

# EXAMINATION REPORT

Determination of the resistance to internal  
pressure at a constant temperature

## REPORT NUMBER

LC 10410

## AUTHORISATION

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## DEPARTMENT

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## 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 Thermafex  
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  $\pm 0.1^{\circ}\text{C}$  of the required value.

Pressure unit with an average pressure of  $\pm 2$  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

Properties	Dimensions	1	2	3
d <sub>e</sub> mean	mm	90,0	90,0	90,3
d <sub>e</sub> min.	mm	89,5	89,3	90,0
d <sub>e</sub> max.	mm	90,3	90,4	90,7
e min.	mm	8,70	8,80	8,50
e max.	mm	9,20	9,20	8,70

### Test conditions and results

Properties	Dimensions	1	2	3
Test pressure	bar	12,0	12,1	11,6
Proving time	h	>2500	>2500	>2500
Type of failure	brittle/ ductile	-	-	-

**Remarks:** none.