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20.09.2014

TEST REPORT

14-9028335e/UDM100/H-2

ORDER:	Execution of leakage tightness test at a universal wall duct gasket UDM 100 up to 2,5 bar
CLIENT:	Hauff-Technik GmbH & Co. KG Robert-Bosch-Str. 9 89568 Hermaringen
TEST ITEM:	Universal wall duct gasket UDM 100
TESTING BASE:	Test procedure Hauff-Technik GmbH & Co. KG
SPECIMEN RECEIVED:	01.07.2014
TEST RESULTS:	See enclosures 1 to 4

Prepared by

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Approved and released by

(Dr.-Ing. Öttl)
Department Mineral
Building Materials

In case of doubt the German report is liable.
This test report comprises 1 page of text and 4 enclosures. The last text page and the attachments bear our official seal. Copying and publishing the report in an abridged form as well as its use for advertising purposes requires our written consent. Place of jurisdiction and performance is Stuttgart.

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1 Introduction

The MPA Universität Stuttgart was charged with the execution of a leakage tightness test at universal wall duct gasket UDM 100 of Hauff-Technik GmbH & Co. KG by letter of 01.07.2014.

It is about a universal wall duct gasket consisting of a rubber gasket made of EPDM with integrated sealing and prestressing tape, which is necessary for a reliable sealing between pipe and concrete. The pre-assembled gasket cover disposes of an integrated patching flange for the processing of polymer-enhanced bituminous thick-coat system. The gasket is foreseen for pipes DN 100 with lengths 200 mm up to 500 mm as well as for pipes DN 150 with lengths 240 mm up to 500 mm.

The test item was supplied to MPA Universität Stuttgart at 01.07.2014 by Hauff-Technik GmbH & Co. KG. Fig. 1 shows a photograph of the gasket. Fig. 2 shows the test item in the condition in which it was supplied. Enclosure 4 shows a sketch of the test structure as well as a sectional view through the specimen (provided by the client).

Fig. 1: Gasket UDM 100

Fig. 2: Supplied test configuration

2. Test order

According to the order of 01.07.2014 the wall duct universal wall duct gasket UDM 100 was supposed to be tested on its water tightness with water pressures up to 2,5 bar.

3. Test samples and test conduction

A C 30/37 concrete sample (Concrete N1 of Ernst Wirth GmbH & Co. KG with a compressive strength of 55,3 MPa according test report No. 3276-2014-200 by TBR Technologiezentrums GmbH & Co. KG), with a maximum aggregate size of 16 mm and a high water penetration resistance (a water penetration depth with an average of 9 mm was determined) was used. The concrete sample by Ernst Wirth GmbH & Co. KG with dimensions 350 x 350 mm² with a thickness of 200 mm was manufactured 06/02/2014.

As depicted in Fig. 2 the test structure was connected to a water hose. The water pressure was raised according to the following program:

1. 08.-09.07.2014 24 h at 1,0 bar
2. 09.-10.07.2014 24 h at 1,5 bar
3. 10.-11.07.2014 24 h at 2,0 bar
4. 11.-08.08.2014 672 h at 2,5 bar

The pressure of 2,5 bar is maintained 28 days. The test is passed when no water outlet is detectable during the whole testing period.

4 Test results

The pressure test was executed according to the program mentioned above. Fig. 3 depicts the condition of the test item at 2,5 bar.

It could be ascertained that there was no water leakage after each pressure step. Furthermore no pressure drop was yet determined in the test cell.

The conformity of the sample with the sketch depicted in Enclosure 4 (Fig. 4) was confirmed after the disassembling of the concrete sample.

Fig. 3: Condition of the test item after 3 days at pressure step 2,5 bar

5. Summary

The tightness of the joint between the universal wall duct gasket UDM 100 of Hauff-Technik GmbH & Co. KG and the surrounding concrete against water was verified up to a water pressure of 2,5 bar during a pressurized water exposition period of 28 days.

