

Test Report No. 185542

1. Issue of 26.11.2018

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Order from: 19.10.2018 – Mr. Joachim Luykx

Order: Determination of the thermal conductivity
of GFK plates according to DIN EN ISO 12664:2001

The test report consists of 3 pages.

The test material has been consumed.



The test report shall be published unabridged.
Any partial publishing requires written allowance by the testing institute. The test results refer only to the tested material.

1 Test material (manufacturer specifications)

| | |
|------------------|--|
| Product: | SoudaFrame SWI |
| Sample material: | GFK plates |
| Remarks: | The manufacturer provided the test samples. Figure 1 shows the test samples which have been used for the determination of the thermal conductivity. |
| Delivery: | 25.10.2018 By delivery service |

2 Tests

2.1 Determination of thermal conductivity according to DIN EN ISO 12664:2001

Figure 1 shows the test samples which have been used for the determination of the thermal conductivity. Details of the test specimens are given in table 1. The results of the determination of the thermal conductivity of the test samples are given in table 2.

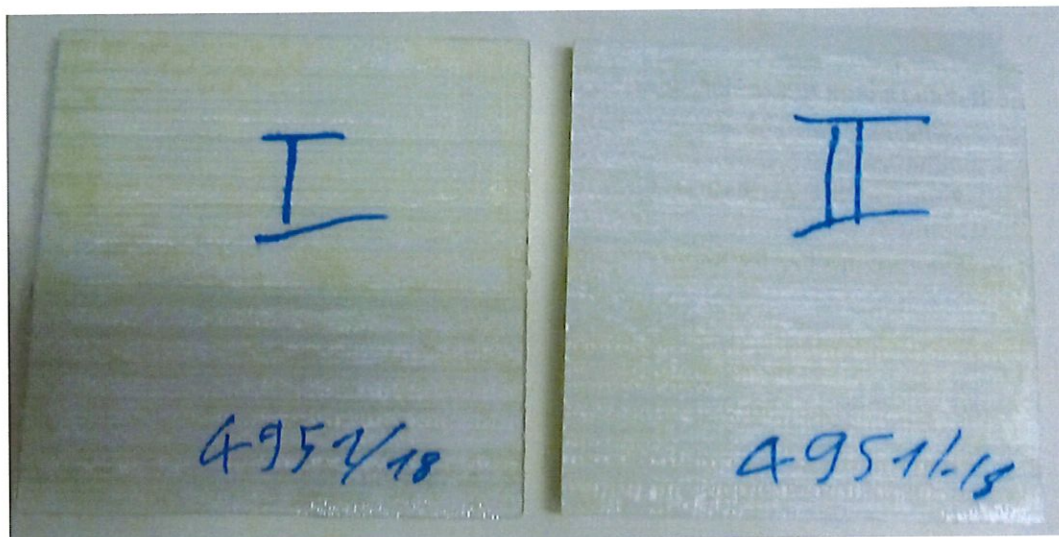


Figure 1: Test samples used for the determination of the thermal conductivity

Table 1: Details of the test specimens

| Measurand | Unit | Specimen 1 | Specimen 2 | Average |
|--------------------------------|-------------------|------------|------------|---------|
| Length | mm | 203,0 | 201,9 | 202,5 |
| Width | mm | 200,8 | 200,9 | 200,9 |
| Thickness | mm | 17,3 | 16,8 | 17,0 |
| Installation thickness | mm | — | — | 18,2 |
| Mass before test | g | 692,6 | 692,7 | 692,7 |
| Mass per unit area before test | kg/m ² | 16,99 | 17,08 | 17,04 |
| Mass after test | g | 692,8 | 692,9 | 692,9 |
| Moisture absorption | % | 0,0 | 0,0 | 0,0 |

Table 2: Test results

| Measurand | Symbol | Unit | Measured value |
|---------------------------------------|------------|------------------|----------------|
| Mean temperature of the hot surfaces | T_1 | °C | 15,0 |
| Mean temperature of the cold surfaces | T_2 | °C | 4,6 |
| Mean temperature of the specimens | T_M | °C | 9,8 |
| Surface temperature difference | ΔT | K | 10,4 |
| Density of heat flow rate | q | W/m ² | 75,95 |
| Thermal conductivity | λ | W/(m·K) | 0,1245 |

Test interval: From 07.11.2018 till 08.11.2018

Hannover, 26 November 2018

Head of laboratory

A handwritten signature in blue ink, appearing to be 'B. Restorff'.

(ORR Dipl.-Ing. B. Restorff)



Technician

A handwritten signature in blue ink, appearing to be 'J. Duhme'.

(Dr. rer. nat. J. Duhme)