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METHOD: EN 13823:2002 (SBI method)

Deviation: There was no deviation from the test method.

PRODUCT: Fire retardant "HOLZProf"

Specimen The timber boards (thickness 24 mm) were coated for the testing with the fire retardant. The timber boards were fastened on the non-combustible board with screws. *pine and spruce*
There were four tests carried out at all. For the tests No.1, 3 and 4 the customer coated the specimens with the fire retardant. For the test No.2 the technician of the Fire Laboratory coated the specimens with the fire retardant according to the customer instruction. Specimen No. 3 was made from birch. Specimen No. 4 was made from pine.

Conditioning: Conditioning was made according to EN 13238:2001.
Before the test the specimens were conditioned at a temperature of $(23 \pm 2) ^\circ\text{C}$ and a relative humidity of $(50 \pm 5) \%$ until constant mass was achieved.
Results of the weighing operations, carried out at an interval of 48 hours:
Mass 1: 29.31 kg
Mass 2: 29.31 kg

Installation: All specimens were mounted directly on the backing board (calcium silicate panel) in accordance with EN 13823:2002 p.5.2 as in their end use application.

TESTING: Dates of test: 14.06.2006, 16.06.2006 and 27.09.2006
Operators: Tõit Kuusre, Madis Loit.

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TEST RESULTS:

	Specimen No.1	Specimen No.2	Specimen No.3	Specimen No.4	Average	Uncertainty (k=2)
General information						
Test start, min: s	0:00	0:00	0:00	0:00	0:00	0:00
Auxiliary burner ignited and adjusted, min: s	2:00	2:00	2:00	2:00	2:00	0:01
Main burner ignited, min: s	5:00	5:00	5:00	5:00	5:00	0:01
Main burner stopped, min: s	26:00	26:00	26:00	26:00	26:00	0:01
Visual observations						
Flaming particles or droplets, s	No	No	No	No	-	-
Lateral flame spread <i>LFS</i> , s	No	No	No	No	-	-
Fire performance						
<i>FIGRA</i> 0.2MJ, W/s	72.7	30.7	101.7	47.2	63.1	31.0
<i>SMOGR</i> A, m ² /s ²	1.0	0.0	2.5	7.6	2.8	3.4
<i>THR</i> 600 MJ	3.3	2.5	3.8	2.9	3.1	0.6
<i>TSP</i> 600 m ²	46.8	37.0	51.6	53.6	47.3	7.4

Note: The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

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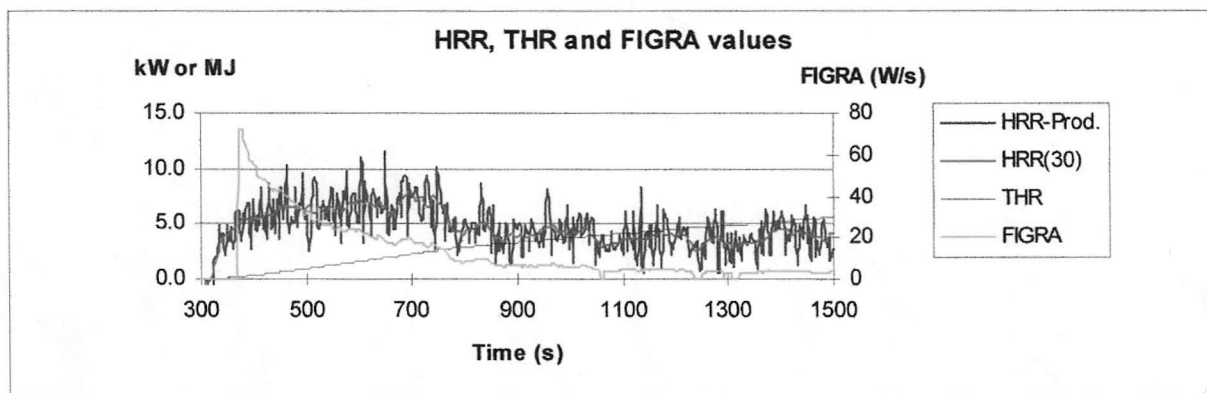


