

Audit certificate

Client: Hauff-Technik GmbH & Co. KG
Gingener Straße 35
89428 Syrgenstein-Landshausen

Order no. (Customer):

Order no. (MPA): **901 1988 000/e**

Test subject **Testing of the tightness of the HRD waterproofing system
using compressed air, in this case: System HRD**

Test specification: **160-1G-3/27-2/32**

Date of receipt of the test item: 25.06.2008

Date of Audit:

Date of Report: 16.09.2008

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Enclosures: 1

Attachments: 0

Number of pages: 3

Number of copies: 2

The test results refer exclusively to the test items.

1. PLACING OF ORDER:

On 25.06.2008 you commissioned us to test the tightness of the waterproofing system of the type "HRD160-1G-3/27-2/32 by means of compressed air in a temperature range of $\pm 0^{\circ}\text{C}$ to $+ 50^{\circ}\text{C}$.

2. TEST MATERIAL:

For the investigation, they presented us on 25. June 2008 , see Appendix 1.

3. TEST EXECUTION AND RESULTS:

To test the tightness, the entire test specimen was first tested with factory-installed sealing elements to the respective test temperatures of $\pm 0^{\circ}\text{C}$, $+ 23^{\circ}\text{C}$, or $+ 50^{\circ}\text{C}$. Afterwards, in the pressure room, see Appendix 1, Item 4, an overpressure of 2.5 bar by compressed air supply (via stopcock).

The subsequent storage at the individual test temperatures was 24 hours each.

At no temperature level was a pressure drop on the pressure gauge detected during the test period of 24 hours.

4. SUMMARY:

The tightness of the sealing system "HRD160-1G-3/27-2/32 " is given with the structure listed in Appendix 1 in the tested temperature range of $\pm 0^{\circ}\text{C}$ to $+ 50^{\circ}\text{C}$ up to an overpressure of 2.5 bar for at least a period of 24 hours.

Processor

Unit 51140 - Insulating materials

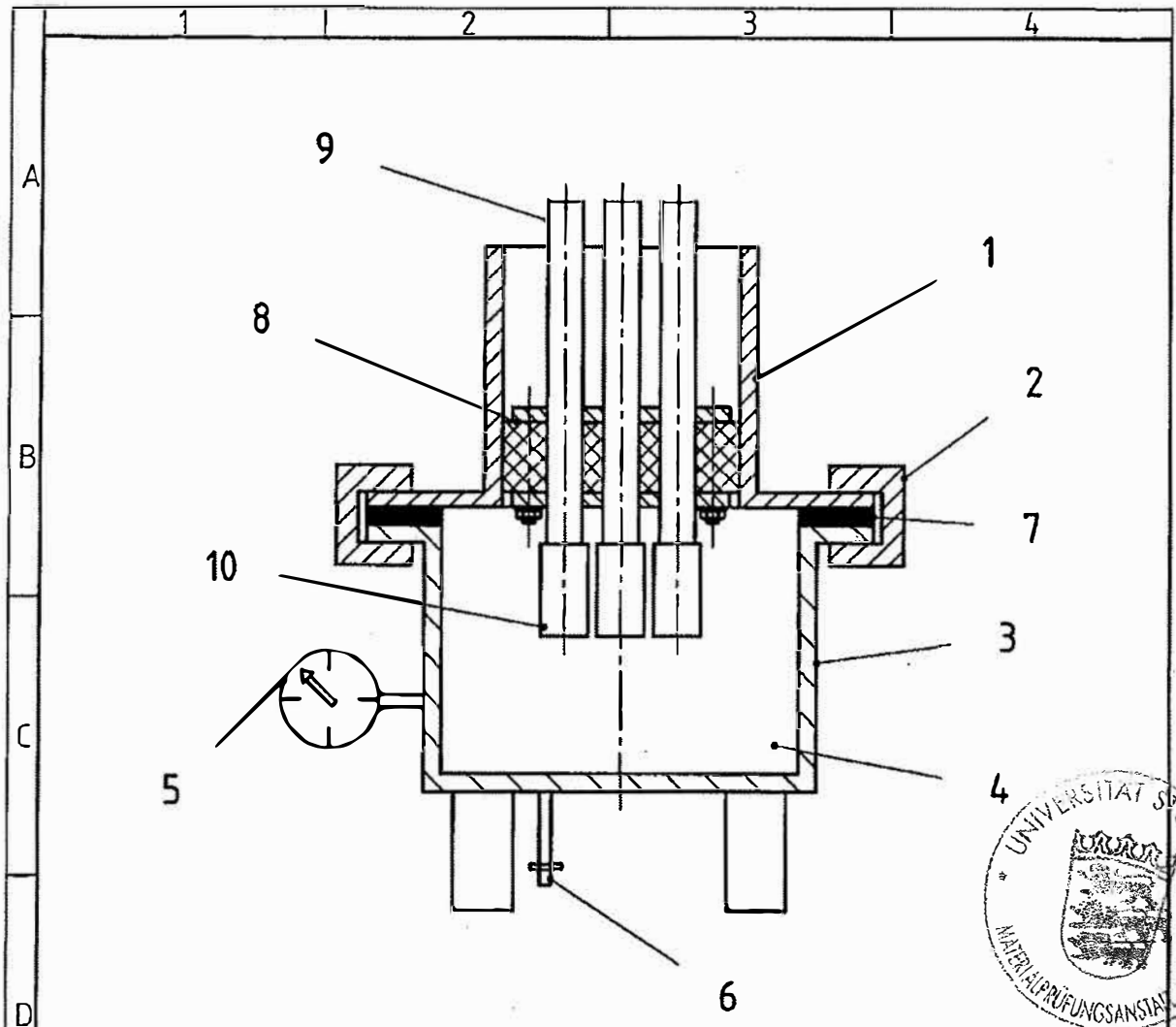
W. Becker

(Dr.-Ing. W. Becker)



Dr. Popp

(Dipl.-Min. Dr. Popp)



10	5	Cable end ppt			
9	5	Cable (3x27 / 2x32)			
8	1	HRD160-1G-3/27-2/32			
7	1	Rubber seal			
6	1	Shut-off valve for pressure chamber			
5	1	Pressure gauge			
4	1	Pressure chamber			
3	1	Steel cylinder			
2	4	Clamp			
1	1	Test piece			
Pos.	No.	Description	Norm	Material	
Material		⑧	Surface	Scale 1:1	Position - Menge -
				hauff-technik Lehr- und Konstruktionsingenieur	
		Date	Name	Pressure test HRD	
		Edat.	28.06.2006		
		Exam.			
		Norm		HRD160-1G-3/27-2/32	
		Dimension tolerance according to DIN ISO 2768 T1 mittel			Sheet
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Resp.	Changes	Date	Name	Dateiname 99 1301 00.DWG	