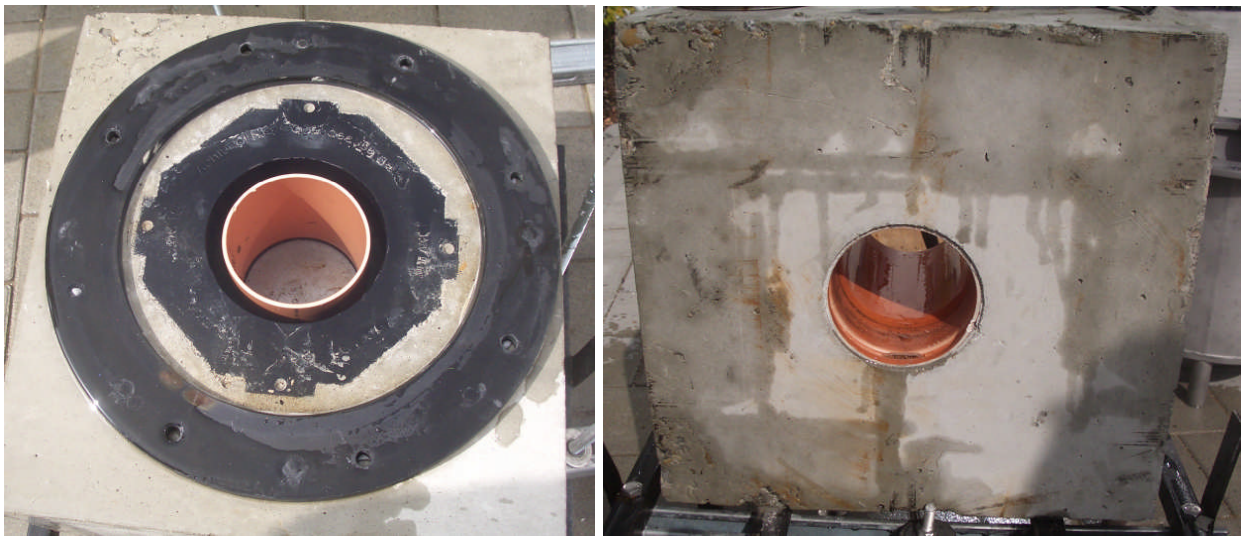

Fig. 4: Dissembled sample

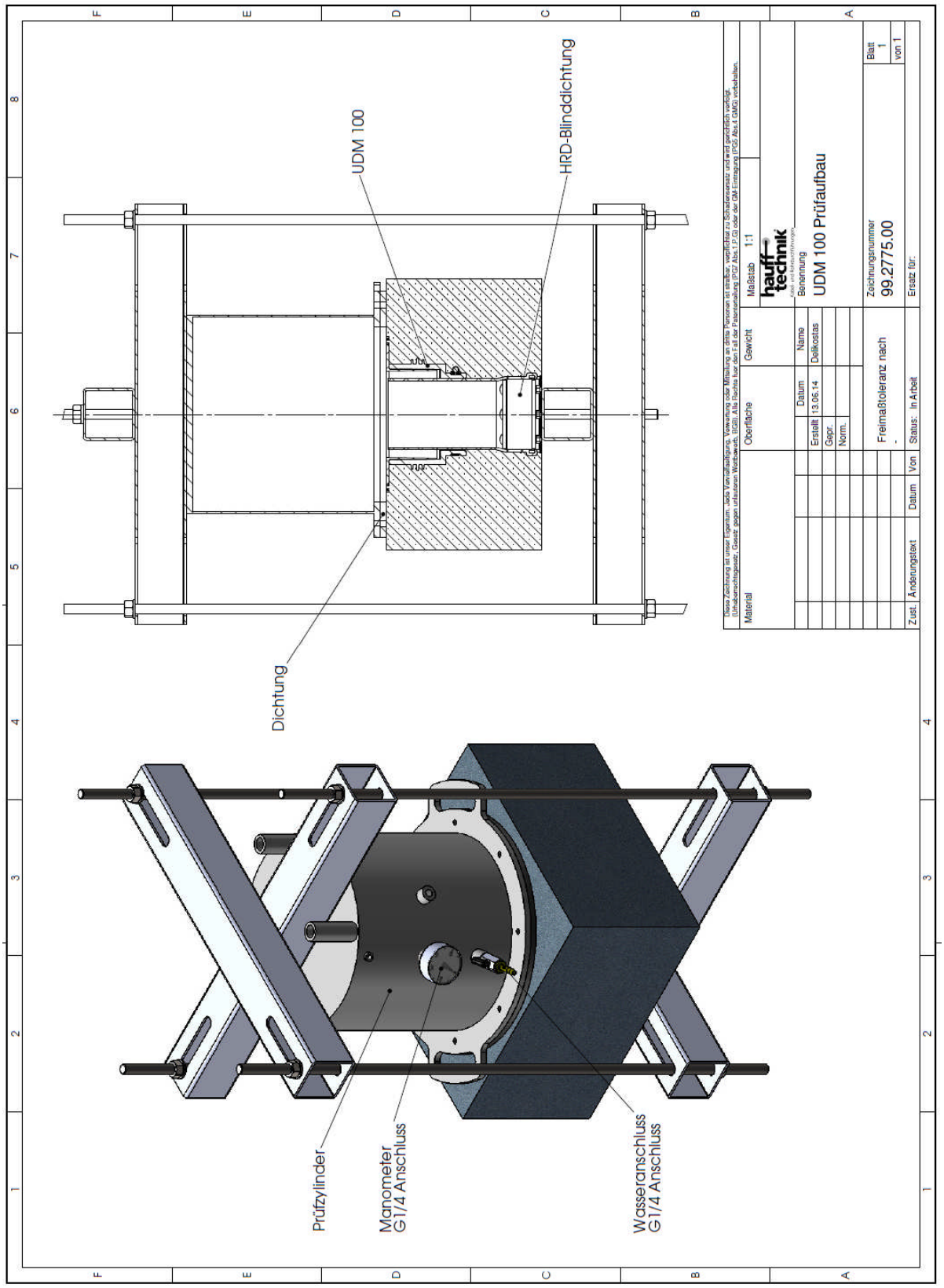

Fig. 5: Sketch of the test structure (provided by the client)