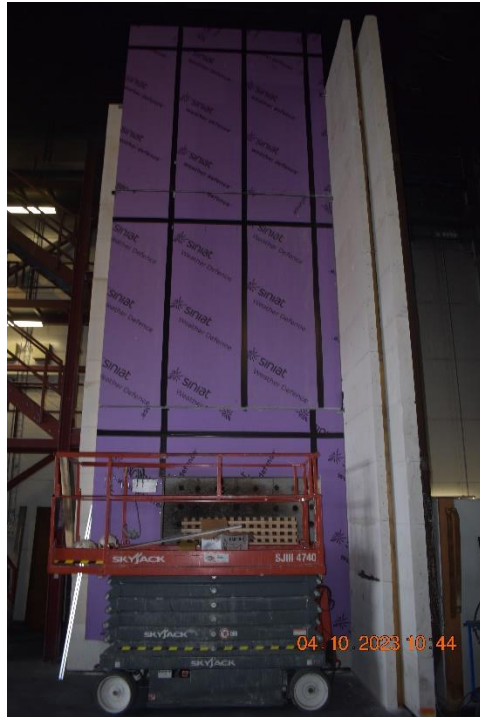


Photo No. 3 Prefabricated walls mounted on the façade rig.



Photo No. 4 z-profile between the construction wood and weather defence.





Photo No. 5 Steel angle to mount the wall on façade rig.



Photo No. 6 Flame deflectors mounted horizontally.



Photo No. 7 Bracket profiles mounted on the wall and flame deflector.

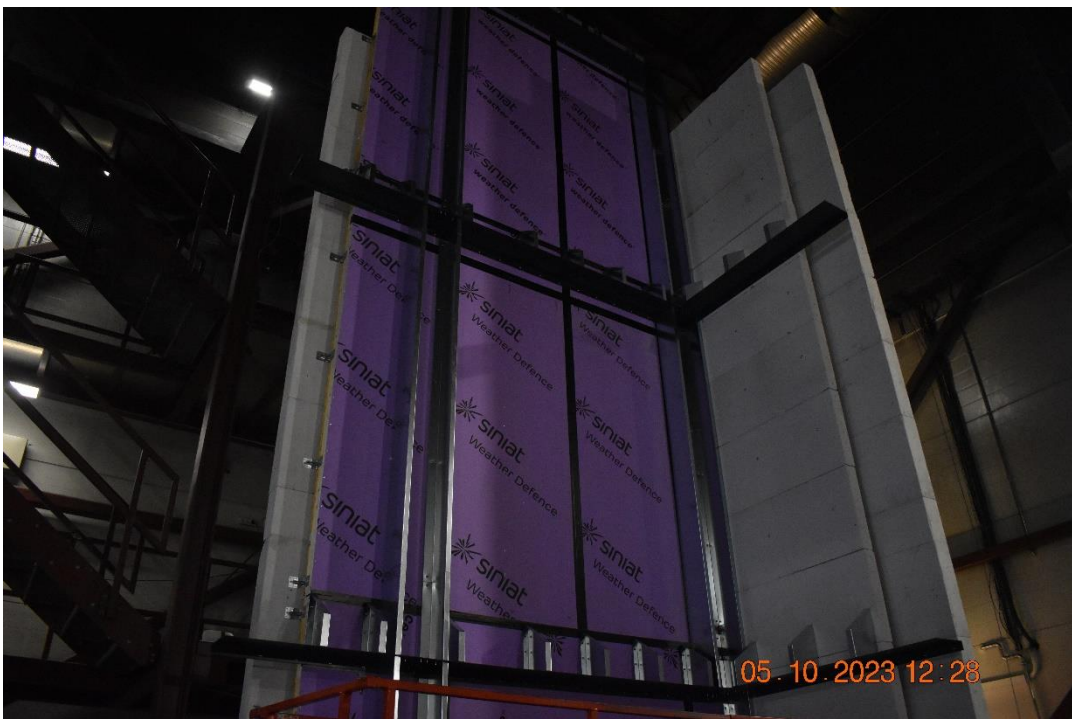


Photo No. 8 Vertical C-profiles mounted on the wall.



Photo No. 9 Bracket profiles were cut at the front upper side.

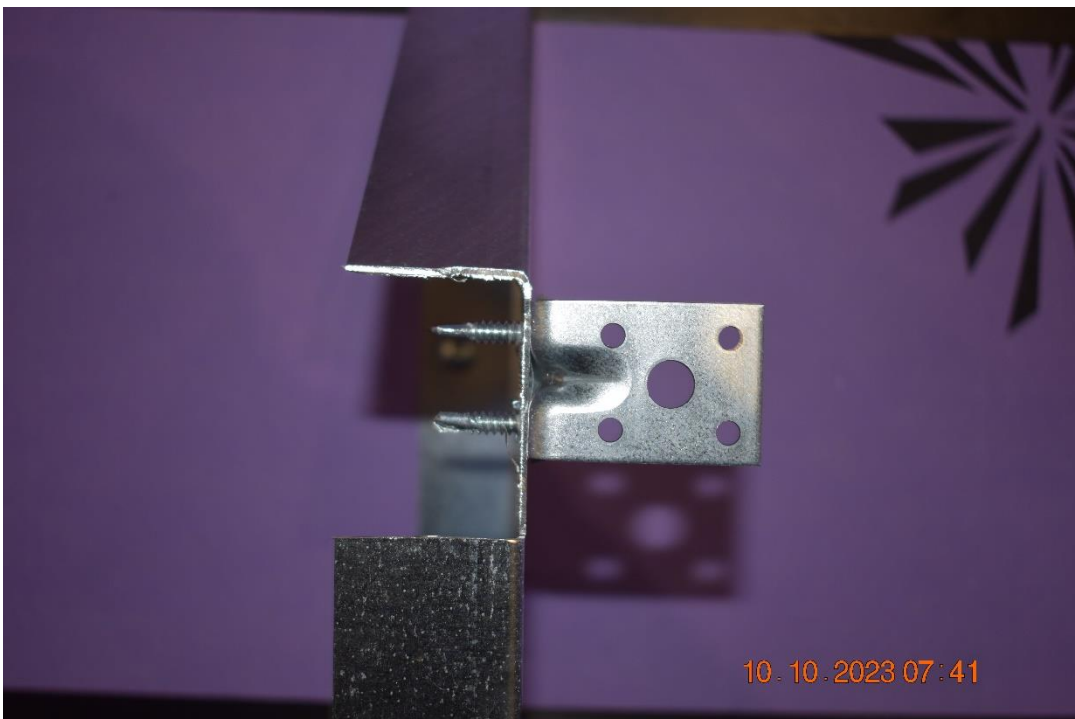


Photo No. 10 The angle was mounted on the bracket profile.



Photo No. 11 Hat profiles were mounted on the C-profiles.



Photo No. 12 Formworks were mount on the wall.



Photo No. 13 Horizontal flame deflectors are mounting.



Photo No. 14 Vertical side coverings were mounted on the C-profile.



Photo No. 15 Vertical steel cassettes are mounting.



Photo No. 16 The Nordland snow catch pipes were put between the wall and the claddings on the top and bottom of the horizontal flame deflector.



Photo No. 17 Cladding is being mounted.



Photo No. 18 Façade before start test.



Photo No. 19 Test start.

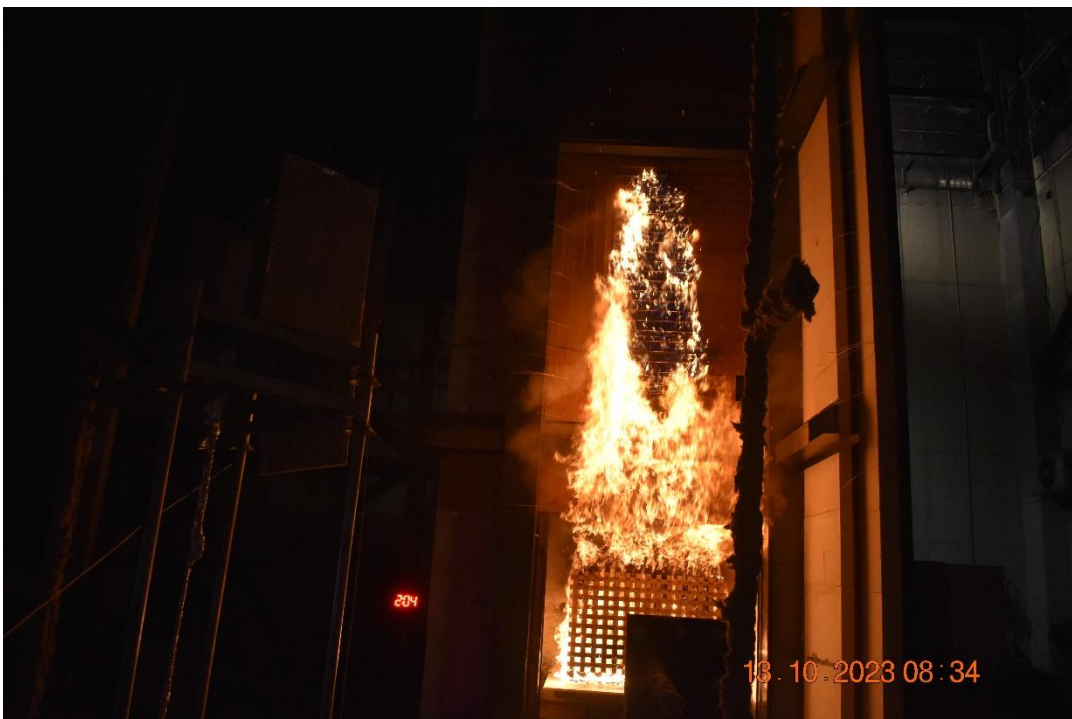


Photo No. 20 Test specimen 2 minutes into the test.





Photo No. 21 Test specimen 4 minutes into the test.



Photo No. 22 Test specimen 9 minutes into the test.



Photo No. 23 Test specimen 12 minutes into the test.



Photo No. 24 Pieces dropped on the floor.



Photo No. 25 Test specimen 18 minutes into the test.



Photo No. 26 Test specimen 19 minutes into the test.



Photo No. 27 Test specimen 23 minutes into the test.



Photo No. 28 Test specimen 27 minutes into the test.



Photo No. 29 Test specimen 32 minutes into the test.



Photo No. 30 Test specimen 35 minutes into the test.



Photo No. 31 Test specimen 40 minutes into the test.



Photo No. 32 Test specimen after the test.



Photo No. 33 Test specimen after the test.

