EXAMINATION REPORT

Determination of the resistance to internal pressure at a constant temperature

REPORT NUMBER
LC 10410

AUTHORISATION
H. Pauw, Co-ordinator Lab C

DEPARTMENT
Lab C

Kiwa Nederland B.V.
Lab C
Wilmersdorf 50
NL 7327 AC Apeldoorn
Netherlands
Telephone +31 55 5393393
Internet www.1kiwa.com

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• In case of dispute regarding this test report please contact Kiwa Nederland B.V.
Determination of the resistance to internal pressure at a constant temperature

Manufacturer: Thermaflex isolatie BV

Place of production: Waalwijk (NL)

Reference number: 140301977

According to standard: ISO 1167
1. **Order**
   By order of Kiwa Nederland B.V., the samples mentioned below were tested by Lab C on the determination resistance to internal pressure at a constant temperature according to NEN-EN-ISO 1167.

2. **Principle**
   After conditioning, the test pieces are subjected to a specified constant internal hydrostatic pressure for a specified period of time or until the test pieces fail.

3. **General**
   The samples were received on 02-04-2014 and registered with number LC 10410. The test was started on 03-04-2014 and was carried out by Mr L.M. Bloeming.

4. **Sample description**
   | Number/type of samples | 3 PB-H pipes |
   | Appearance             | meets the requirements |
   | Compound               | PB4267 by LyondellBassell |
   | Dimensions             | 90 mm |
   | Design pressure        | not specified |
   | Marking                | 120-1176 Classe 2 (70C-10bars) et Classe 5 (80C-6bars) ATEC 14/07-1176/12072555 PR12-2610 Thermaflex Flexalen PB 90x8.2 EN ISO 15876 Class 5 :8 bar KIWA BRL-K17401 Class 2:10 bar/ DVGW DW-8326CM0090 (2) 10 bar-70C/ 50 Jahre 000000334 14:16:50 |
   | Colour                 | grey |
   | Date of production     | not specified |
   | Other                  | - |

5. **Preparation of the sample**
   After determining the dimensions, the test pieces were assembled with end caps and filled with softened water. Subsequently the test pieces were conditioned according to NEN-EN-ISO 1167.

6. **Apparatus**
   Tank or oven with an average temperature of ± 0.1°C of the required value. Pressure unit with an average pressure of +2 en -1% of the required value. Measuring equipment according to NEN-EN 3126.

7. **Preservation of samples**
   In case of failure the samples will be kept for 3 months.
8. Test conditions

Standard : NEN-EN-ISO 1167
Test temperature : 95°C (water in water)
Hoop stress : 5,6 MPa (according to instructions principal)
End cap : type A
Pressure station nr. : Tank 5, S290
Total length of the sample : 50 cm
Free length of the sample : 45 cm
Conditioning time : 1 hour
Time to achieve test pressure : 2 min.
Orientation o/t test pieces : horizontal

9. Examination results

Dimensions
Measured according to NEN-EN ISO 3126
Ambient temperature: 22,7° C

<table>
<thead>
<tr>
<th>Properties</th>
<th>Dimensions</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tbody>
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<td>90,0</td>
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<td>mm</td>
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<td>89,3</td>
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<tr>
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<td>mm</td>
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<td>e max.</td>
<td>mm</td>
<td>9,20</td>
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<td>8,70</td>
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Test conditions and results

<table>
<thead>
<tr>
<th>Properties</th>
<th>Dimensions</th>
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<tbody>
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<td>&gt;2500</td>
<td>&gt;2500</td>
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<tr>
<td>Type of failure</td>
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Remarks: none.