

TEST REPORT

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CAPCO
Attention: Mr Barry Gould
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FIRE TESTING OF MATERIALS, COMPONENTS AND ELEMENTS USED IN BUILDINGS SANS 10177 P 2- 2005 "FIRE RESITANCE TEST FOR BUILDING ELEMENTS"

1 OBJECTIVE OF TEST

- 1.1 The sample as described under section 2 of this report was tested in accordance with SANS 10177-2: 2005 "*Fire resistance test for building elements*".
- 1.2 The walling system as described under section 2 of this report **complied** with the relevant requirements of SABS 10177-2:2005 "*Fire resistance test for building elements*". in respect of a 120 minute fire rating.

2 DESCRIPTION OF SAMPLE

The panel was installed by the sponsor at the Fire Protection Engineering Laboratory of the SABS in Pretoria.

The UoM was applied to the result and the outcome of the compliance remains the same

2.1 MATERIALS

STEEL FRAMEWORK

HEAD TRACK

Capco drywall track consisting of galvanised "U" shaped channel section measuring 65 x 30 x 0,5mm fixed to head at 600mm centres.

FLOOR TRACK

Capco drywall track consisting of galvanised "U" shaped channel section measuring 65 x 30 x 0,5mm fixed to head at 600mm centres.

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VERTICAL STUDS

Capco drywall studs consisting of galvanised mild steel "C" shaped channel section measuring 35 x 64 x 6, 5 x 0,5mm fixed to head and floor tracks at 600mm centres with studs fitted hard into track and 15 mm short into top track.

DRY LINING**BOARDING**

2 Layers of Capco Fireshield 15mm thick tapered edge gypsum boards fitted to each side of 63,5 drywall steel framing with 25 x 3,5 mm and 41 mm x 3,5 mm black phosphated fine thread drywall steel screws fixed at 230 mm centres. Gypsum board to be staggered.

FINISHING

50mm wide self-adhesive fibreglass mesh tape applied to recessed edges of each layer of gypsum boards and flush jointed with 2 coats of Capco drywall jointing compound.

NB. All drywall screws to be fitted by means of drywall screwdriver with a depth gauge so that drywall screws do not penetrate gypsum board paper lining. Screws depth to be $\pm 0,5$ mm depressed into paper lining and covered with Capco drywall jointing compound.

3 NATURE AND METHOD OF TEST

The fire resistance of panel was determined in accordance with SANS 10177: Part 2-2005 "Fire Resistance Test for Building Elements" as specified for non-load bearing vertical elements. As the panel was symmetrical in construction it was tested from one side only.

4 DATE OF RECEIPT

8 January 2017.

DATE OF TEST

03 February 2017.

5 TEST APPARATUS

Equipment	Calibration certificate No	UoM
Vertical furnace	SABS PPE 0003143	N/A
Type K thermocouples	Calibrated – 2020.9545.2	$\pm 2^{\circ}\text{C}$
Stopwatch	Calibrated - 71791	± 50 ms

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6 OBSERVATIONS

6.1 The following observations were made during the test:

Time, min	Observation	E-Exposed Side U-Unexposed side	Photographs No
0	Panel prior to test.	U	1
0	Exposed face prior to test.	E	2
15:30	Exposed side charring	E	-
22:15	Joint plaster (Rrinoglide) falling off.	E	-
30	Condition of panel.	U	3
60	Condition of panel.	U	4
90	Condition of panel.	U	5
120	Condition of panel	U	6
	Wall panel after test	E	7

NOTE: "Exposed" in the context of this report means exposed to the heat of the furnace.

6.2 The following temperatures were recorded during the test.

Time, min	Temperature, °C				
	Unexposed face				Furnace Target*
	Joint 2	Joint 5	Average	Maximum	
0	27	27	27	27	27
10	27	28	28	28	678
20	31	31	31	32	781
30	39	39	40	44	842
40	50	51	50	54	885
50	58	58	57	58	918
60	59	61	59	61	945
70	59	66	60	66	968
80	64	70	64	70	988
90	66	71	66	71	1006
100	66	72	66	72	1021
110	67	73	69	73	1036
120	73	78	76	79	1049

NOTE* The furnace temperature was controlled within the applicable tolerances during the entire test.

