

Test Report: Nr.: **416.723-4**      Date: **2016-03-31**

## **Pipe Connectors and Pipe Joints in Drinking Water Installation**

**Client:** HENCO Industries N.V.  
Toekomstlaan 27  
2200 Herentals  
Belgien

**Subject:** Multilayer piping systems for hot and cold water installations inside buildings made out of PE-Xc/Al/PE-Xc and fittings (press-fittings made out of PVDF with the trade name Henco®)

**Task:** Leak tightness test on fittings with forced leak in unfinished (unpressed) state according to DVGW W 534:2015, clause 12.14

**Order:** 2016-03-04 by Mr. Vroman

**Date of sampling:** ---

**Location of sampling:** No sampling by OFI employee  
Samples were submitted by customer

**Receipt of samples:** 2016-03-21

**Ref:** Ker / Bock

## 1 SCOPE OF WORK

According to the order a leak tightness test on multilayer piping systems for hot and cold water installations inside buildings made out of PE-Xc/Al/PE-Xc and fittings (press-fittings made out of PVDF with the trade name Henco®) with forced leak in unfinished (unpressed) state according to DVGW W 534:2015, clause 12.14 was done.

## 2 SCOPE OF APPLICATION

The results given in this test report have been obtained under the specific conditions of the individual tests. They shall serve as a proof for the client of the conformity of the samples to the requirements of the product standard(s) given.

## 3 SAMPLE MATERIAL

The company HENCO Industries N.V. located in 2200 Herentals submitted the samples listed in Table 1 to the OFI Technologie & Innovation GmbH (subsequently OFI).

**Table 1:** Description of samples

Sample	Description of samples
1	HENCO Pipe PE-Xc/Al/PE-Xc 32x3 291015
2	HENCO Pipe PE-Xc/Al 0.7/PE-Xc 40x3,5 100615
3	HENCO Pipe PE-Xc/Al 0.9/PE-Xc 50x4 170216
4	HENCO Pipe PE-Xc/Al 1.2/PE-Xc 63x4,5 201013
5	90° Bend 32x32 PVDF press fitting
6	T-piece 32x32x32 PVDF press fitting
7	Coupler 32x32 PVDF press fitting
8	90° Bend 40x40 PVDF press fitting
9	Coupler 40x40 PVDF press fitting
10	90° Bend 50x50 PVDF press fitting

Sample	Description of samples
11	T-piece 50x50x50 PVDF press fitting
12	Coupler 50x50 PVDF press fitting
13	90° Bend 63x63 PVDF press fitting
14	T-piece 63x63x63 PVDF press fitting
15	Coupler 63x63 PVDF press fitting

#### 4 TESTS

All tests were carried out between 2016-03-21 and 2016-03-31 in the individual technical departments within the scope of competence of the authorised signatories according to the OFI QM-Manual.

##### 4.1 LEAK TIGHTNESS TEST ON FITTINGS WITH FORCED LEAK IN UNFINISHED (COMPRESSED) STATE

The tests were carried out on samples made of multilayer pipes (sample 1 to sample 4) and fittings (sample 5 to sample 15). The fittings are connected with the pipes without pressing them.

All fittings with a forced leak in unfinished (unpressed) state were clearly leaking when tested with water and with air at test pressures between 1.0 bar and 6.5 bar. An example picture of leaky fittings while tested with air can be seen in Figure 1.



**Figure 1:** Clear leakage while tested with air

After the leakage test the specimen were pressed and subjected to an internal pressure test at 23 °C with 25 bar with water for a duration time of 1 h.

During and after the internal pressure test with 25 bar no leakage could be observed. The requirements are met.

## 5 RESULTS

A leak tightness test on fittings with forced leak in unfinished (unpressed) state on multilayer piping systems for hot and cold water installations inside buildings made out of PE-Xc/Al/PE-Xc and fittings (press-fittings made out of PVDF with the trade name Henco®) with forced leak in unfinished (unpressed) state produced by company HENCO Industries N.V. located in 2200 Herentals according to DVGW W 534:2015, clause 12.14 was done.

All requirements of the DVGW W 534:2015, clause 12.14 are fulfilled.

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This test report no. **416.723-4**

comprises 5 sheet(s) 1 table(s), 1 figure(s), 0 Annex(es).

Testing staff

Director in charge  
Piping Technology



Andreas Bockenauer



DI (FH) Martin Kerschenbauer

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The test results only relate to the samples tested.

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