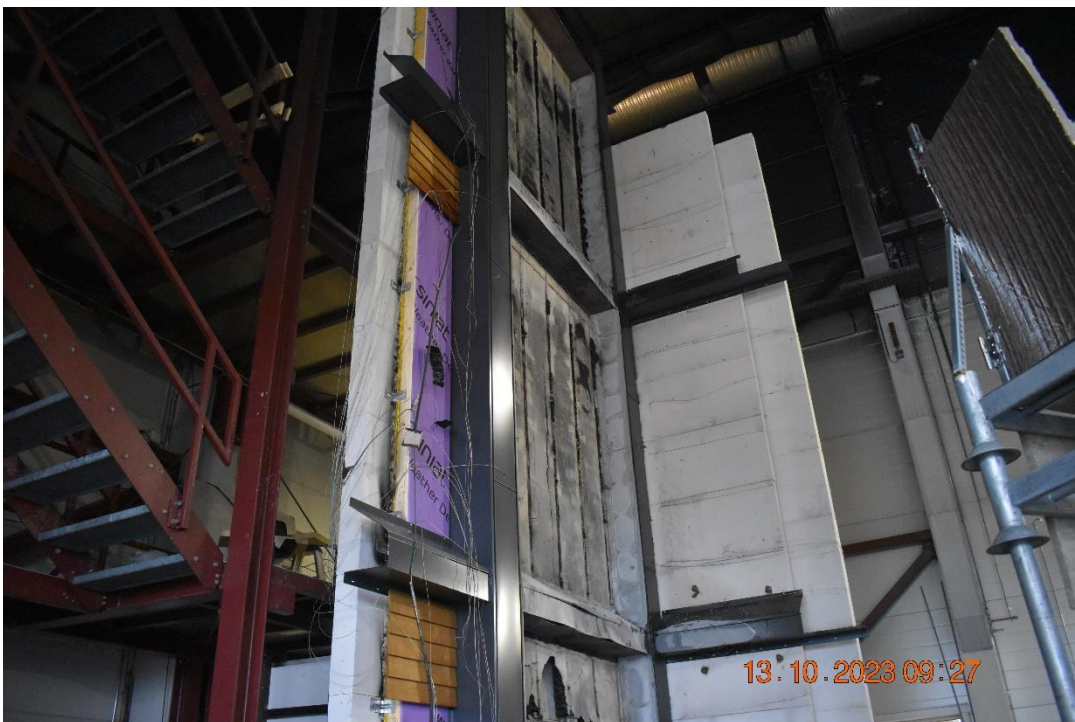
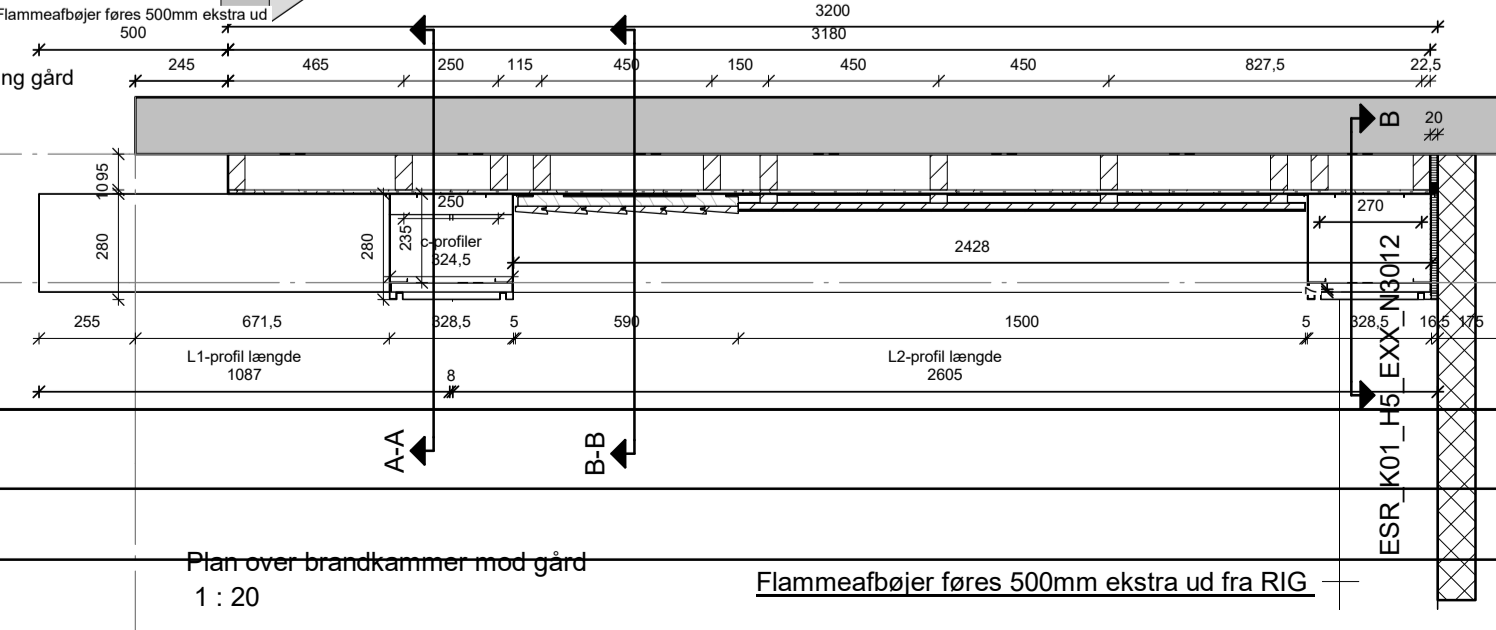
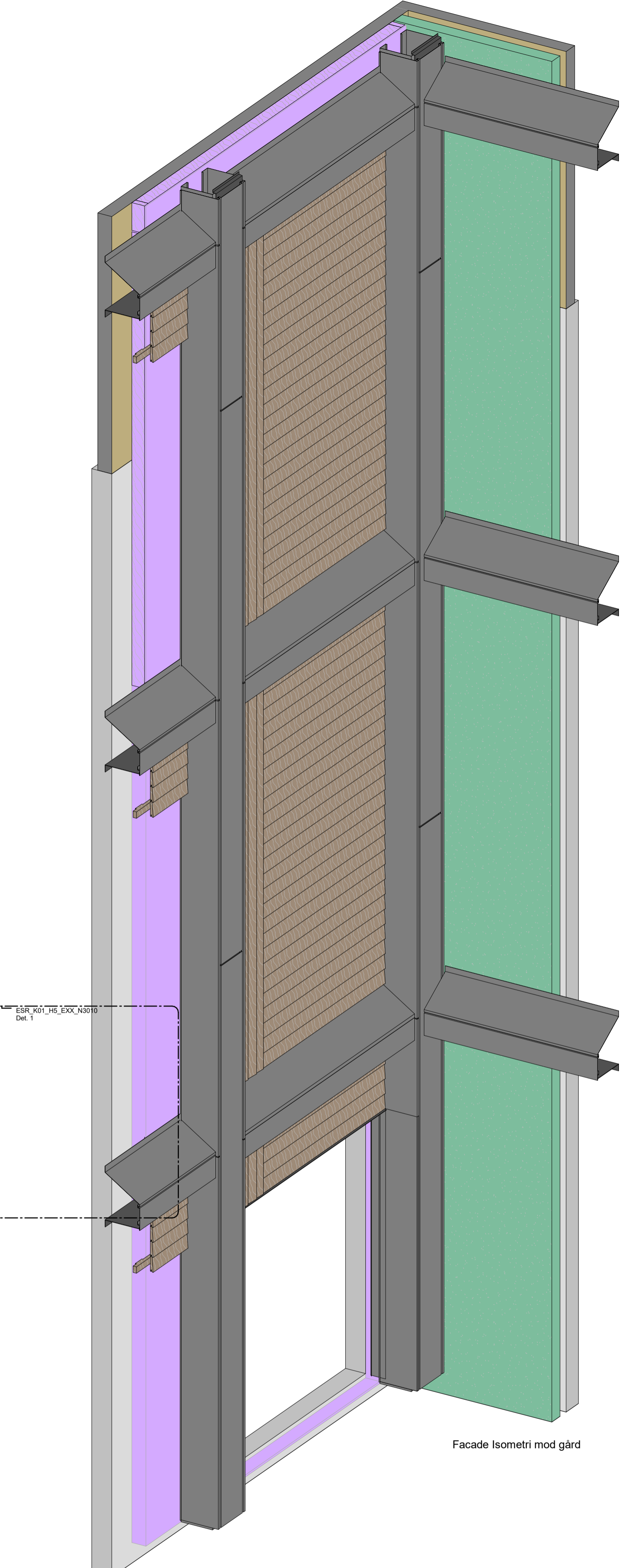
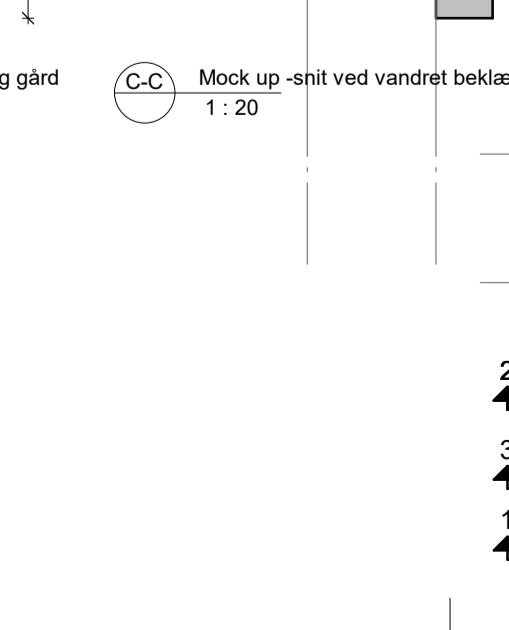
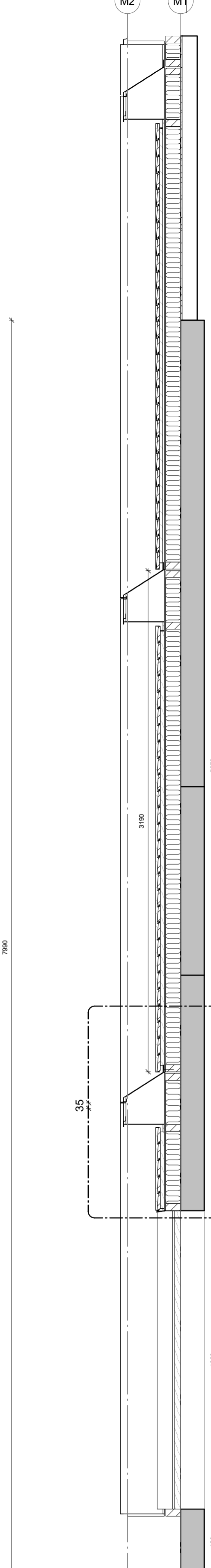
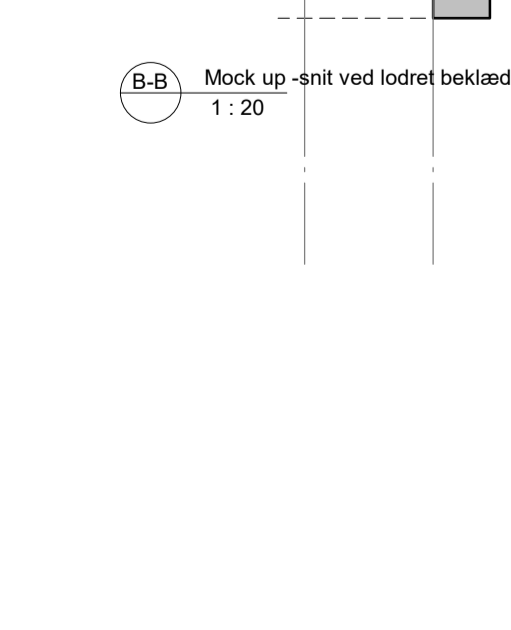
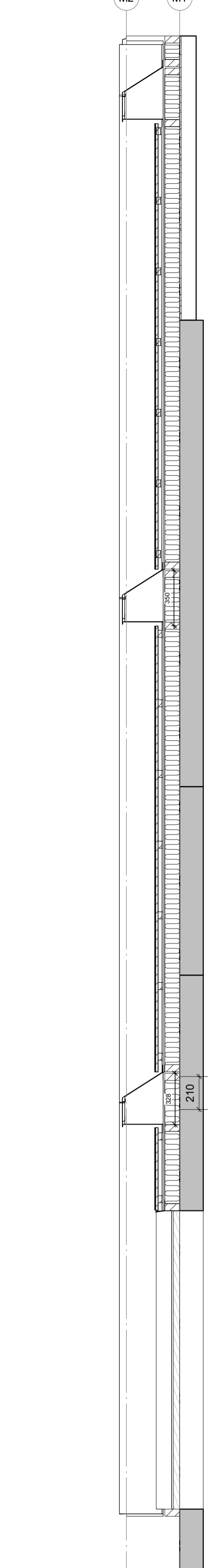
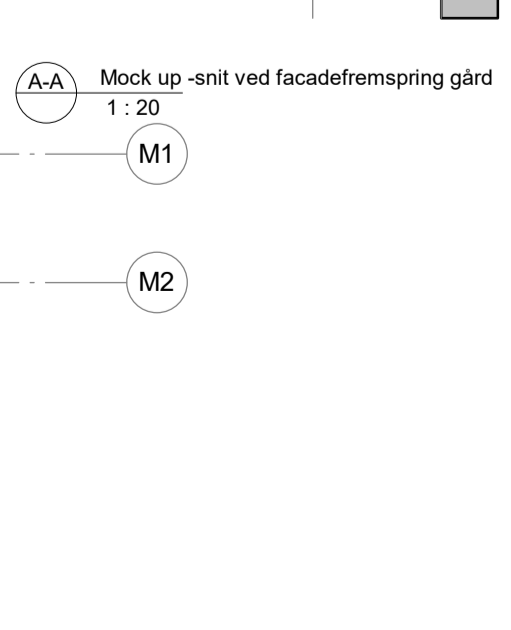
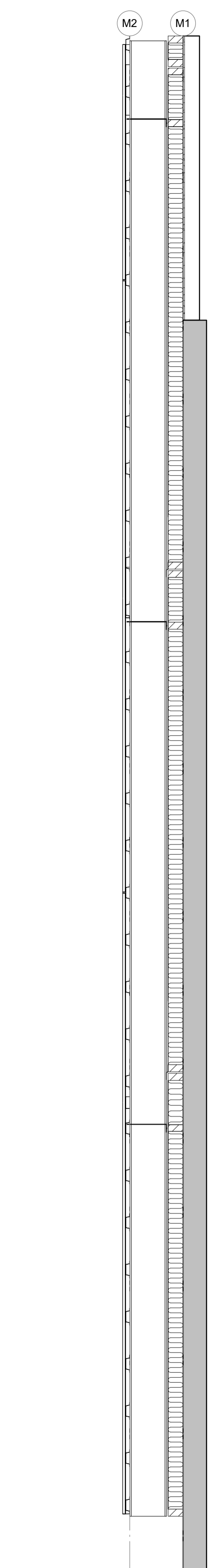
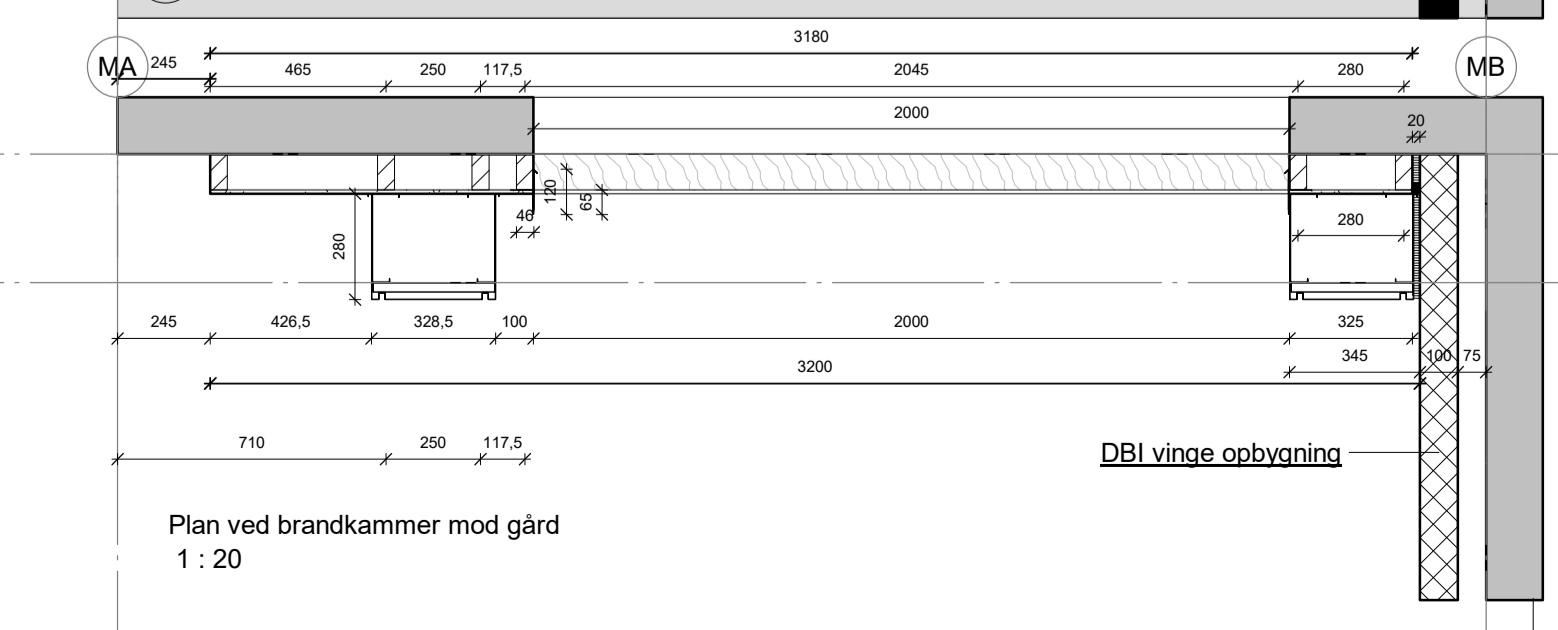
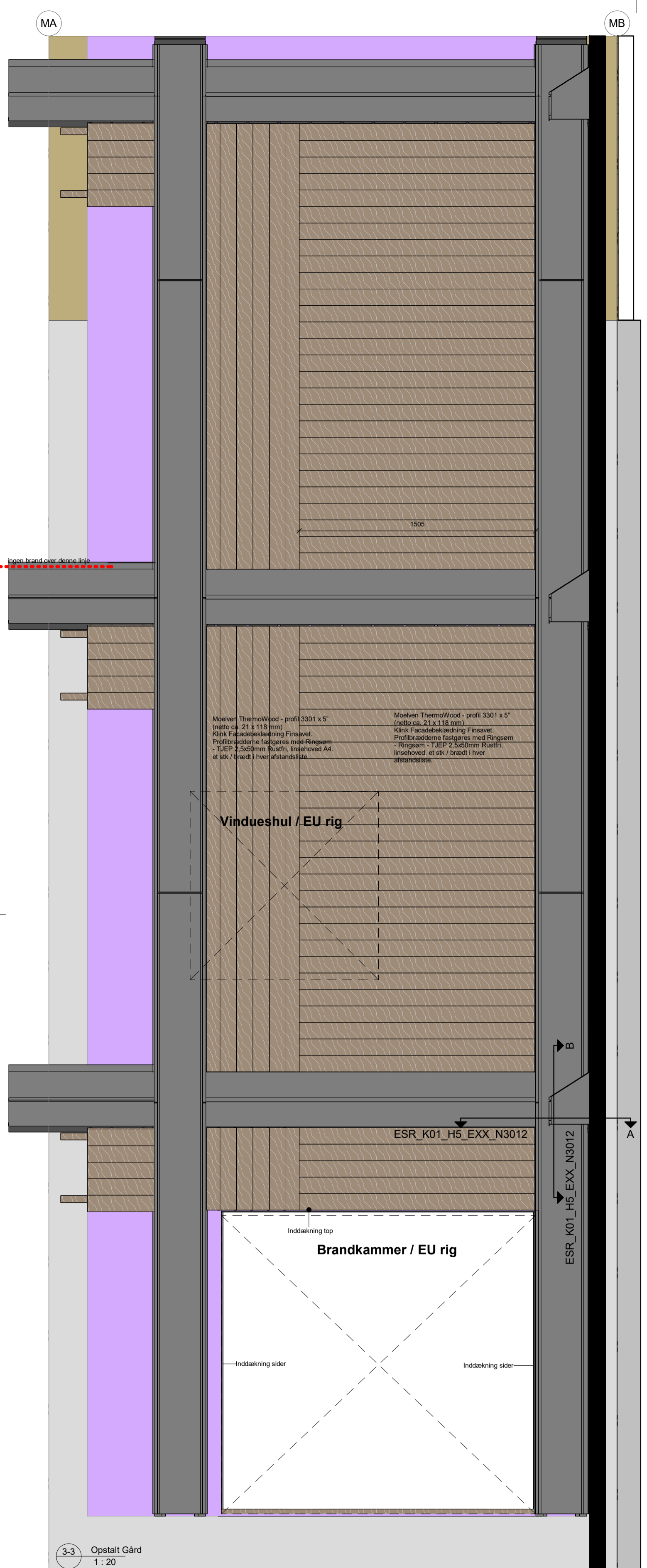


Photo No. 34 Test specimen after the test.



Photo No. 35 Test specimen after the test.





Materiale:

Facade: 45x95 C24 Reglar: Fastgørelser af reglar til facaderig skruer som DBI bøjler: <b>Isolering klasse A indblæses til kl. 34:</b> Isover insulSAFE Densitet >= 30 kg/m3 0,034 1.1-værdi (W/m K) vindspærresystem Sinat Weather Defence 9,5mm Isøver Wall-Blanket på bagside for indblæsning: Deretter PE-folie 0,2mm	500283 Flammeafbejler 1001 9,00 stk Godstykkelse 2,00 mm Overfladebelegning Galvaniseret Materialetype Stål, S350 - Z275 9 stk. à 2.430 mm
Facadebeklædning Moelven ThermoWood - profil 3301 x 5" (netto ca. 21 x 118 mm) Klink Facadebeklædning Finsavet Profilbrædderne fastgøres med R-ringsøm - TJEJ 2,5x50mm Rustfri, linsehoved et stk / brædt / hver afstandsliste.	500283 Laskeplade 1002 6,00 stk Godstykkelse 2,00 mm Overfladebelegning Galvaniseret Materialetype Stål, S350 - Z275 6 stk. à 253 mm
Afstandsliste, 25x45 mm Vandret - Trykimpregneret (godkendt jf. biocidforordningen EU 528/2012) Neoprenklodser 8x50x100mm TJEJ GR 3,1x90 mm, varmgalv. pr 600mm c/c min 50mm fra endetræ	500279 C-profil 1003 14,00 stk Godstykkelse 1,00 mm Overfladebelegning Galvaniseret Materialetype Stål, S350 - Z275 14 stk. à 3.000 mm
Afstandsliste, 25x45 mm Lodret - Trykimpregneret (godkendt jf. biocidforordningen EU 528/2012) - Fastgøres af afstandslistet med Ringsøm - TJEJ GR 3,1x90 mm, varmgalv. pr 600mm c/c min 50mm fra endetræ	4004239 DS Hatprofil 006 20,00 stk Godstykkelse 1,00 mm Overfladebelegning Aluzink Korrosionsbestandighed RC 4 Dimension 25 mm Materialetype Stål, S280GD - AZ185 Længde 3000 mm
Metafacade 0,75mm opbukket facade kassetter som DS Stålprofil Greencoat farve sort 697 Matt brandklasse 50 µm A1 s1 d0 <a href="https://www.ssab.com/en/brands-and-products/greencoat/products/pural-bit">https://www.ssab.com/en/brands-and-products/greencoat/products/pural-bit</a>	7001105 DS Montageskrue til stålunderlag 6,00 Pakke DB Nummer 1292807 Farve Silver nærmeste RAL 9006 Dimension 5,5 x 25 mm Skruenhoved 6-kt. hoved Materiale/Borespids Galvaniseret/#2+ Antal pr. Pakke 250 stk.
Fastgørelser: Skruer til Flammeafbejler: Type: RedHorse CORONA™ RXB 4.8 X 60 #1 TX20 EPDM-9.5B - pr. 200mm C/C i 20mm langguljer Skruer til fastgørelse af Bøjler på flammeafbejler. Antracit nærmeste RAL 7016 Type: DS Montageskrue til stålunderlag 4,8 x 22 mm Torx Galvaniseret/#2+ DB Nummer 1877444 2 stk / bøjle skrue nedfra. der forbores ø8mm huller i L-profil.	7001164 DS Montageskrue til stålunderlag 1,00 Pakke DB Nummer 1877444 Farve Antracit nærmeste RAL 7016 Dimension 4,8 x 22 mm Skruenhoved Torx Materiale/Borespids Galvaniseret/#2+ Antal pr. Pakke 100 stk.
Skruer til fastgørelse af C profiler på vindgips og reglar Type: Fastgøres med RF Skruer m. borespids, RedHorse CORONA™ RXB 4.8 X 60 #1 TX20EPDM-9.5B	DS Stålprofil inddækninger: 5000093 DS Special inddækning 1001 9,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebelegning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Dimension 4,8 x 22 mm 9 stk. à 2.100 mm
Skruer til fastgørelse af hat-profiler på C-profiler af stål. Type: DS Montageskrue til stålunderlag 5,5 x 25 mm 6-kt. hoved Galvaniseret/#2+DB Nummer 1292807 4 stk. skruer /hatprofil, hatprofil /300mm c/c	5000093 DS Special inddækning 1002 9,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebelegning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Dimension 4,8 x 22 mm 9 stk. à 2.100 mm
Skruer til fastgørelse af Hafter/Z-profiler på c-profiler af stål. Type: DS Montageskrue til stålunderlag 5,5 x 25 mm 6-kt. hoved Galvaniseret/#2+DB Nummer 1292807 1 stk. skruer /bøjle, ca. / 400mm c/c	5000093 DS Special inddækning 1003 12,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebelegning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Dimension 4,8 x 22 mm 12 stk. à 1.600 mm
Skruer til laskeplader på flammeafbejler. Type: DS Montageskrue til stålunderlag 5,5 x 25 mm 6-kt. hoved Galvaniseret/#2+DB Nummer 1292807 10 stk / laskeplade, skrues 3 stk. på hver side af samlinger 15mm fra kanten. og 4 stk. for fastholdelse.	5000093 DS Special inddækning 1004 12,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebelegning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Dimension 4,8 x 22 mm 12 stk. à 300 mm
Skruer til fastgørelse af facadekassetter på hat-profiler: Type: DS Montageskrue til stålunderlag 4,8 x 22 mm Torx Galvaniseret/#2+ DB Nummer 1877444	7001164 DS Montageskrue til stålunderlag 5,00 Pakke DB Nummer 1877444 Farve Antracit nærmeste RAL 7016 Dimension 4,8 x 22 mm Skruenhoved Torx Materiale/Borespids Galvaniseret/#2+ Antal pr. Pakke 100 stk.
Skruer til fastgørelse af Afstandslistet af træ på vindgips og underlag af reglar: Type: TJEJ GR 3,1x90 mm, varmgalv. pr 600mm c/c min 50mm fra endetræ	5000093 DS Special inddækning 1005 4,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebelegning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Dimension 4,8 x 22 mm 4 stk. à 2.500 mm
Skruer til fastgørelse af Bøjler underlag for sælbænk. Type: RedHorse CORONA™ RXB 4.8 X 60 #1 TX20	5000093 DS Special inddækning 1006 2,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebelegning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Dimension 4,8 x 22 mm 2 stk. à 2.500 mm
Skruer til fastgørelse af gips på træ. Type: Spit håndgipskrue, ELFZ, 4,2 x 42mm must be used when fixing in wood. skrues med kantafstand 10-15mm max. 300mm c/c afstand maks. c/c stolpeafstand 600mm	500278 Underbetonet 40,00 stk Godstykkelse 1,00 mm Overfladebelegning Galvaniseret
TAPE TIL VINDGIPS Paroc XST 042 Cortex B-Tape, 60mm, sort	

Myndighedsprojekt

Mock-up  
2023-10-09

REV.	DATO	EMNE	TEGN.	GOOR.