Figure 1: Test No 1. HRR, THR and FIGRA values

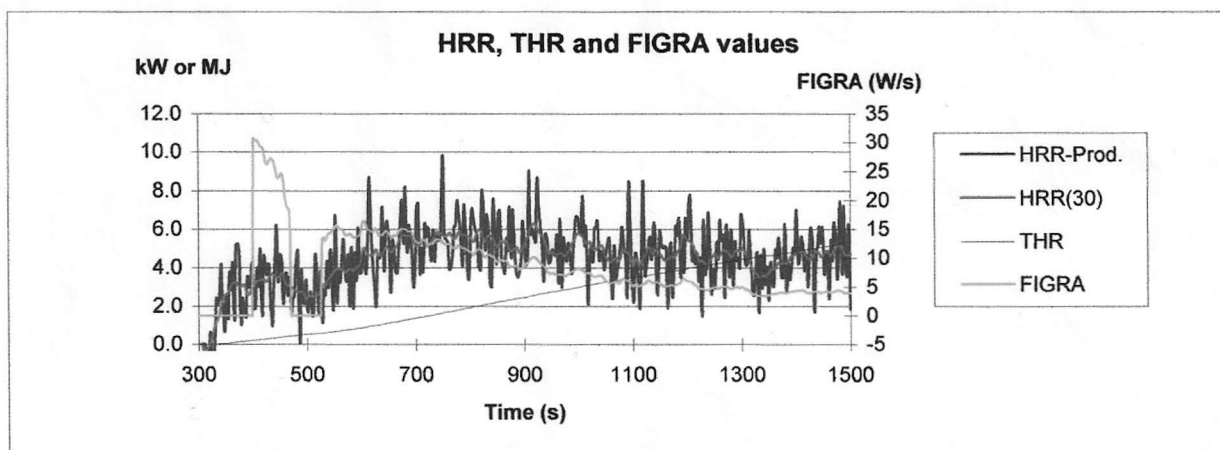


Figure 2: Test No 2. HRR, THR and FIGRA values

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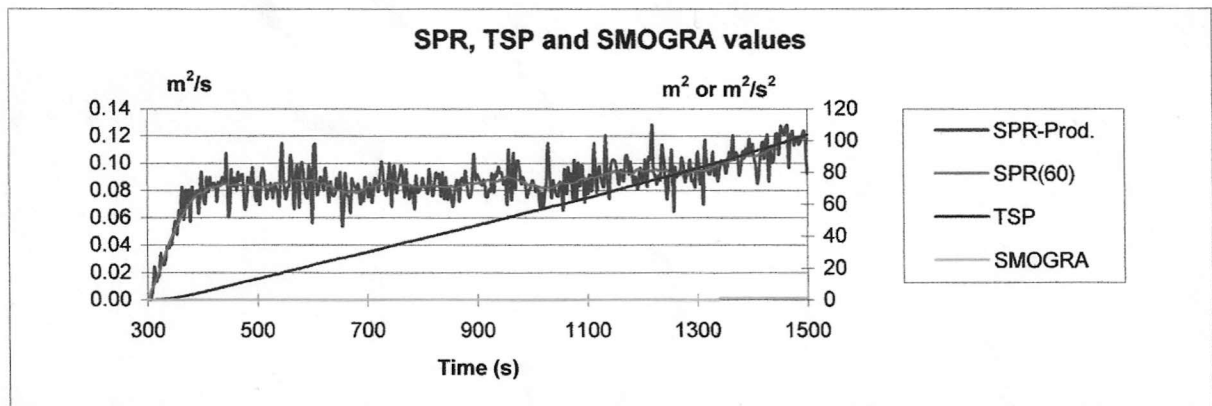