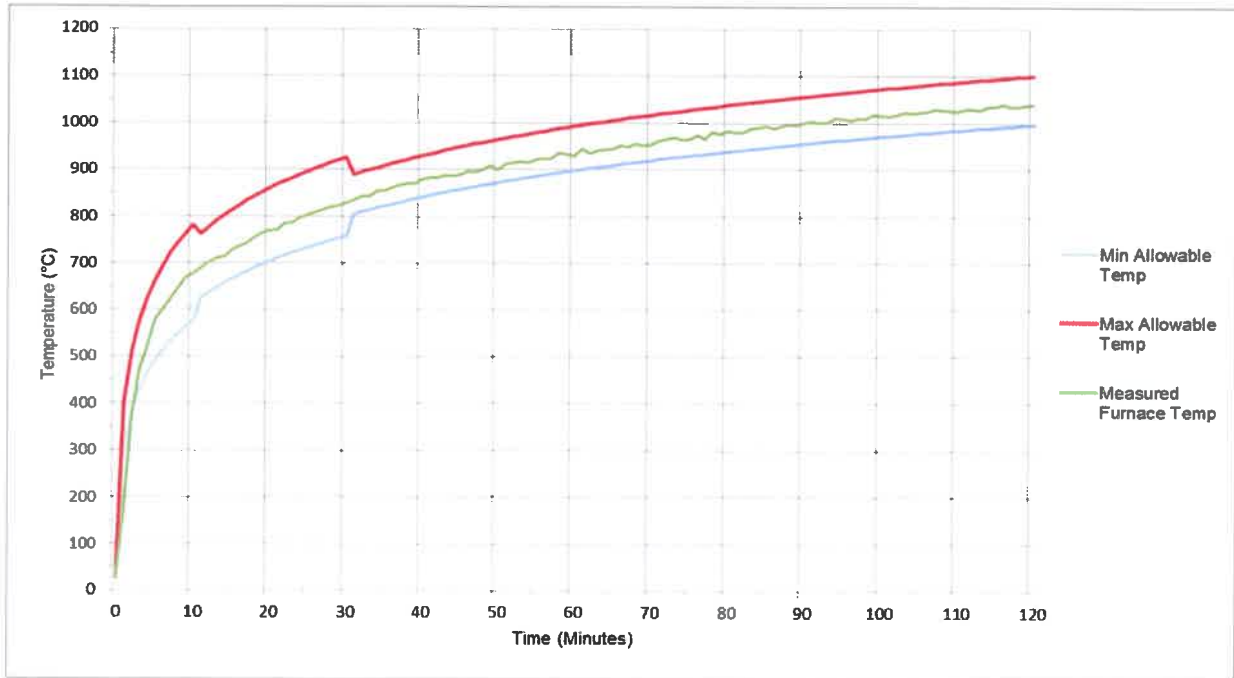
6.3 The evaluation of the panel during the test was as follows: -

Criteria	Time of failure, min	Results
Stability	No failure	Comply
Integrity	No failure	Comply
Insulation	No failure	Comply

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The following Furnace temperatures were recorded during the test:



7 Photographs

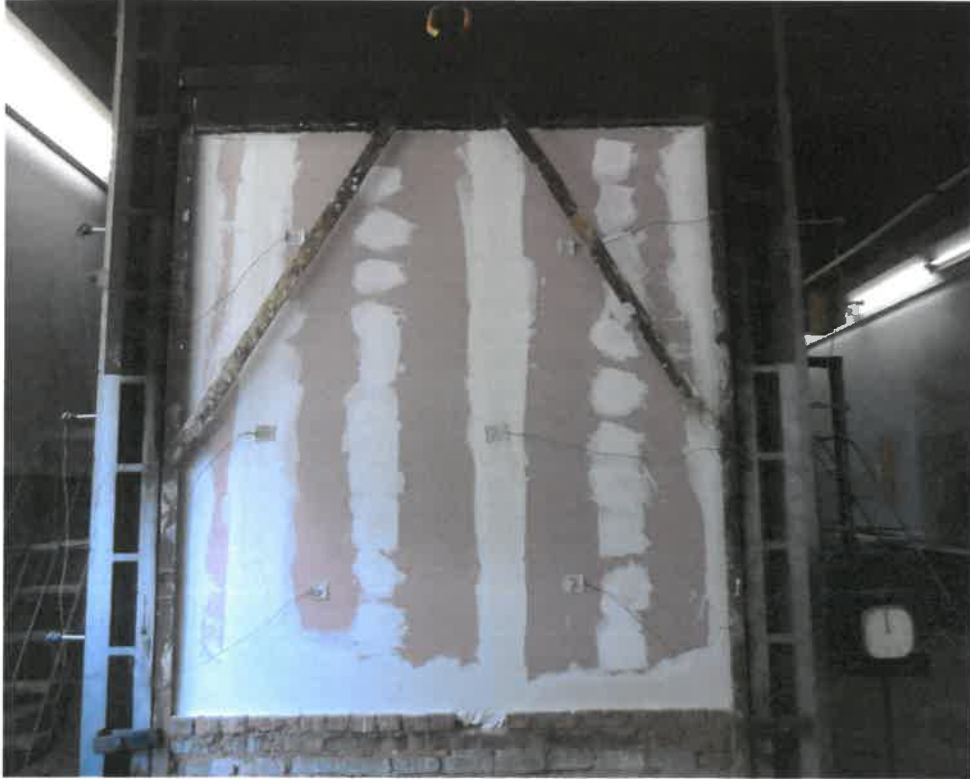
No1: Exposed side of the panel prior to test



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No 2: Unexposed side at onset



No 3: Panel at 30 min



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No 4: Panel at 60 min



No 5: Panel at 90 min



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No 6: Panel at 120 min



No 7: Exposed face after test.



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Test Officer: Fire Protection Engineering

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