**Earth Shot Residential**

Forløb

Solbænkvej  
Højvej  
Callevej  
Højvej

EMNE: Mock-up facade mod gård til Rig

SAG NR.: 1960020071

MALESTOK: 1:20

DATO: 2023-10-09

TEGN: Author

KONTROL: Checker

GOODKENDT: Approver

FORMAT: NREP

TEGN NR.: ESR\_K01\_H4\_EXX\_N3010

REV.:

© BYGGERI: NREP, SOUTHAMPTONGADE 4, DK-2150 NORDHAVN

● ARKITEKT: HENNING LARSEN ARCHITECTS, VESTERBROGADE 76, DK-1620 KØBENHAVN V

○ INGENIØR: SOREN JENSEN RÅDGIVENDE INGENIØRFIRMA A/S, FREDERIKSBORGGADE 1, 2. SAL, DK-1360 KØBENHAVN

○ LANDSKABSARKITEKT: HENNING LARSEN ARCHITECTS, VESTERBROGADE 76, DK-1620 KØBENHAVN V

○ ENTREPRENØR: SE BYG A/S, CORTEX PARK 12, DK-9230 ODENSE M

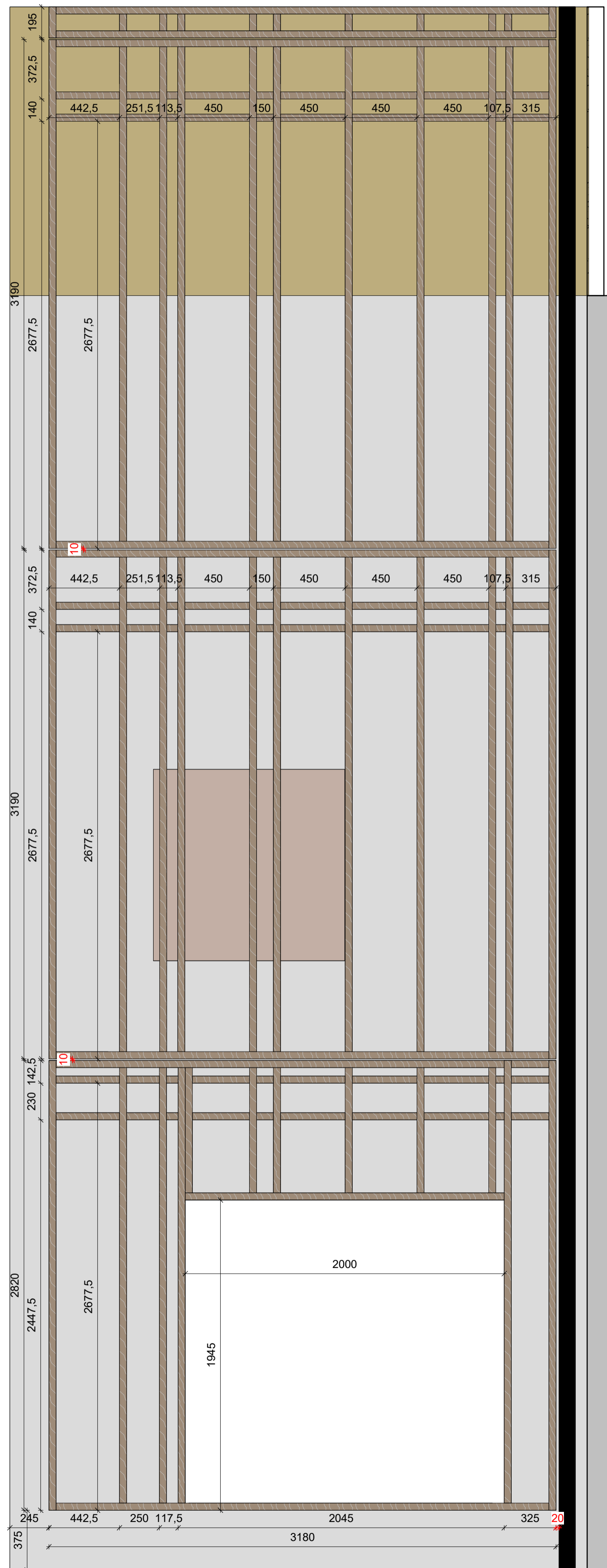
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TLF: +45 8233 3000

TLF: +45 8612 2011

TLF: +45 8233 3000

TLF: +45 6340 4140

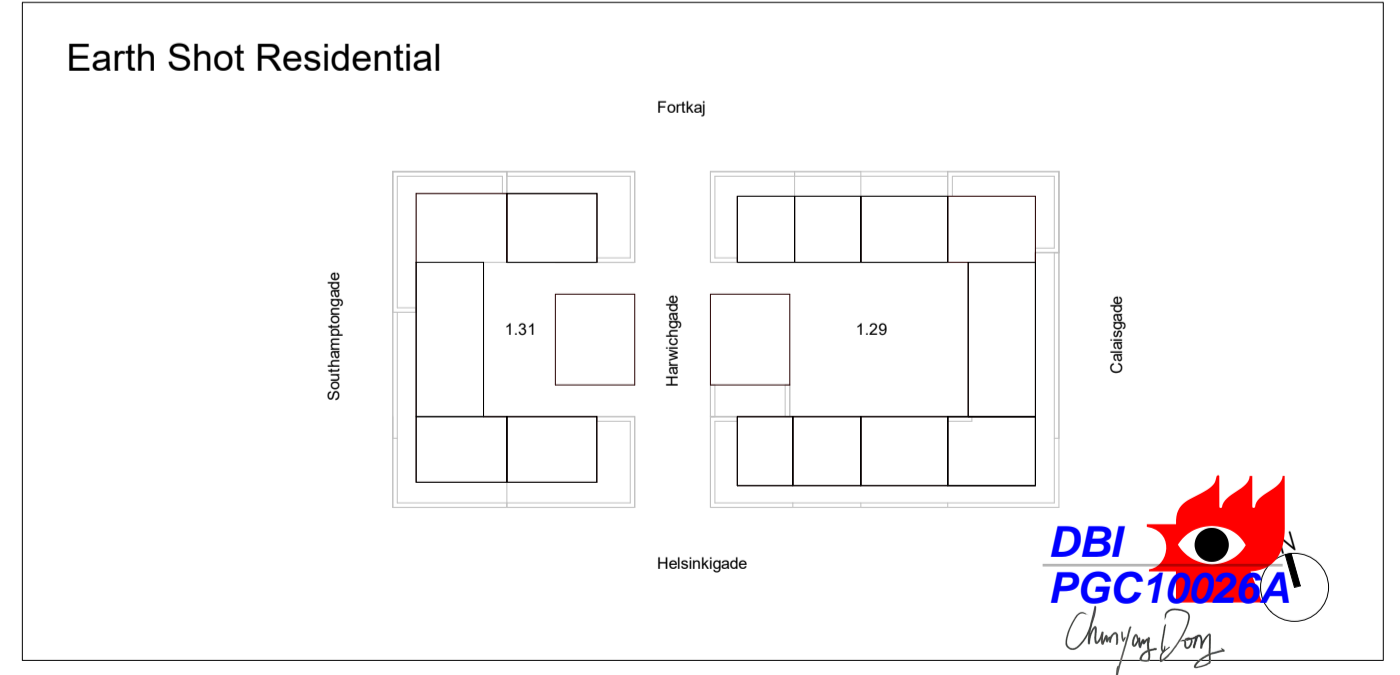


- Materialer:**
- DS Stålrprofil under beklædninger: 5000283 Flammeafbøjer 1001 9,00 stk
  - Facade: 45x95 C24 Reglar: Godstykkeelse 2,00 mm
  - Fastgørelser af reglar til facaderig skruer som DBI plejer: Overfladebelægning Galvaniseret
  - Materialtype Stål, S350 - Z275 9 stk. à 2.430 mm
  - 5000283 Laskeplade 1002 6,00 stk
  - Godstykkeelse 2,00 mm
  - Isolering klasse A indblæst til kl. 34: isover isolerulsafe Densitet >= 30 kg/m<sup>3</sup> 0,034 1-l-værdi (W/m K)
  - 5000279 C-profil 1003 14,00 stk
  - Godstykkeelse 1,00 mm
  - vindspærresystem Siniat Weather Defence 9,5mm
  - Isoler Wall-Element på bagside for indblæsning: Overfladebelægning Galvaniseret
  - Materialtype Stål, S350 - Z275 6 stk. à 253 mm
  - 4004239 DS Hattoprofil 006 20,00 stk
  - Godstykkeelse 1,00 mm
  - Dererfer PE folie 0,2mm
  - 5000279 C-profil 1003 14,00 stk
  - Godstykkeelse 1,00 mm
  - Facadebeklædning: Moelven ThermoWood - profil 3301 x 5" (netto ca. 21 x 118 mm)
  - Klink Facadebeklædning Finsavet: Overfladebelægning Galvaniseret
  - Profilrædderne fastgøres med RRingsøm - TJEP 2,5x50mm Rustfri, linsehoved et stk / brædt i hver afstandsliste. 14 stk. à 3.000 mm
  - 4004239 DS Hattoprofil 006 20,00 stk
  - Godstykkeelse 1,00 mm
  - Overfladebelægning Aluzink
  - Korrosionsbestandighed RC 4
  - Dimension 25 mm
  - Materialtype Stål, S280GD - A2185
  - Længde 3000 mm
  - 7000105 DS Montageskrue til stålunderlag 6,00 Pakke
  - DB Nummer 1292807
  - Farve Silver nærmeste RAL 9006
  - Dimension 5,5 x 25 mm
  - Skruehoved 6-kt. hoved
  - Materiale/Borespids Galvaniseret/#2+
  - Antal pr. Pakke 250 stk.
  - Afstandsliste, 25x45 mm Vandret
  - Trykimpregneret (godkendt jf. biocidforordningen EU 528/2012)
  - Neoprenklodser 8x50x100mm
  - TJEP GR 3,1x90 mm, varmgalv. pr 600mm c/c min 50mm fra endetræ
  - Materialtype Stål, S280GD - A2185
  - Længde 3000 mm
  - 7000105 DS Montageskrue til stålunderlag 6,00 Pakke
  - DB Nummer 1292807
  - Farve Silver nærmeste RAL 9006
  - Dimension 5,5 x 25 mm
  - Skruehoved 6-kt. hoved
  - Materiale/Borespids Galvaniseret/#2+
  - Antal pr. Pakke 250 stk.
  - Afstandsliste, 25x45 mm Lodret
  - Trykimpregneret (godkendt jf. biocidforordningen EU 528/2012)
  - Fastgøres af afstandslist med Ringsøm - TJEP GR 3,1x90 mm, varmgalv. pr 600mm c/c min 50mm fra endetræ
  - Materialtype Stål, S280GD - A2185
  - Længde 3000 mm
  - 7000105 DS Montageskrue til stålunderlag 6,00 Pakke
  - DB Nummer 1292807
  - Farve Silver nærmeste RAL 9006
  - Dimension 5,5 x 25 mm
  - Skruehoved 6-kt. hoved
  - Materiale/Borespids Galvaniseret/#2+
  - Antal pr. Pakke 250 stk.
  - Metal facade
  - 0,75mm opbukket facade kassetter som DS Stålrprofil
  - Greencoat farve sort 697 Matt brandklasse 50 µm A1 s1 d0
  - https://www.ssab.com/en/brands-and-products/greencoat/products/pural-bt
  - 7000164 DS Montageskrue til stålunderlag 1,00 Pakke
  - DB Nummer 1877444
  - Farve Antracit nærmeste RAL 7016
  - Dimension 4,8 x 22 mm
  - Skruehoved Torx
  - Materiale/Borespids Galvaniseret/#2+
  - Antal pr. Pakke 100 stk.
  - Fastgørelser:
  - Skrue til Flammeafbøjer: Type: RedHorse CORONA™ RXB 4.8 X 60 #1 TX20 EPDM-9.5B - pr. 200mm C/C i 20mm langhuller
  - 5000093 DS Special inddækning 1001 9,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebelægning GreenCoat® Pural BT
  - Korrosionsbestandighed RC 5
  - Materialtype Stål, S280GD - Z275
  - 9 stk. à 2.100 mm
  - 5000093 DS Special inddækning 1002 9,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebelægning GreenCoat® Pural BT
  - Korrosionsbestandighed RC 5
  - Materialtype Stål, S280GD - Z275
  - 9 stk. à 2.100 mm
  - 5000093 DS Special inddækning 1003 12,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebelægning GreenCoat® Pural BT
  - Korrosionsbestandighed RC 5
  - Materialtype Stål, S280GD - Z275
  - 12 stk. à 1.600 mm
  - 5000093 DS Special inddækning 1004 12,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebelægning GreenCoat® Pural BT
  - Korrosionsbestandighed RC 5
  - Materialtype Stål, S280GD - Z275
  - 12 stk. à 300 mm
  - 7000164 DS Montageskrue til stålunderlag 5,00 Pakke
  - DB Nummer 1877444
  - Farve Antracit nærmeste RAL 7016
  - Dimension 4,8 x 22 mm
  - Skruehoved Torx
  - Materiale/Borespids Galvaniseret/#2+
  - Antal pr. Pakke 100 stk.
  - 5000093 DS Special inddækning 1005 4,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebelægning GreenCoat® Pural BT
  - Korrosionsbestandighed RC 5
  - Materialtype Stål, S280GD - Z275
  - 4 stk. à 2.500 mm
  - 5000093 DS Special inddækning 1006 2,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebelægning GreenCoat® Pural BT
  - Korrosionsbestandighed RC 5
  - Materialtype Stål, S280GD - Z275
  - 2 stk. à 2.500 mm
  - 5000278 Understøtning 40,00 stk
  - Godstykkeelse 1,00 mm
  - Overfladebelægning Galvaniseret