Figure 3: Test No 1. SPR, TSP and SMOGRA values

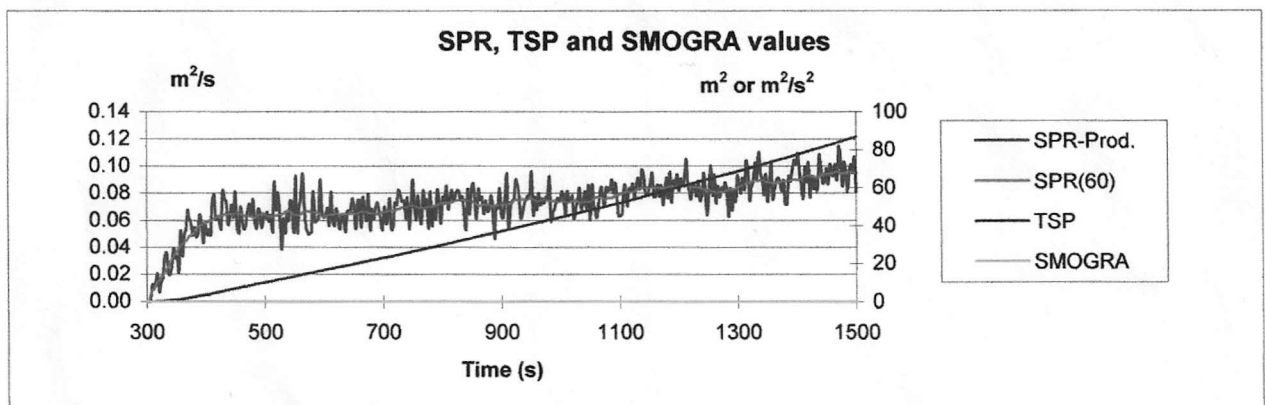


Figure 4: Test No 2. SPR, TSP and SMOGRA values

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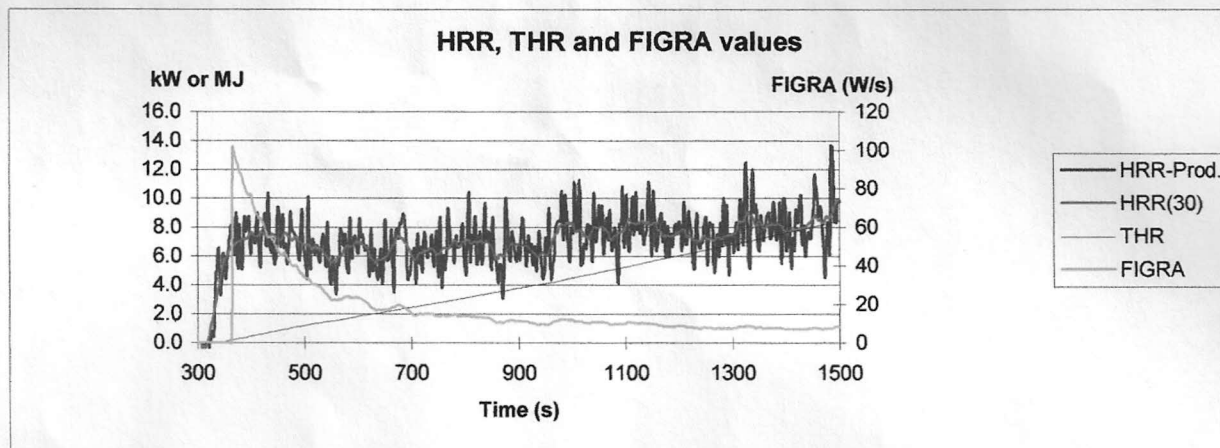