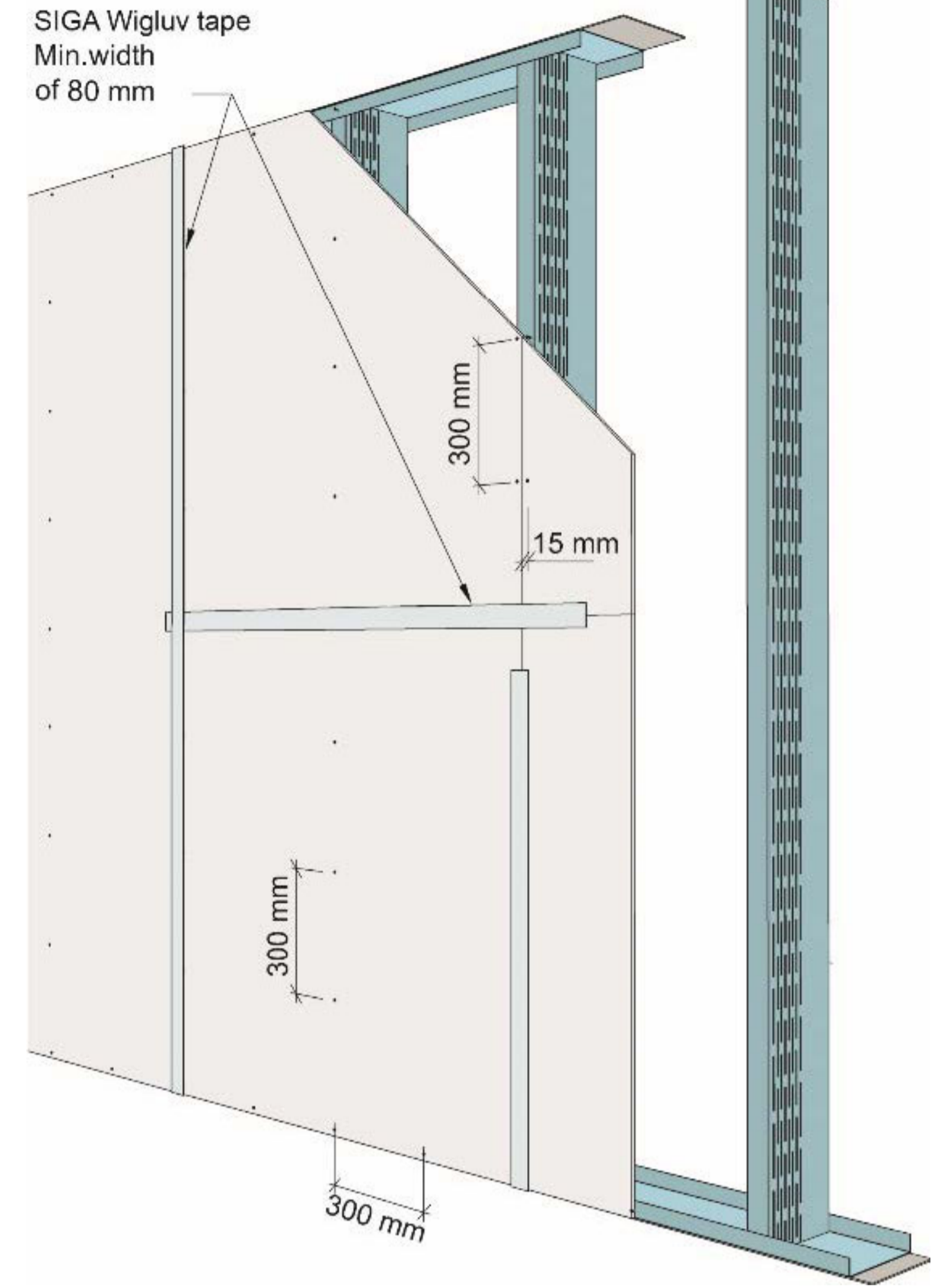
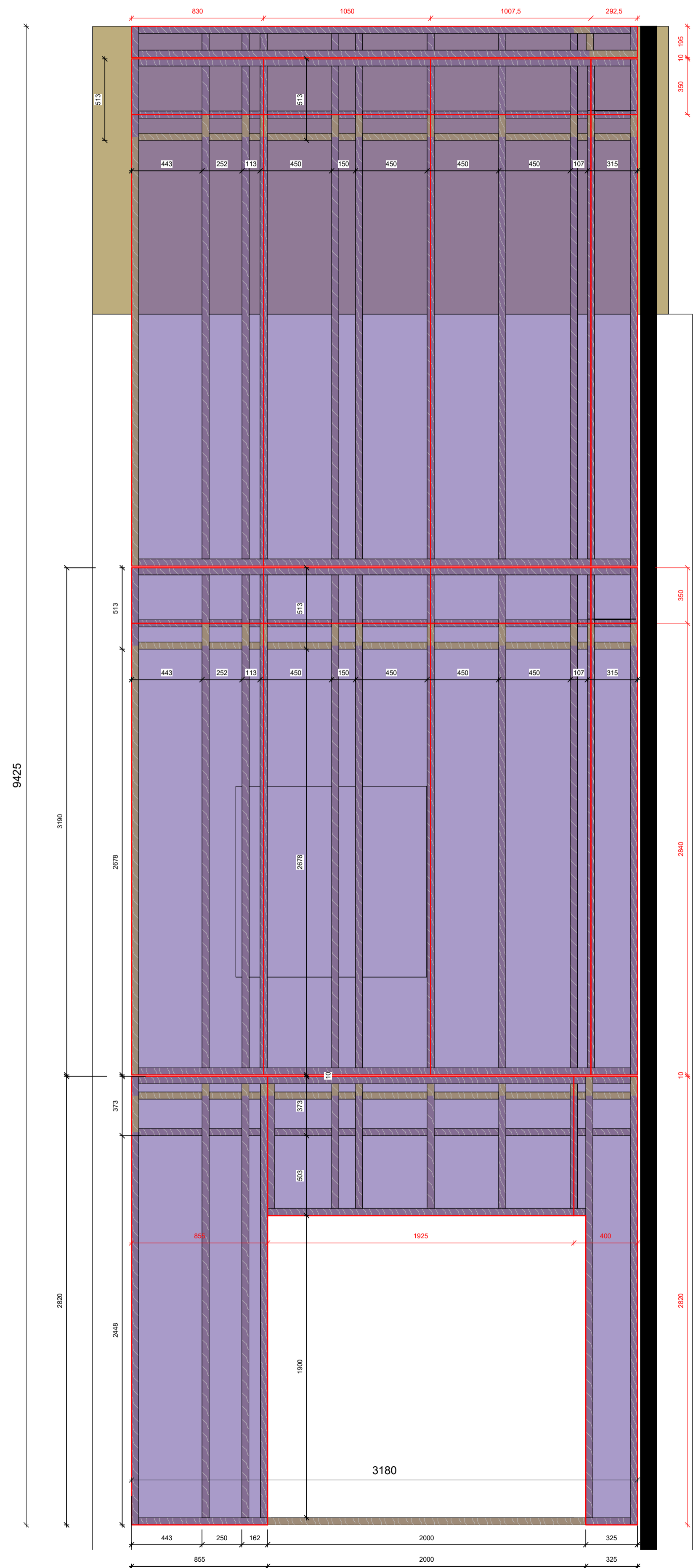
Myndighedsprojekt

Mock-up  
2023-10-09

REV.	DATO	EMNE	TEGN.	GOOR.



EMNE:	SAG NR.:	1960020071
Trærammer	MALESTOK:	1 : 20
	DATO:	2023-10-09
	TEGN:	Author
	KONTROL:	Checker
	GODKENDT:	Approver
	FORMAT:	
	TEGN NR.:	REV.:



Taaings z-profil i vandrette samlinger i mellem elementer  
 Montage af vindgips iht. Sinia\_Weather\_defence\_ \_ Godkendelse.pdf SKAL UDLEVERES TIL DE UDFØRENDE

Nedenstående er er udklip fra vejledning

Skruer til fastgørelse af gips på træ.  
 Type: Spil hårdgipskrue, ELFZ, 4,2 x 42mm, skrues med kantafstand 10-15mm max. c/c stolpeafstand 600mm

TAPE TIL VINDGIPS  
 Paroc XST 042 Cortex B-Tape, 60mm, sort

**Installation**  
 Weather Defence is installed on studs with maximum centre distance c/c 600 mm. The boards are installed on a frame with screws of type Spil hårdgipskrue, ELFZ, 4,2 x 42mm at intervals of maximum 300 mm in all board joints and in the middle section of the boards. The screw heads must be flush with the surface of the board. The distance from the screws to the edge of the boards must be at least 10 mm and at least 15 mm from edges where the gypsum core is exposed. For contact with base, windows, doors, roof, and bushings, see relevant instructions in Byggeforskeren. A silicone sealant shall be used in junctions between Weather Defence and other framing materials.

In general, it is recommended to cover the wind barrier with an external cladding as soon as possible. However, it is considered that the wind barrier system can remain uncovered, as indicated in clause 4 "Properties", provided that the building is not subjected to large amounts of driving rain. It is also a prerequisite that all joints are protected with tape and that all board edges (for instance along the bottom, sides and top of the wall, and around wall penetrations) are protected against rain.

When the boards are used for wind bracing, as specified in section 4, all board edges shall be supported by studs of at least 45 mm width.

**Screws**  
 Spil hårdgipskrue, ELFZ, 4,2 x 42mm screws with length of at least 42 mm must be used when fixing in wood.

**Sealing of joints**  
 SIGA Wigluv sealing tape, with a width of at least 50 mm, must be used. Horizontal joints must be sealed with two tape strips where the upper tape strip overlaps the lower tape strip with 25 mm before the vertical joints are sealed. The surface of the boards must be dust-free and dry before the tape is applied. The manufacturer's instructions must be followed.

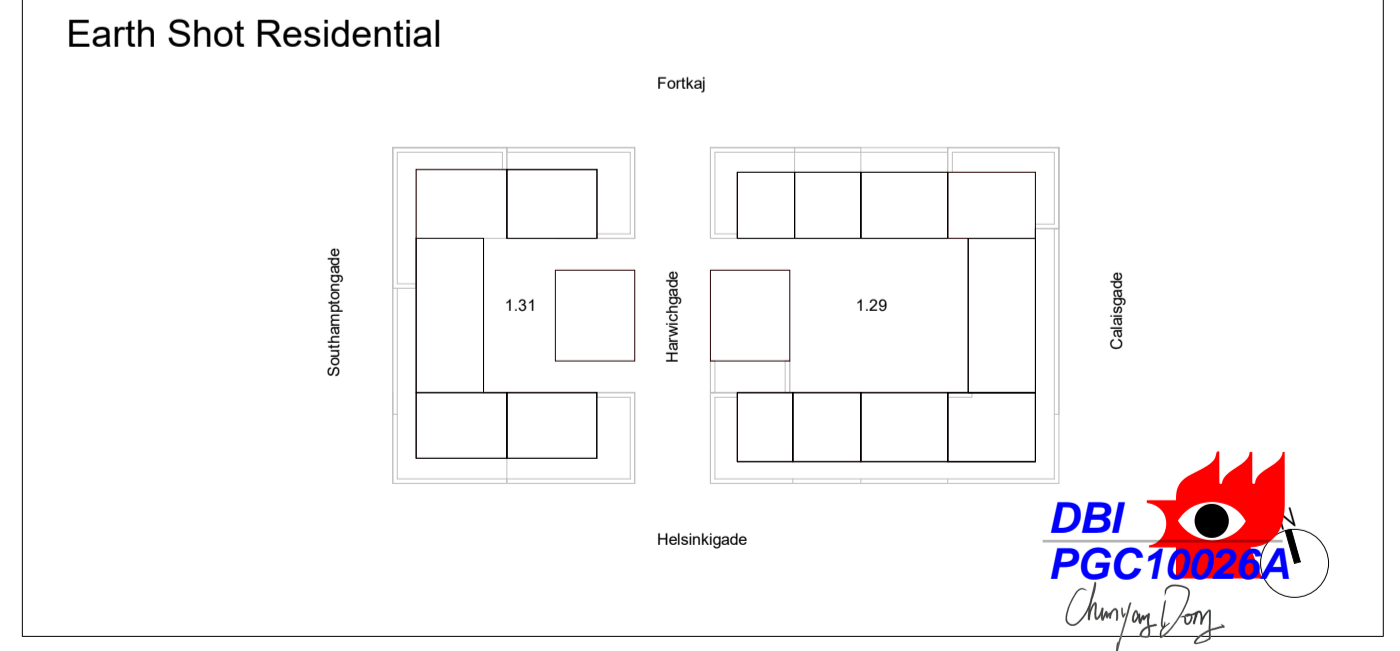
**Transport and storage**  
 The boards shall be covered during transport and stored on a levelled support in dry conditions.

- Materiale:**
- DS Stålrør underbeklædning: 5000283 Flammeafbejler 1001 9,00 stk Godstykkelse 2,00 mm Overfladebeklædning Galvaniseret Materialetype Stål, S350 - Z275 9 stk. à 2.430 mm
  - 5000283 Laskeplade 1002 6,00 stk Godstykkelse 2,00 mm Overfladebeklædning Galvaniseret Materialetype Stål, S350 - Z275 6 stk. à 253 mm
  - 5000279 C-profil 1003 14,00 stk Godstykkelse 1,00 mm Overfladebeklædning Galvaniseret Materialetype Stål, S350 - Z275 14 stk. à 3.000 mm
  - 4004239 DS Hattoprofil 006 20,00 stk Godstykkelse 1,00 mm Overfladebeklædning Aluzink Korrosionsbestandighed RC 4 Dimension 25 mm Materialetype Stål, S280GD - A2185 Længde 3000 mm
  - 7000105 DS Montageskrue til stålunderlag 6,00 Pakke DB Nummer 1292807 Farve Silver nærmeste RAL 9006 Dimension 5,5 x 25 mm Skruehoved 6-kt. hoved Materiale/Borespids Galvaniseret/#2+ Antal pr. Pakke 250 stk
  - 7000164 DS Montageskrue til stålunderlag 1,00 Pakke DB Nummer 1877444 Farve Antracit nærmeste RAL 7016 Dimension 4,8 x 22 mm Skruehoved Torx Materiale/Borespids Galvaniseret/#2+ Antal pr. Pakke 100 stk
  - DS Stålrør inddækninger: 5000093 DS Special inddækning 1001 9,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebeklædning Aluzink Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 9 stk. à 2.100 mm
  - 5000093 DS Special inddækning 1002 9,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebeklædning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 9 stk. à 2.100 mm
  - 5000093 DS Special inddækning 1003 12,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebeklædning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 12 stk. à 1.600 mm
  - 5000093 DS Special inddækning 1004 12,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebeklædning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 12 stk. à 300 mm
  - 7000164 DS Montageskrue til stålunderlag 5,00 Pakke DB Nummer 1877444 Farve Antracit nærmeste RAL 7016 Dimension 4,8 x 22 mm Skruehoved Torx Materiale/Borespids Galvaniseret/#2+ Antal pr. Pakke 100 stk
  - 5000093 DS Special inddækning 1005 4,00 stk Godstykkelse 0,75 mm Farve Antracit nærmeste RAL 7016 Coating 50 µm Overfladebeklædning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 2 stk. à 2.500 mm
  - 5000278 Understating 40,00 stk Godstykkelse 1,00 mm Overfladebeklædning Galvaniseret

Myndighedsprojekt

Mock-up  
2023-10-09

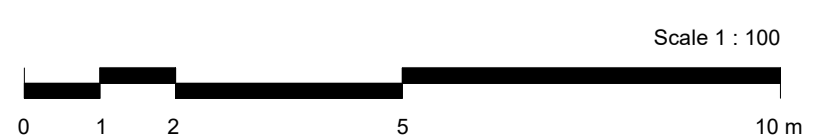
REV.	DATO	EMNE	TEGN.	GOOR.

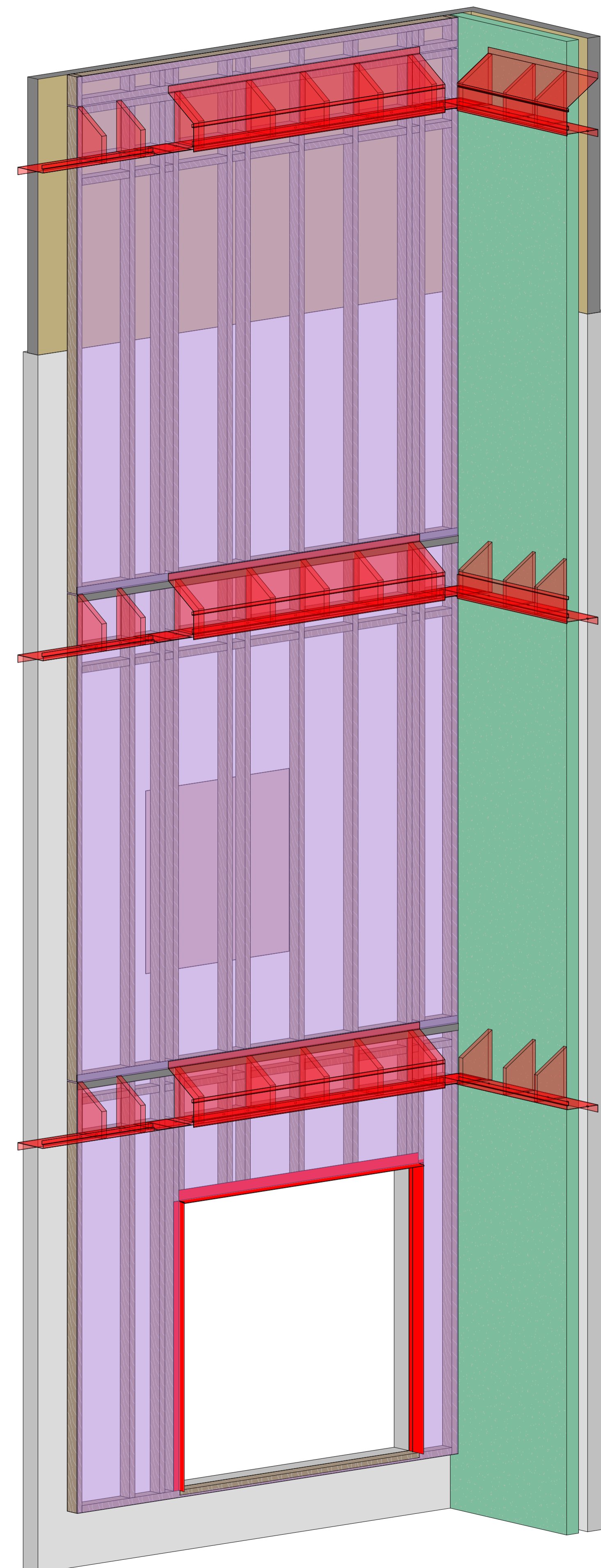
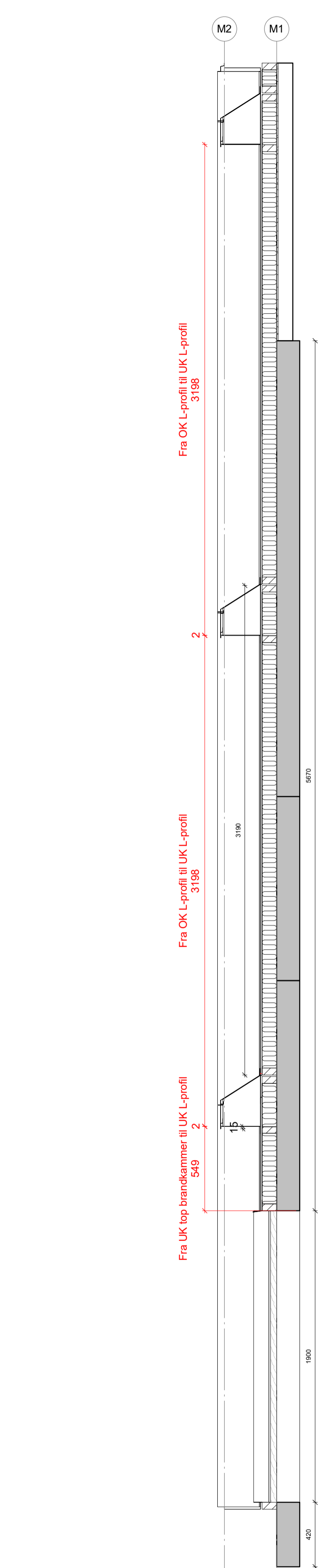
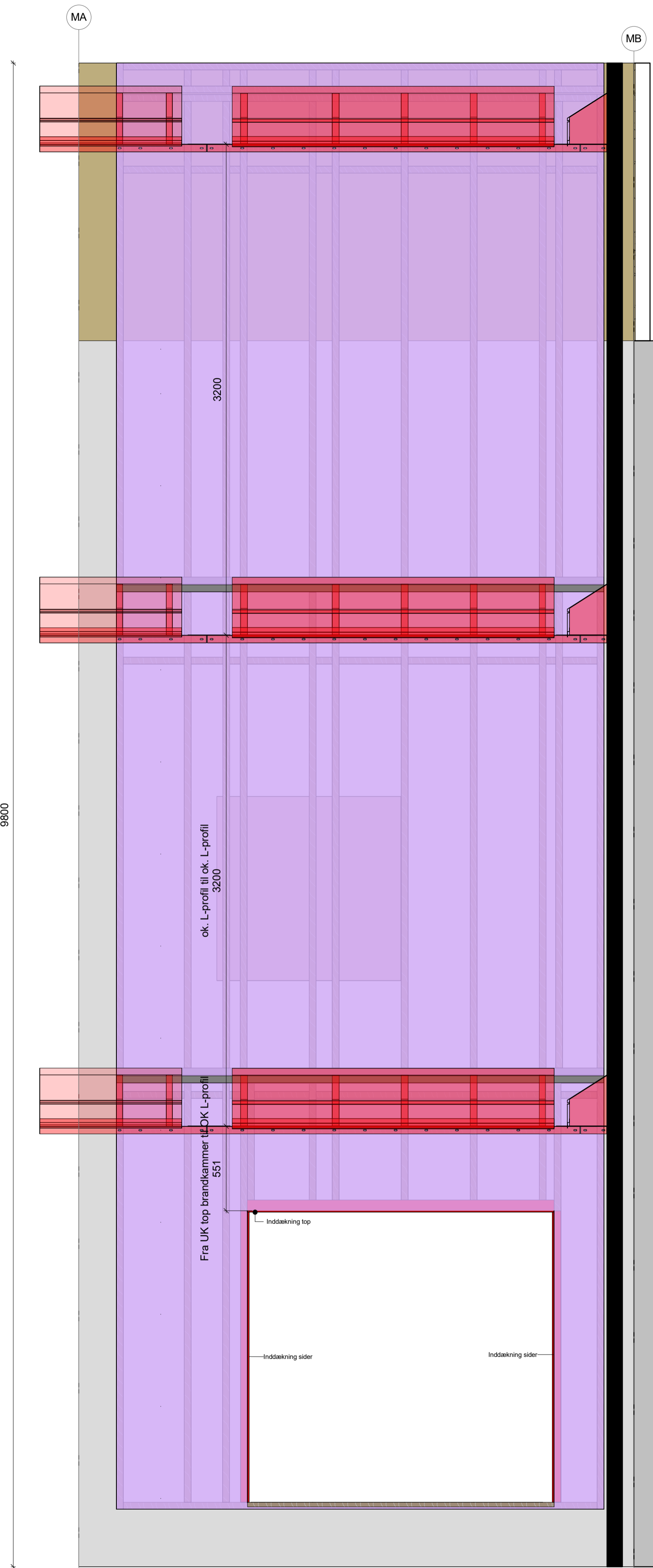


EMNE:	Gips på trærammer	SAG NR.:	1960020071
MALESTOK:	As indicated	DATO:	2023-10-09
TEGN:	Author	KONTROL:	Checker
GOOR/ENDT:	Approver	FORMAT:	
TEGN NR.:		REV.:	

ESR\_K01\_H4\_EXX\_N3012

- BYGHERRE: NREP, SOUTHAMPTONGADE 4, DK-2150 NORDHAVN
- ARHITEKT: HENNING LARSEN ARCHITECTS, VESTERBROGADE 76, DK-1620 KØBENHAVN V
- INGENIØR: SØREN JENSEN RÅDGIVENDE INGENIØRFIRMA A/S, FREDERIKSBORGGADE 1, 2. SAL, DK-1360 KØBENHAVN
- LANDSKABSARKITEKT: HENNING LARSEN ARCHITECTS, VESTERBROGADE 76, DK-1620 KØBENHAVN V
- ENTREPRENØR: SE BYG A/S, CORTEX PARK 12, DK-9230 ODENSE M



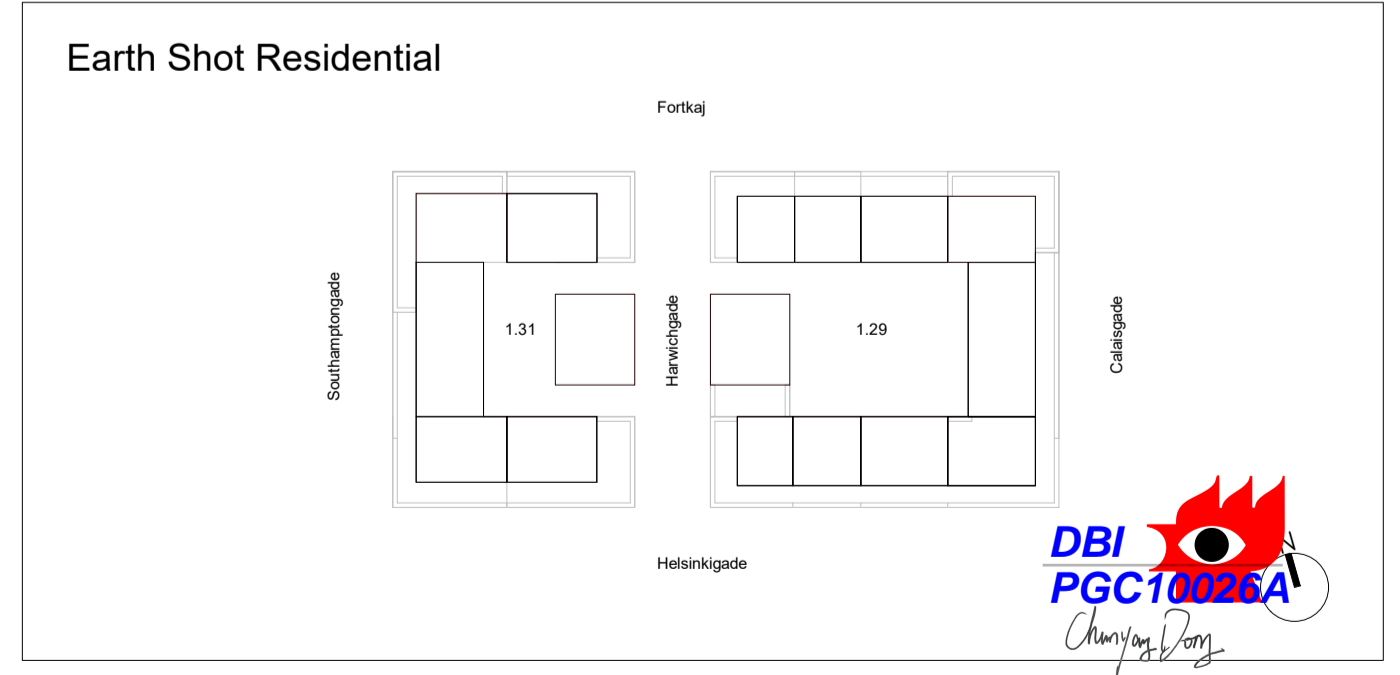


- Materiale:**
- DS Stålrprofil under beklædning: 5000283 Flammeafbøjer 1001 9,00 stk
  - Facade: 45x95 C24 Reglar: Godstykkeelse 2,00 mm
  - Fastgørelser af reglar til facaderig skruer som DBI plejer: Overfladebeklægning Galvaniseret Materialetype Stål, S350 - Z275 9 stk. à 2.430 mm
  - 5000283 Laskeplade 1002 6,00 stk
  - Godstykkeelse 2,00 mm
  - Overfladebeklægning Galvaniseret Materialetype Stål, S350 - Z275 6 stk. à 253 mm
  - 5000279 C-profil 1003 14,00 stk
  - Godstykkeelse 1,00 mm
  - Overfladebeklægning Galvaniseret Materialetype Stål, S350 - Z275 14 stk. à 3.000 mm
  - 4004239 DS Hattoprofil 006 20,00 stk
  - Godstykkeelse 1,00 mm
  - Overfladebeklægning Aluzink Korrosionsbestandighed RC 4 Dimension 25 mm
  - Materialetype Stål, S280GD - Z275 Længde 3000 mm
  - 7001105 DS Montageskrue til stålunderlag 6,00 Pakke
  - DB Nummer 1292807
  - Farve Silver nærmeste RAL 9006
  - Dimension 5,5 x 25 mm
  - Skruenhoved 6-kt. hoved
  - Materiale/Borespids Galvaniseret/#2+ Antal pr. Pakke 250 stk.
  - 7000164 DS Montageskrue til stålunderlag 1,00 Pakke
  - DB Nummer 1877444
  - Farve Antracit nærmeste RAL 7016
  - Dimension 4,8 x 22 mm
  - Skruenhoved Torx
  - Materiale/Borespids Galvaniseret/#2+ Antal pr. Pakke 100 stk.
  - DS Stålrprofil inddækninger:
  - 5000093 DS Special inddækning 1001 9,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebeklægning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 9 stk. à 2.100 mm
  - 5000093 DS Special inddækning 1002 9,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebeklægning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 9 stk. à 2.100 mm
  - 5000093 DS Special inddækning 1003 12,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebeklægning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 12 stk. à 1.600 mm
  - 5000093 DS Special inddækning 1004 12,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebeklægning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 12 stk. à 300 mm
  - 7000164 DS Montageskrue til stålunderlag 5,00 Pakke
  - DB Nummer 1877444
  - Farve Antracit nærmeste RAL 7016
  - Dimension 4,8 x 22 mm
  - Skruenhoved Torx
  - Materiale/Borespids Galvaniseret/#2+ Antal pr. Pakke 100 stk.
  - 5000093 DS Special inddækning 1005 4,00 stk
  - Godstykkeelse 0,75 mm
  - Farve Antracit nærmeste RAL 7016
  - Coating 50 µm
  - Overfladebeklægning GreenCoat® Pural BT Korrosionsbestandighed RC 5 Materialetype Stål, S280GD - Z275 2 stk. à 2.500 mm
  - 5000278 Underlætning 40,00 stk
  - Godstykkeelse 1,00 mm
  - Overfladebeklægning Galvaniseret

Myndighedsprojekt

Mock-up  
2023-10-09

REV.	DATO	EMNE	TEGN.	GOOR.



EMNE: Gips og flammeafbøjer og inddækninger brandkammer

SAG NR.: 1960020071

MALESTOK: 1 : 20

DATO: 2023-10-09

TEGN.: Author

KONTROL: Checker

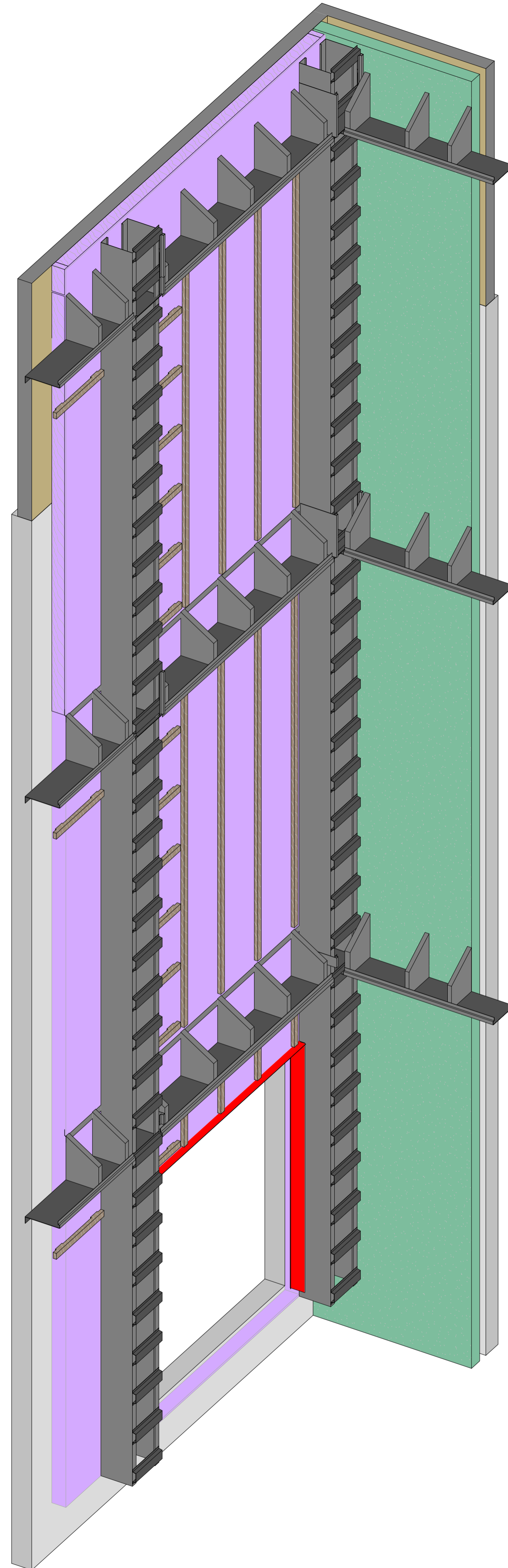
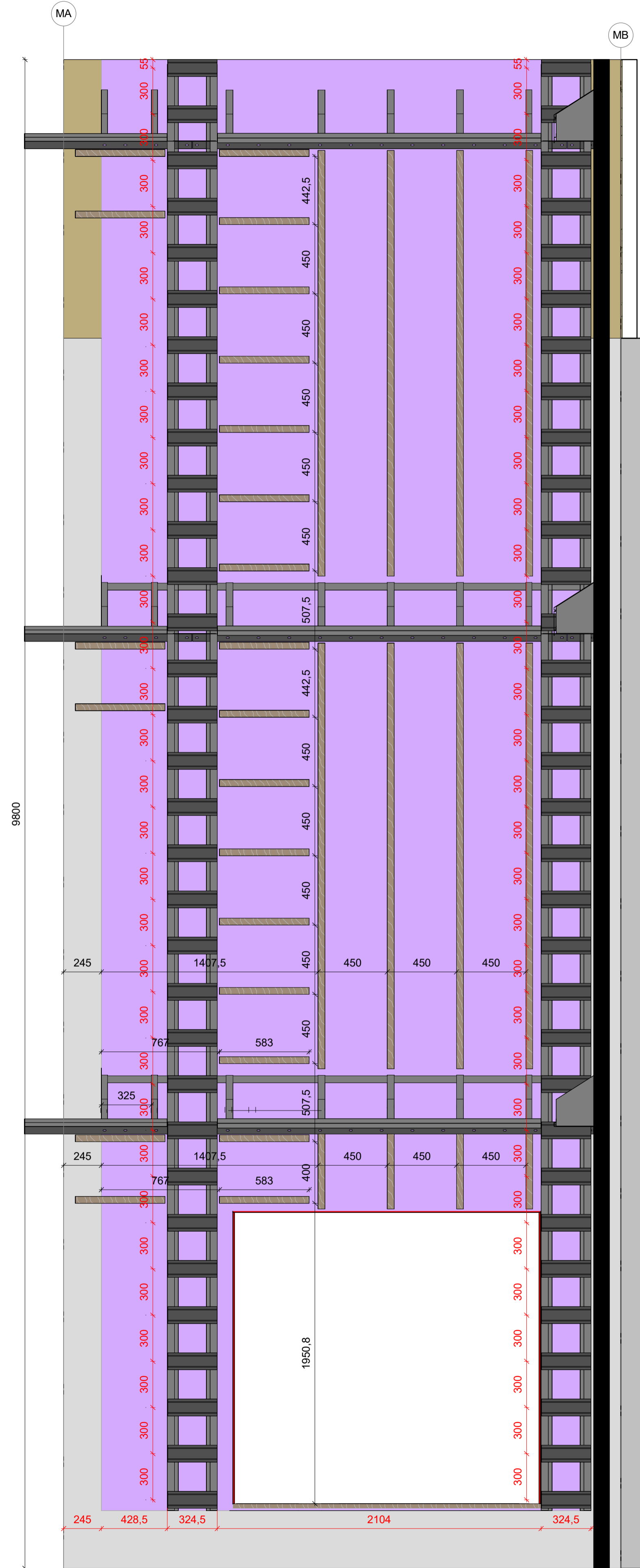
GOODKENDT: Approver

FORMAT:

TEGN NR.:

REV.:

**ESR\_K01\_H4\_EXX\_N3013**

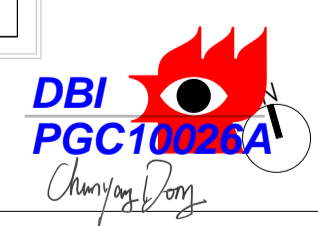
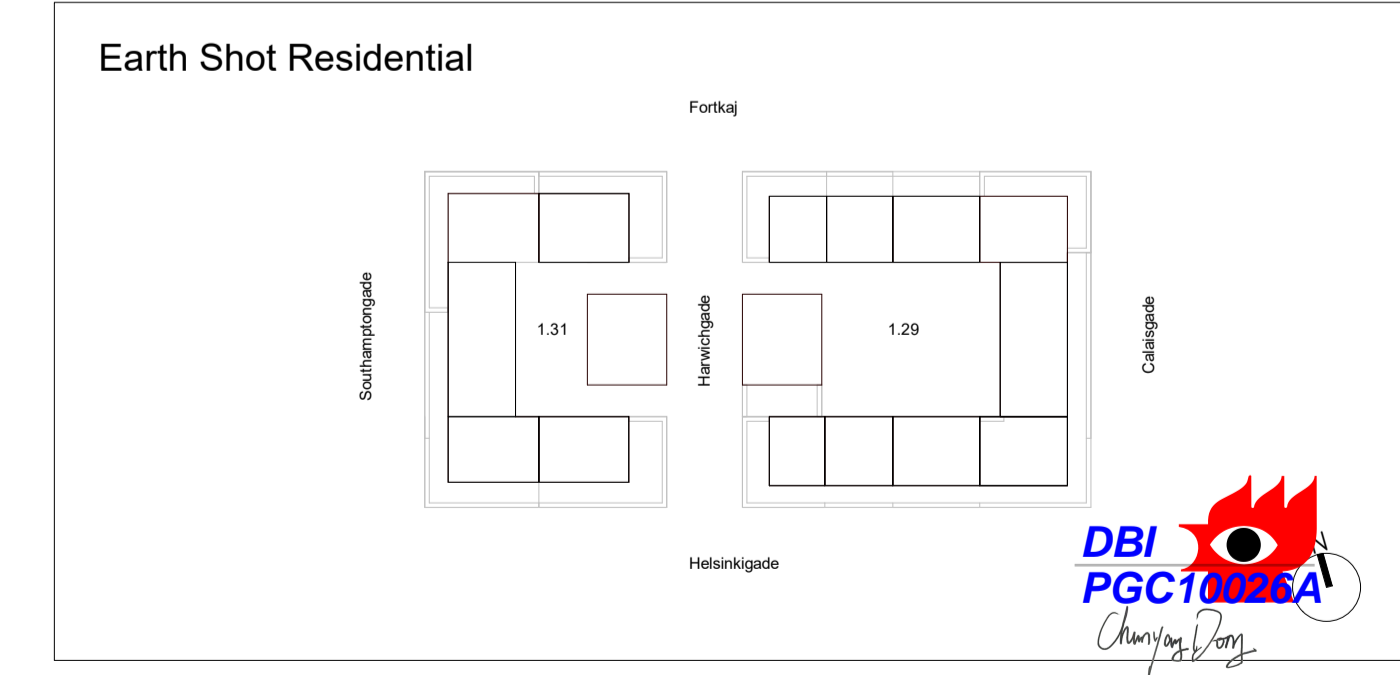