Figure 5: Test No 3. HRR, THR and FIGRA values

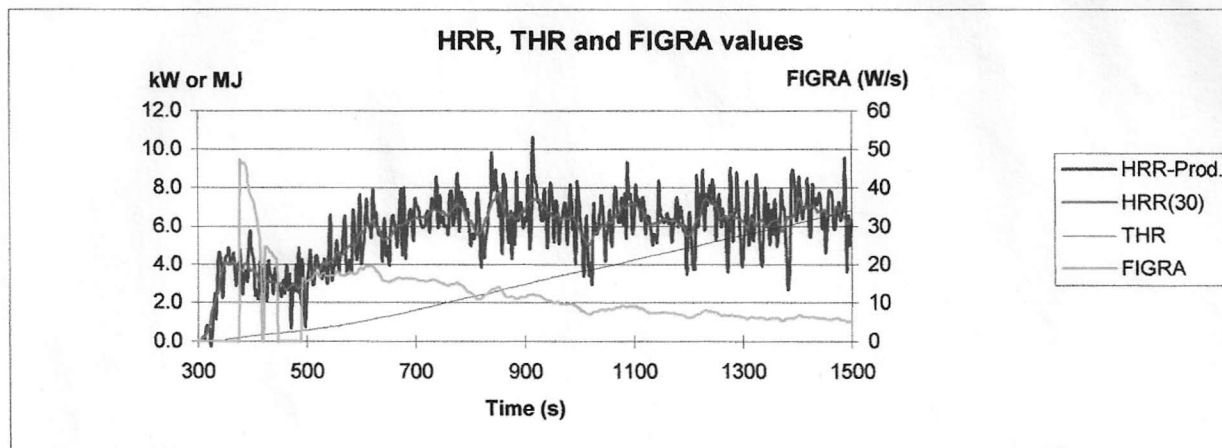


Figure 6: Test No 4. HRR, THR and FIGRA values

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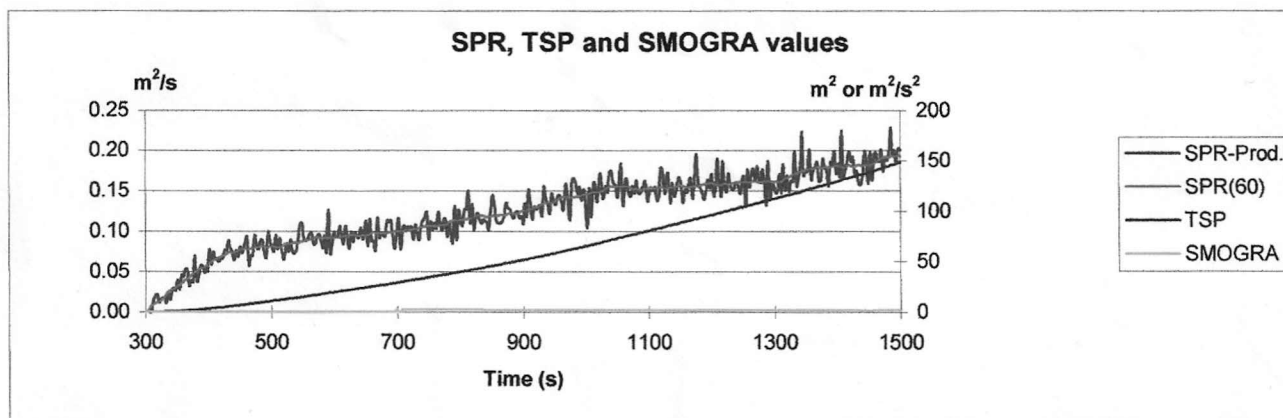


Figure 7: Test No 3. SPR, TSP and SMOGRA values

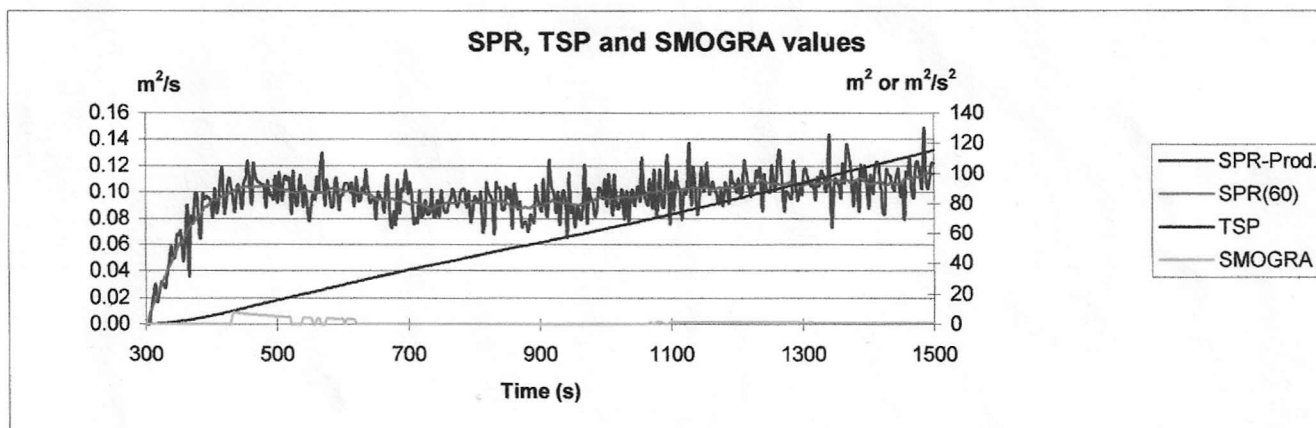


Figure 8: Test No 4. SPR, TSP and SMOGRA values

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Test parameter explanation:

FIGRA_{0.2MJ}, W/s	Fire growth rate index at THR threshold of 0.2 MJ. $\text{FIGRA} = 1000 \times \max \left(\frac{\text{HRR}_{av}(t)}{t - 300} \right)$
THR₆₀₀, MJ	Total heat release within 600 s. $\text{THR}(t_s) = \frac{3}{1000} \sum_{300s}^{t_s} (\max[\text{HRR}(t), 0])$
HRR, kW	Heat release rate.
SMOGRA, m²/s²	Smoke growth rate. $\text{SMOGRA} = 10000 \times \max \left(\frac{\text{SPR}_{av}(t)}{t - 300} \right)$
TSP₆₀₀, m²	Total smoke production within 600 s. $\text{TSP}(t_s) = 3 \sum_{300s}^{t_s} (\max[\text{SPR}(t), 0])$
SPR, m²/s	Smoke production.

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Photographs:



Photograph 1. View at the test specimen before the test.



Photograph 2. View at the test specimen 500 s after the test was started.



Photograph 3. View at the test specimen 1500 s after the test was started.



Photograph 4. View at the test specimen after the test.

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