- Materiale:**
- Facade: 45x95 C24 Reglar; Fastgørelser af reglar til facaderig skruer som DBI plejer;
  - Isolering klasse A indblæst til kl. 34:** isover isolatsafe Densitet >= 30 kg/m<sup>3</sup> 0,034 1.1-værdi (W/m K)
  - Facadebeklædning: Moelven ThermoWood - profil 3301 x 5" (netto ca. 21 x 118 mm); Klink Facadebeklædning Finsavat; Profilrædderne fastgøres med RRingsøm - TJEJ 2,5x50mm Rustfri, linsehoved et stk / brædt i hver afstandsliste.
  - Afstandsliste, 25x45 mm Vandret - Trykimpregneret (godkendt jf. biocidforordningen EU 528/2012) - Fastgøres af afstandsliste med Ringsøm - TJEJ GR 3,1x90 mm, varmgalv. pr 600mm c/c min 50mm fra endetræ
  - Afstandsliste, 25x45 mm Lodret - Trykimpregneret (godkendt jf. biocidforordningen EU 528/2012) - Fastgøres af afstandsliste med Ringsøm - TJEJ GR 3,1x90 mm, varmgalv. pr 600mm c/c min 50mm fra endetræ
  - Metalfacade: 0,75mm opbukket facade kassetter som DS Stålprofil; Greencoat farve sort 697 Matt brandklasse 50 µm A1 s1 d0 <https://www.ssab.com/en/brands-and-products/greencoat/products/pural-bt>
  - Fastgørelser: Skruer til Flammeafbøjer; Type: RedHorse CORONA™ RXB 4.8 X 60 #1 TX20 EPDM-9.5B - pr. 200mm C/C i 20mm langhuller
  - Skruer til fastgørelse af Bøjer på flammeafbøjer; Type: DS Montageskruer til stålunderlag 4,8 x 22 mm Torx Galvaniseret/#2+ DB Nummer 1877444; 2 stk / bøjle skruer nedfra, der forbores ø8mm huller i L-profil.
  - Skruer til fastgørelse af C profiler på vindgips og reglar; Type: Fastgøres med RF Skruer m. borepids, RedHorse CORONA™ RXB 4.8 X 60 #1 TX20EPDM-9.5B
  - Skruer til fastgørelse af hat-profiler på C-profiler af stål; Type: DS Montageskruer til stålunderlag 5,5 x 25 mm 6-kt. hoved Galvaniseret/#2+ DB Nummer 1292807; 4 stk. skruer /hatprofil, hatprofil /300mm c/c
  - Skruer til fastgørelse af Hæfter/Z-profiler på c-profiler af stål; Type: DS Montageskruer til stålunderlag 5,5 x 25 mm 6-kt. hoved Galvaniseret/#2+ DB Nummer 1292807; 1 stk. skruer /bøjle, ca. / 400mm c/c
  - Skruer til laskeplader på flammeafbøjer; Type: DS Montageskruer til stålunderlag 5,5 x 25 mm 6-kt. hoved Galvaniseret/#2+ DB Nummer 1292807; 10 stk / laskeplade, skrues 3 stk. på hver side af samlinger 15mm fra kanten. og 4 stk. for fasholdelse.
  - Skruer til fastgørelse af facadekassetter på hat-profiler; Type: DS Montageskruer til stålunderlag 4,8 x 22 mm Torx Galvaniseret/#2+ DB Nummer 1877444
  - Skruer til fastgørelse af lysninger på c-profiler; Type: DS Montageskruer til stålunderlag 4,8 x 22 mm Torx Galvaniseret/#2+ DB Nummer 1877444
  - Skruer til fastgørelse af Afstandslistes af træ på vindgips og underlag af reglar; Type: TJEJ GR 3,1x90 mm, varmgalv. pr 600mm c/c min 50mm fra endetræ
  - Skruer til fastgørelse af Bøjer underlag for sælbænk; Type: RedHorse CORONA™ RXB 4.8 X 60 #1 TX20
  - Skruer til fastgørelse af gips på træ; Type: Spit hårdgipskrue, ELFZ, 4,2 x 42mm must be used when fixing in wood. skrues med kantafstand 10-15mm max. 300mm c/c afstand maks. c/c stolpeafstand 600mm
  - TAPE TIL VINDGIPS; Paroc XST 042 Cortex B-Tape, 60mm, sort
- DS Stålprofil under beklædninger:**
- 5000283 Flammeafbøjer 1001 9,00 stk; Godstykkelse 2,00 mm; Overfladebelægning Galvaniseret; Materialetype Stål, S350 - Z275; 9 stk. à 2.430 mm
  - 5000283 Laskeplade 1002 6,00 stk; Godstykkelse 2,00 mm; Overfladebelægning Galvaniseret; Materialetype Stål, S350 - Z275; 6 stk. à 253 mm
  - 5000279 C-profil 1003 14,00 stk; Godstykkelse 1,00 mm; Overfladebelægning Galvaniseret; Materialetype Stål, S350 - Z275; 14 stk. à 3.000 mm
  - 4004239 DS Hattprofil 006 20,00 stk; Godstykkelse 1,00 mm; Overfladebelægning Aluzink; Korrosionsbestandighed RC 4; Dimension 25 mm; Materialetype Stål, S280GD - A2185; Længde 3000 mm
  - 7000105 DS Montageskruer til stålunderlag 6,00 Pakke; DB Nummer 1292807; Farve Silver nærmeste RAL 9006; Dimension 5,5 x 25 mm; Skruenhoved 6-kt. hoved; Materiale/Borepids Galvaniseret/#2+; Antal pr. Pakke 250 stk.
  - 7000164 DS Montageskruer til stålunderlag 1,00 Pakke; DB Nummer 1877444; Farve Antracit nærmeste RAL 7016; Dimension 4,8 x 22 mm; Skruenhoved Torx; Materiale/Borepids Galvaniseret/#2+; Antal pr. Pakke 100 stk.
  - DS Stålprofil inddækninger:
  - 5000093 DS Special inddækning 1001 9,00 stk; Godstykkelse 0,75 mm; Farve Antracit nærmeste RAL 7016; Coating 50 µm; Overfladebelægning GreenCoat® Pural BT; Korrosionsbestandighed RC 5; Materialetype Stål, S280GD - Z275; 9 stk. à 2.100 mm
  - 5000093 DS Special inddækning 1002 9,00 stk; Godstykkelse 0,75 mm; Farve Antracit nærmeste RAL 7016; Coating 50 µm; Overfladebelægning GreenCoat® Pural BT; Korrosionsbestandighed RC 5; Materialetype Stål, S280GD - Z275; 9 stk. à 2.100 mm
  - 5000093 DS Special inddækning 1003 12,00 stk; Godstykkelse 0,75 mm; Farve Antracit nærmeste RAL 7016; Coating 50 µm; Overfladebelægning GreenCoat® Pural BT; Korrosionsbestandighed RC 5; Materialetype Stål, S280GD - Z275; 12 stk. à 1.600 mm
  - 5000093 DS Special inddækning 1004 12,00 stk; Godstykkelse 0,75 mm; Farve Antracit nærmeste RAL 7016; Coating 50 µm; Overfladebelægning GreenCoat® Pural BT; Korrosionsbestandighed RC 5; Materialetype Stål, S280GD - Z275; 12 stk. à 300 mm
  - 7000164 DS Montageskruer til stålunderlag 5,00 Pakke; DB Nummer 1877444; Farve Antracit nærmeste RAL 7016; Dimension 4,8 x 22 mm; Skruenhoved Torx; Materiale/Borepids Galvaniseret/#2+; Antal pr. Pakke 100 stk.
  - 5000093 DS Special inddækning 1005 4,00 stk; Godstykkelse 0,75 mm; Farve Antracit nærmeste RAL 7016; Coating 50 µm; Overfladebelægning GreenCoat® Pural BT; Korrosionsbestandighed RC 5; Materialetype Stål, S280GD - Z275; 4 stk. à 2.500 mm
  - 5000093 DS Special inddækning 1006 2,00 stk; Godstykkelse 0,75 mm; Farve Antracit nærmeste RAL 7016; Coating 50 µm; Overfladebelægning GreenCoat® Pural BT; Korrosionsbestandighed RC 5; Materialetype Stål, S280GD - Z275; 2 stk. à 2.500 mm
  - 5000278 Understøtning 40,00 stk; Godstykkelse 1,00 mm; Overfladebelægning Galvaniseret

Myndighedsprojekt

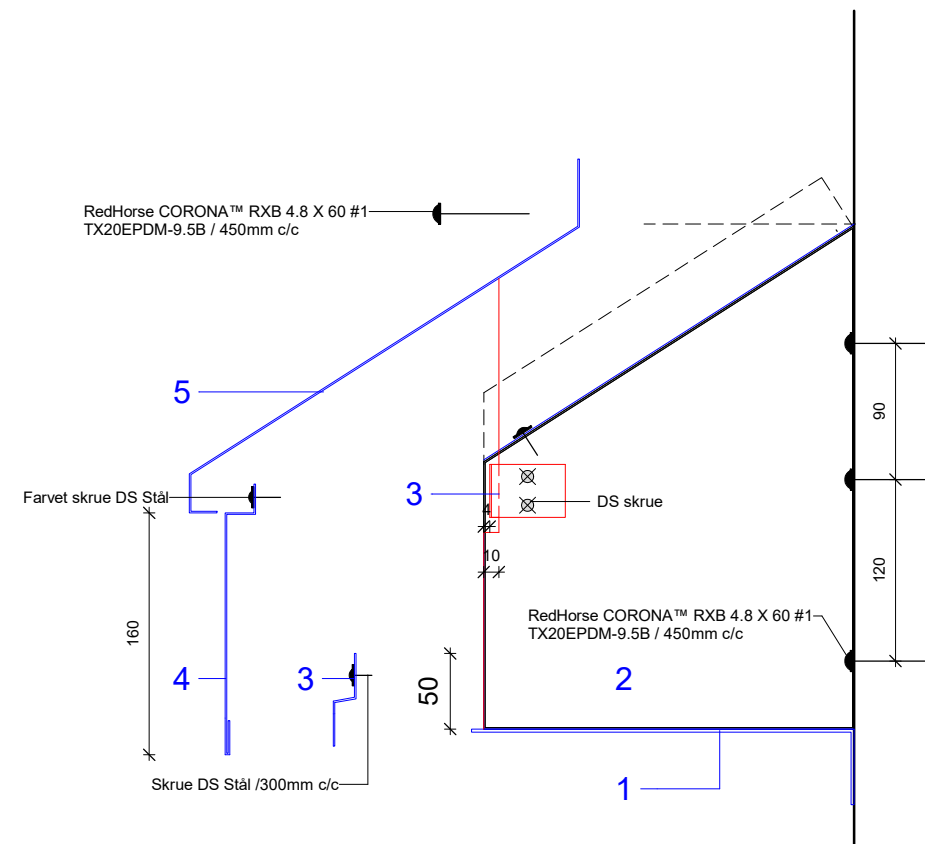
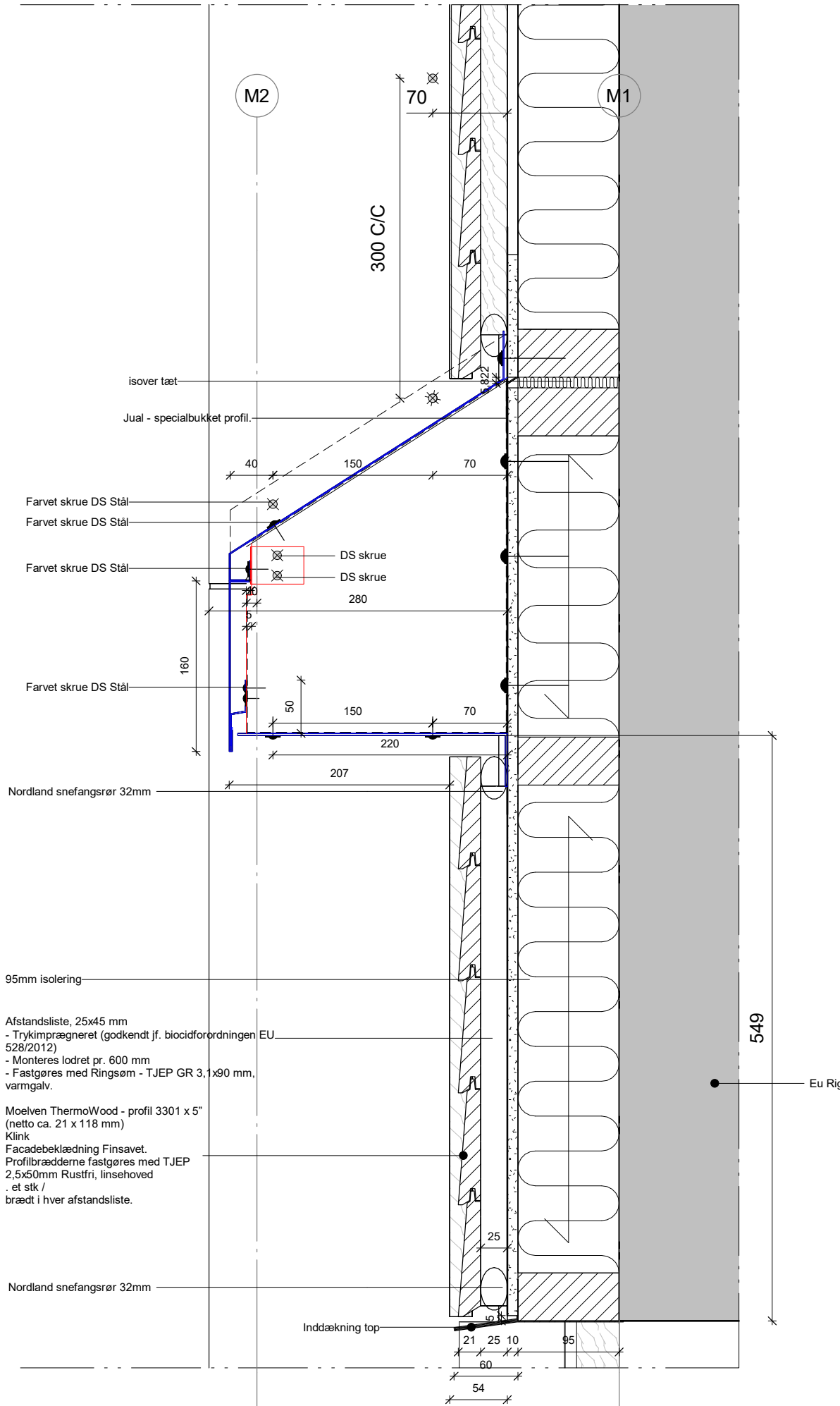
Mock-up  
2023-10-09

REV.	DATO	EMNE	TEGN.	GOOR.



EMNE:	SAG NR.:	1960020071
Underlag for beklædninger (Gård)	MALESTOK:	1 : 20
	DATO:	2023-10-09
	TEGN:	Author
	KONTROL:	Checker
	GOODENDT:	Approver
	FORMAT:	
	TEGN NR.:	
	REV.:	

ESR\_K01\_H4\_EXX\_N3014



5. Sålbank monteres og skrues oppefra på mock up  
Skrue: DS Farvet skrue
4. Frontplade monteres vandret løftes op i hafte og fixeres i top  
Skrue: DS Farvet skrue
3. Hafte og vinkler fikseres 2. Bøjle.  
Skrue: DS skrue uden farve
2. Bøjle fikseres i væg og sammen med 1. L-profil.
1. L-profil fikseres til væg.



Mock-up  
2023-10-09

Earth Shot Residential  
Detalje over brandkammer (lodret snit)  
Lodret

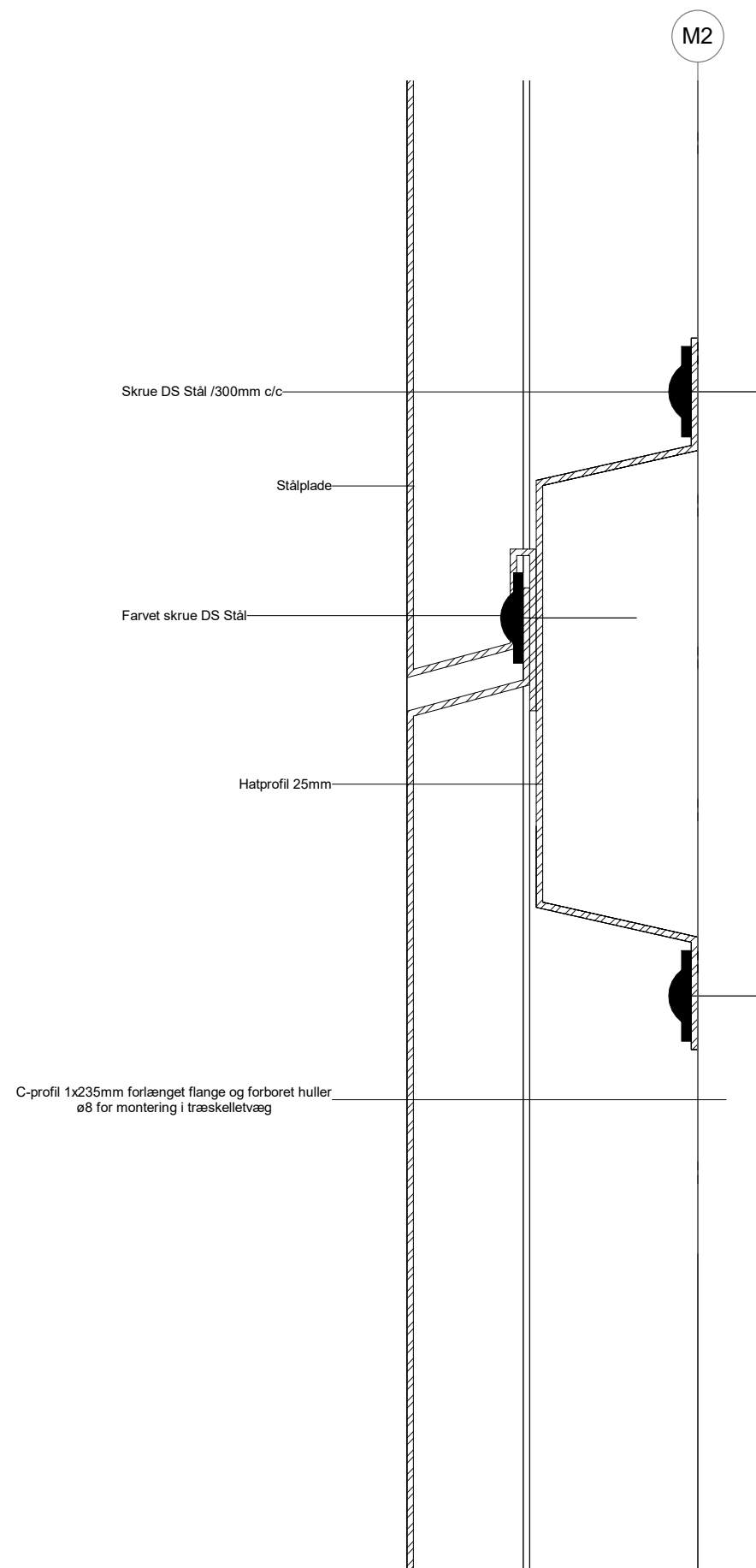


Søren Jensen

Henning Larsen

SAGSNR.	:	1960020071
MALESTOK	:	1 : 5
DATO	:	2023-10-09
TEGN	:	Author
KONTROL	:	Checker
GODKENDT	:	Approver
FORMAT	:	
TEGN NR.	:	REV.:

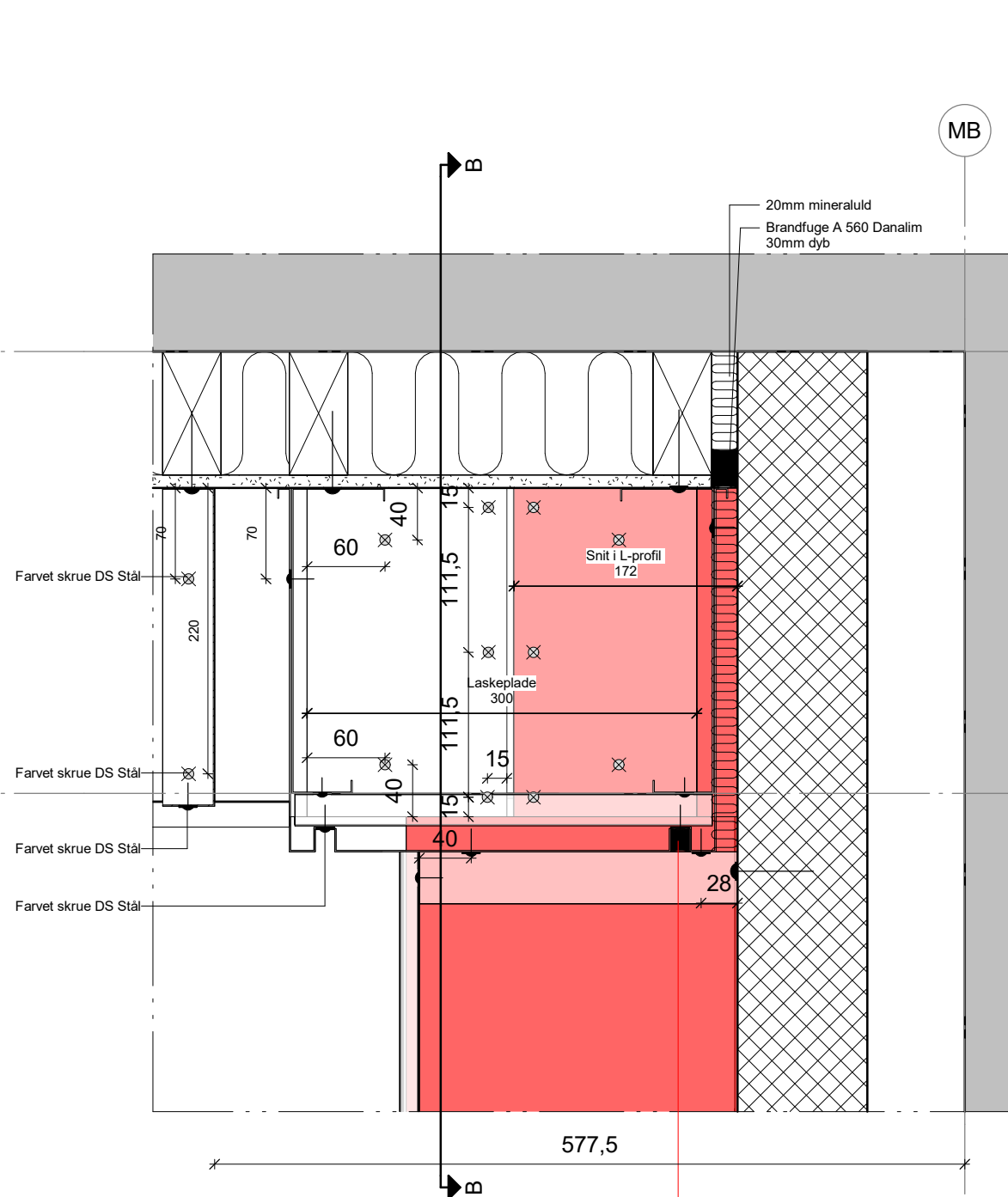
ESR\_K01\_H5\_EXX\_N3010



Mock-up  
2023-10-09

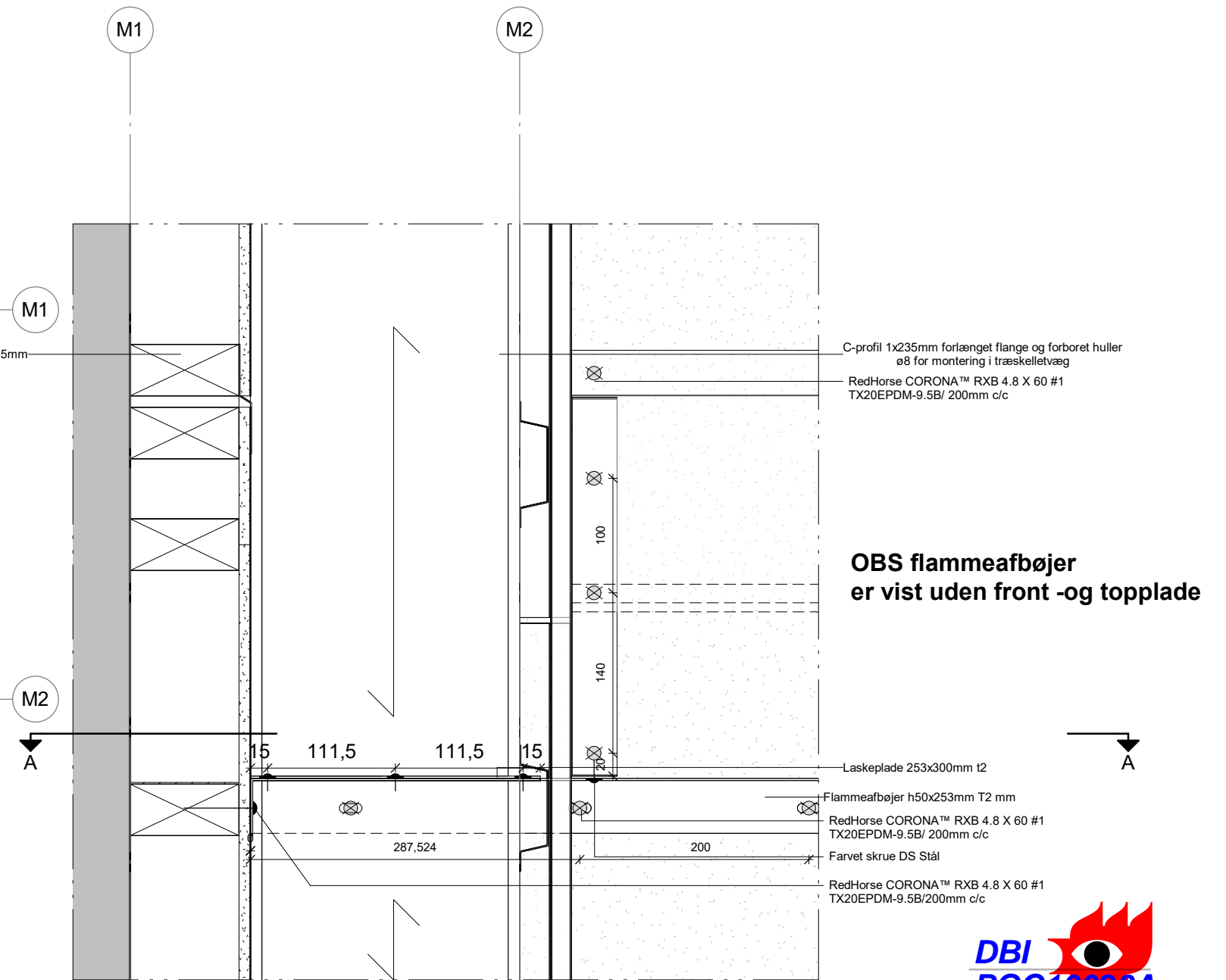
Earth Shot Residential  
Snit i horisontal samling i kassetter

SAGSNR.	:	1960020071
MÅLESTOK	:	1 : 1
DATO	:	2023-10-09
TEGN	:	Author
KONTROL	:	Checker
GODKENDT	:	Approver
FORMAT	:	
TEGN NR.	:	REV.:



A-A Plan snit i flammeafbøjer hjørnet  
1 : 5

Skyggenoten:  
Fyldes med mineraluld og brandfuge



B-B Lodret snit i flammeafbøjer  
1 : 5

**OBS flammeafbøjer  
er vist uden front -og topplade**

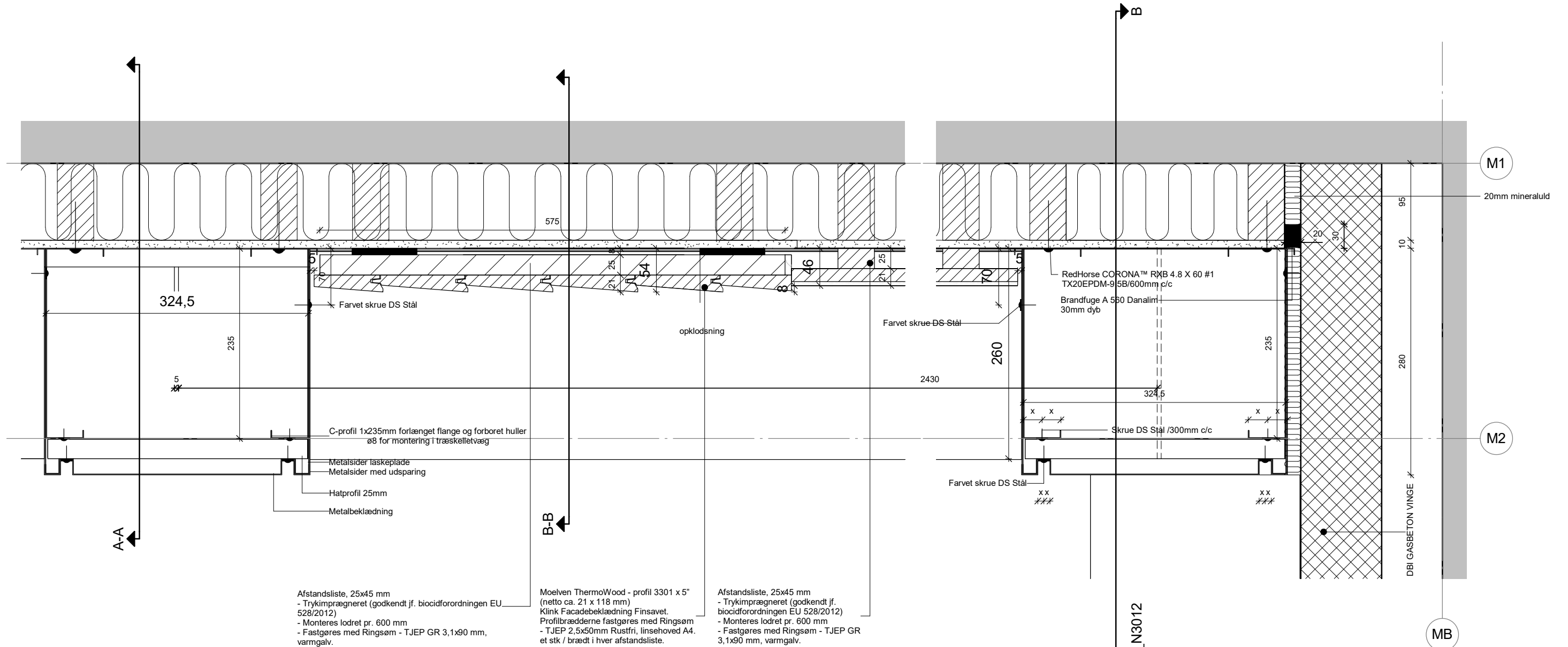


**Mock-up  
2023-10-09**

**Earth Shot Residential**  
Snit i flammeafbøjer hjørnet  
vandret og lodret

SAGSNR.	:	1960020071
MALESTOK	:	1 : 5
DATO	:	2023-10-09
TEGN	:	Author
KONTROL	:	Checker
GODKENDT	:	Approver
FORMAT	:	
TEGN NR.	:	REV.:





Afstandsliste, 25x45 mm  
 - Trykimprægneret (godkendt jf. biocidforordningen EU 528/2012)  
 - Monteres lodret pr. 600 mm  
 - Fastgøres med Ringsøm - TJEP GR 3,1x90 mm, varmgalv.

Moelven ThermoWood - profil 3301 x 5" (netto ca. 21 x 118 mm)  
 Klink Facadebeklædning Finsavet.  
 Profilbrædderne fastgøres med Ringsøm  
 - TJEP 2,5x50mm Rustfri, linsehoved A4.  
 et stk / brædt i hver afstandsliste.

Afstandsliste, 25x45 mm  
 - Trykimprægneret (godkendt jf. biocidforordningen EU 528/2012)  
 - Monteres lodret pr. 600 mm  
 - Fastgøres med Ringsøm - TJEP GR 3,1x90 mm, varmgalv.

ESR\_K01\_H5\_EXX\_N3013



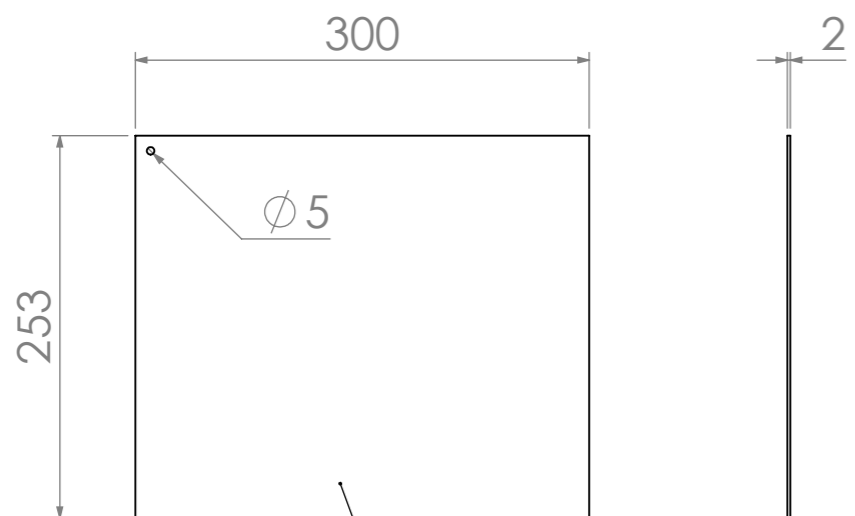
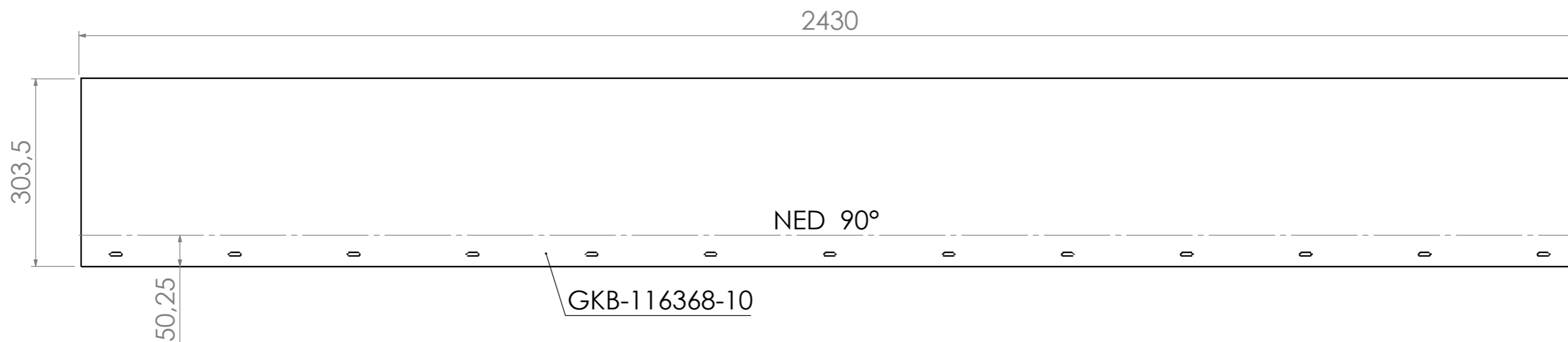
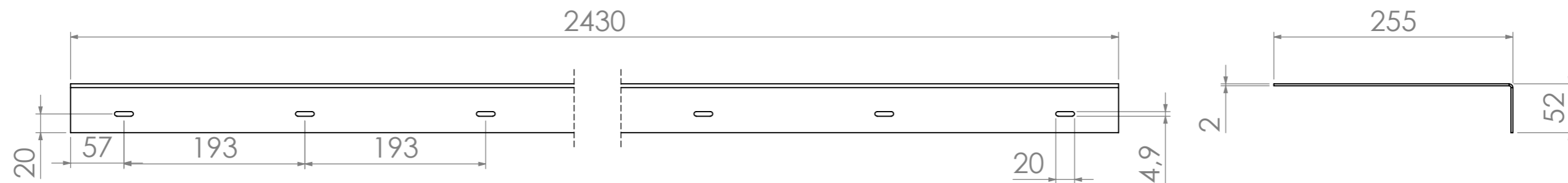
Mock-up  
 2023-10-09

<b>Earth Shot Residential</b>		SAGSNR. :	1960020071
Detalje over brandkammer (vandret snit)		MALESTOK :	1 : 5
		DATO :	2023-10-09
		TEGN :	Author
		KONTROL :	Checker
		GODKENDT :	Approver
		FORMAT :	
		TEGN NR. :	REV.:



Søren Jensen Henning Larsen

ESR\_K01\_H5\_EXX\_N3013



OV: R1  
 UV: Spor 16  
 BT: 0,5 mm

NAME	DATE
DRAWN casper	27-09-2023



Folder name:  
 X:\Facadeplan\  
 Customer:

TITLE:  
 2 mm plade

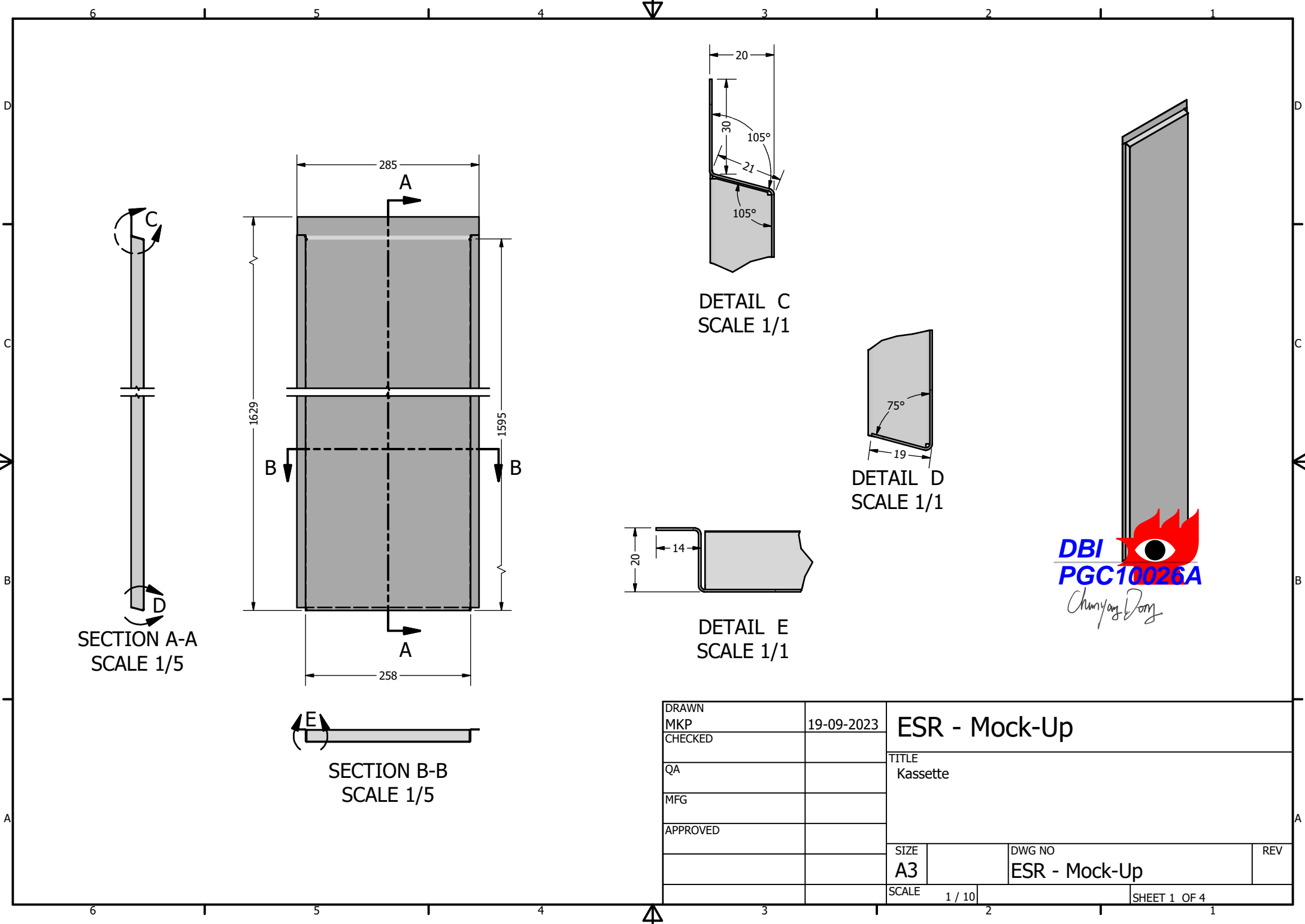
Hvor intet andet er angivet, er tolerancer i henhold til DS/ISO 2768-1 (m)  
 Alle mål er i millimeter, medmindre andet er angivet.  
 Tegningen må ikke skaleres.

MATERIAL:  
 DX51D Z275 (Varm-Galv)

DWG NO. **GKB-116368** REVISION

WEIGHT: 11.49

SCALE:1:5 A3 SHEET 1 OF 1



SECTION A-A  
SCALE 1/5

SECTION B-B  
SCALE 1/5

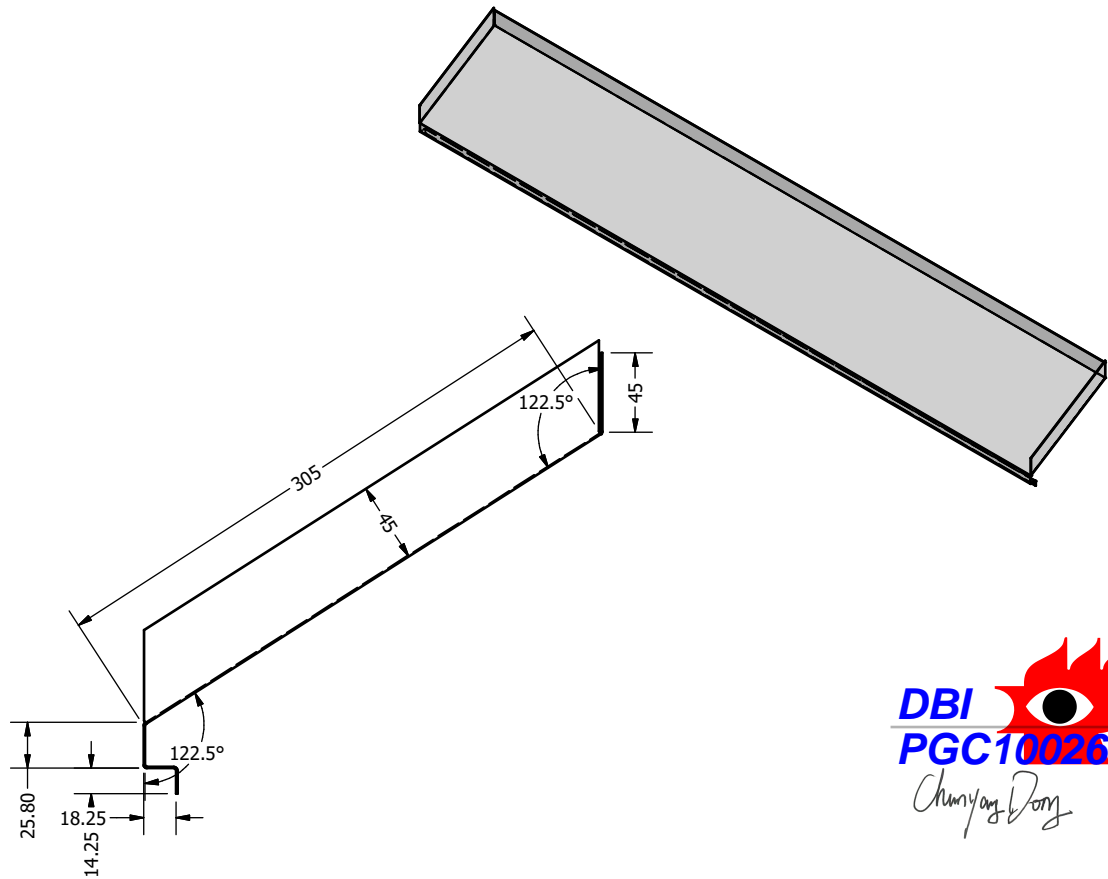
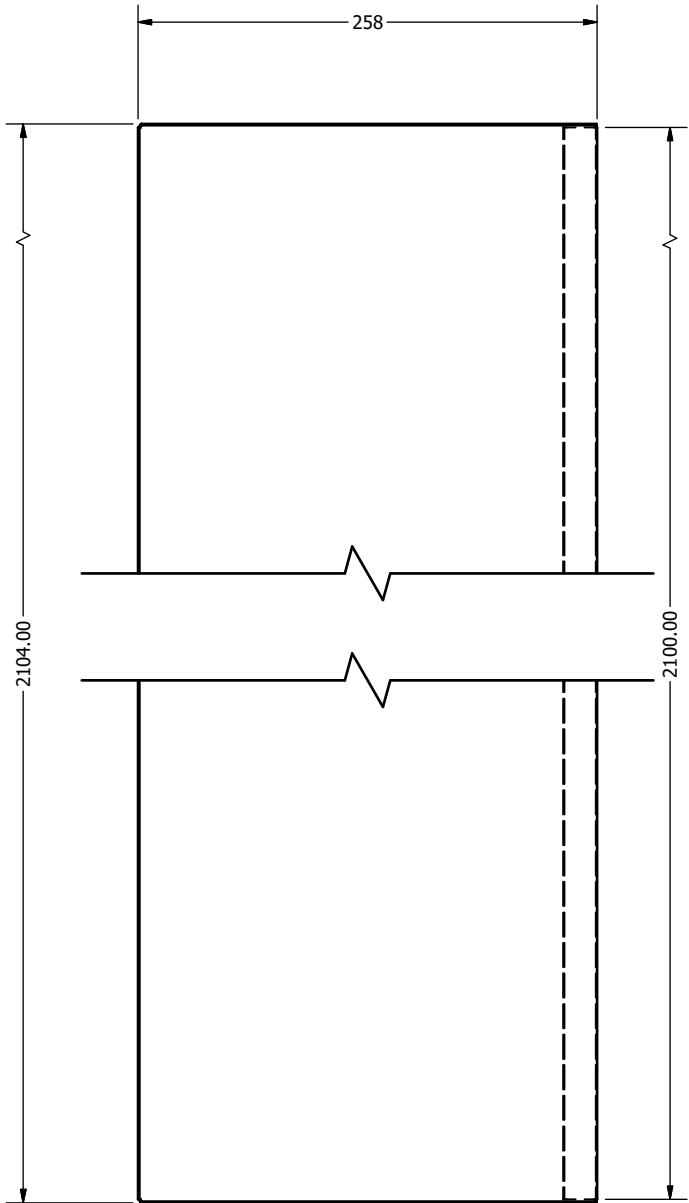
DETAIL C  
SCALE 1/1

DETAIL D  
SCALE 1/1

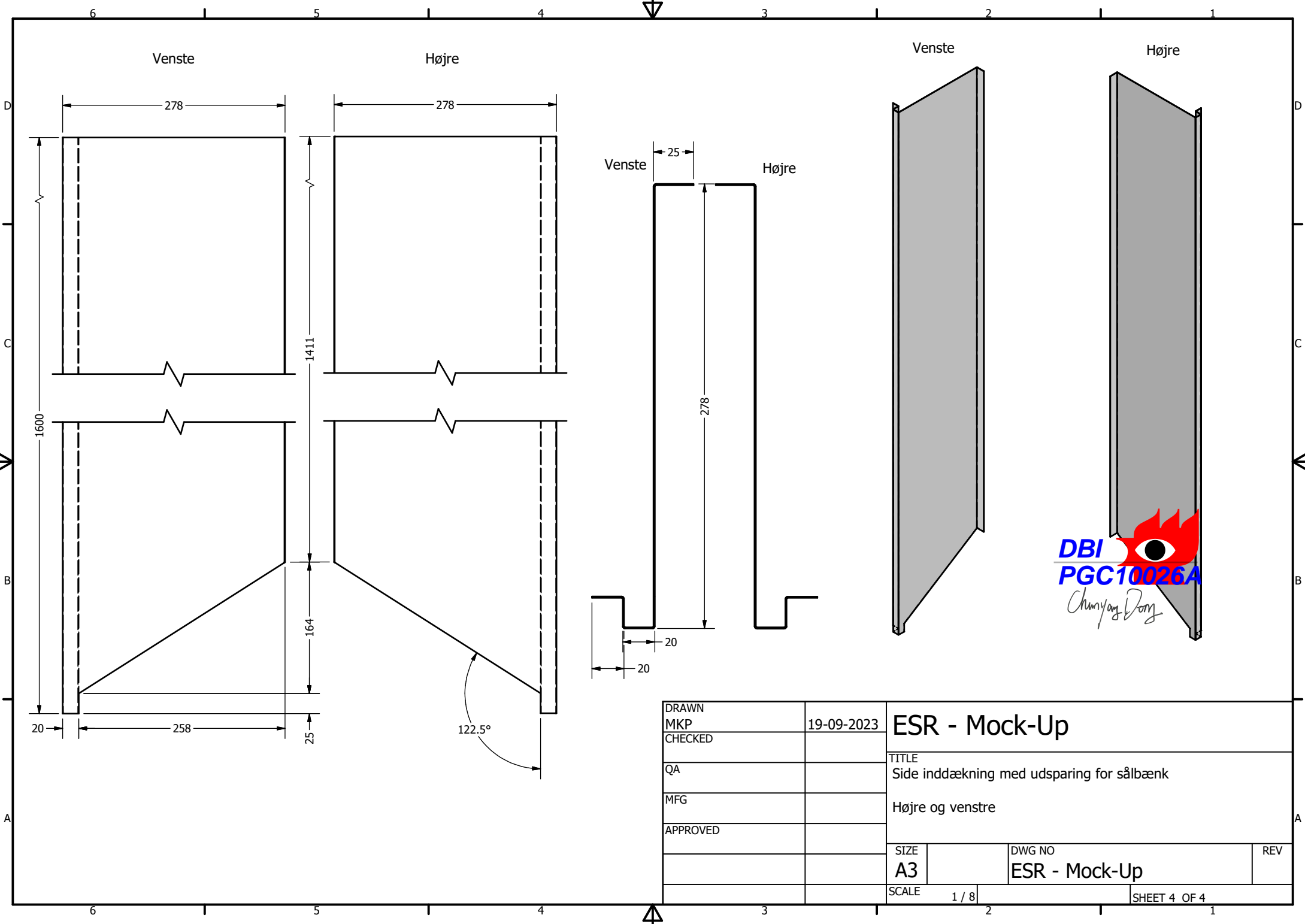
DETAIL E  
SCALE 1/1



DRAWN MKP	19-09-2023	ESR - Mock-Up		
CHECKED		TITLE Kassette		
QA				
MFG				
APPROVED				
		SIZE A3	DWG NO ESR - Mock-Up	REV
		SCALE 1 / 10	SHEET 1 OF 4	



DRAWN	MKP	19-09-2023	ESR - Mock-Up	
CHECKED			TITLE	
QA			Sålbænk	
MFG				
APPROVED				
			SIZE	DWG NO
			A3	ESR - Mock-Up
			SCALE	REV
			1 / 13	
			SHEET 3 OF 4	



Venste

Højre

Venste

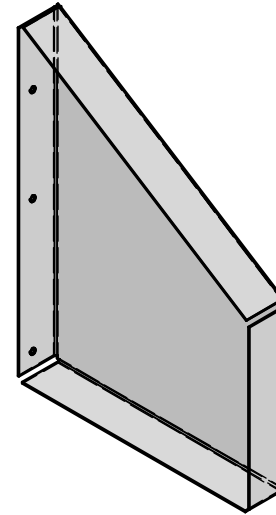
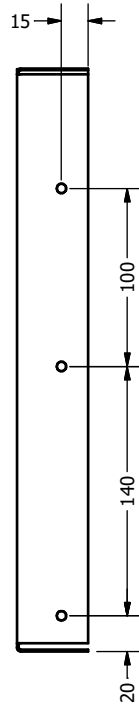
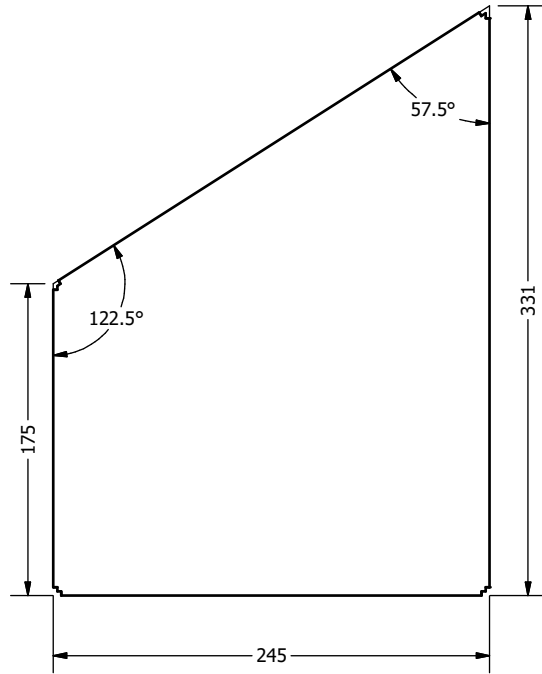
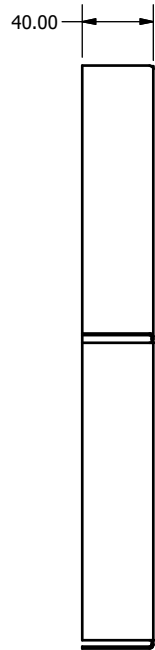
Højre

Venste

Højre

**DBI**  
**PGC10026A**  
*Chunyang Dong*

DRAWN	MKP	19-09-2023	<b>ESR - Mock-Up</b>	
CHECKED	QA		TITLE Side inddækning med udsparring for sælbænk	
	MFG		Højre og venstre	
APPROVED			SIZE	DWG NO
			<b>A3</b>	<b>ESR - Mock-Up</b>
			SCALE	1 / 8
			SHEET 4 OF 4	



DRAWN MKP	19-09-2023	ESR - Mock-Up		
CHECKED		TITLE Understøtning		
QA				
MFG				
APPROVED				
		SIZE A3	DWG NO ESR - Mock-Up	REV
		SCALE 1/3	SHEET 2 OF 4	