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**MPA** **MPA STUTT GART**  
**Otto-Graf-Institut**  
Materialprüfungsanstalt Universität Stuttgart

# Test Report

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

Order-No. (Client):

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

Test Item: **Tightness test of the sealing system HRD using compressed air,  
here: System HRD 160-1G-3/27-2/32**

Specification Applied: -

Date of Receipt of Test Item 25 June 2008

Date of Test:

Date of Report: 16 September 2008

Page 1 of 2 text pages

Enclosures : 1

Supplements:

Total Number of Pages: 3

Number of Reports: 2

The test results relate only to the items tested.

Publication of this report in full or partly is only allowed with written authorization by MPA University of Stuttgart.

**1 Purpose of Investigation**

We received your order on 25 June 2008 concerning the determination of the tightness of sealing system type HRD160-1G-3/27-2/32 using compressed air in a temperature range between  $\pm 0^{\circ}\text{C}$  and  $+ 50^{\circ}\text{C}$ .

**2 Tested Material**

On 25 June 2008 we received from you one assembled specimen ready for testing, cf. Encl. 1.

**3 Test Performance and Results**

The complete specimen including the sealing elements assembled at the factory were first of all adjusted to the respective test temperatures of  $\pm 0^{\circ}\text{C}$ ,  $+ 23^{\circ}\text{C}$  and  $+ 50^{\circ}\text{C}$ . Following this, an overpressure was applied by compressed air (via a valve) of 2.5 bar in the pressure chamber, cf. Encl. 1, pos. 4. Subsequently the specimen was stored at each test temperature for 24 hours. The manometer did not indicate any pressure drop at none of the temperature levels during the 24 hour test.

**4 Summary**

The tightness of the sealing system "HRD160-1G-3/27-2/32" is for at least 24 hours in accordance with the assembly mentioned in Encl. 1 for the temperature range between  $\pm 0^{\circ}\text{C}$  to  $+ 50^{\circ}\text{C}$  up to an overpressure of 2.5 bar.

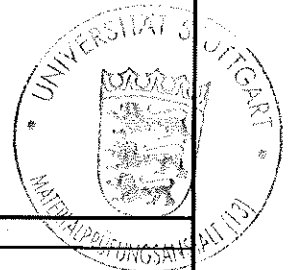
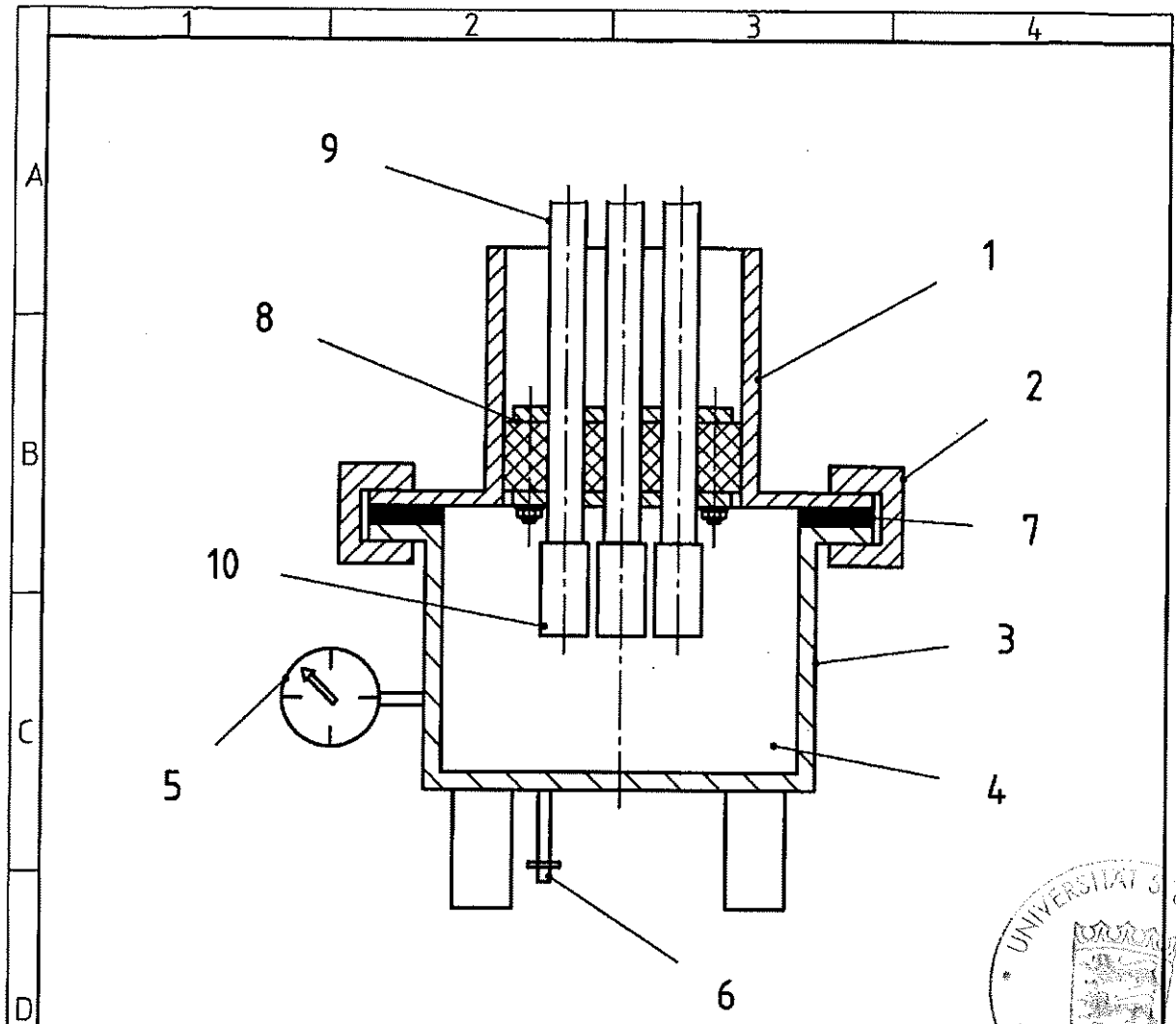
Prepared by

**Dr.-Ing. W. Becker**  
**Testing Engineer**



Approved and released by

**Dipl.-Min. Dr. Popp**  
**Unit 51140 – Thermal Insulation**



|    |   |                                    |  |  |
|----|---|------------------------------------|--|--|
| 10 | 5 | cable end cap                      |  |  |
| 9  | 5 | cables ( 3x27 / 2x32 )             |  |  |
| 8  | 1 | HRD160-1G-3/27-2/32                |  |  |
| 7  | 1 | rubber joint/seal                  |  |  |
| 6  | 1 | sealing valve for pressure chamber |  |  |
| 5  | 1 | manometer                          |  |  |
| 4  | 1 | pressure chamber                   |  |  |
| 3  | 1 | steel cylinder                     |  |  |
| 2  | 4 | clamp                              |  |  |
| 1  | 1 | testing cap                        |  |  |

| Pos. | Anz | Beschreibung                                   | Norm                                  | Material             |
|------|-----|--|---------------------------------------|----------------------|
|      |     | Material                                       | Maßstab 1:1                           | Position -- Menge -- |
|      |     | (8)  | hauff-technik<br>Lab- und Anordnungen |                      |
|      |     | Datum  | Name                                  |                      |
|      |     | Bearb. 28.06.2006                              | Münch                                 |                      |
|      |     | Gepr.  |                                       |                      |
|      |     | Norm   |                                       |                      |
|      |     | Freimaßtoleranz nach<br>DIN ISO 2768 T1 mittel | 99.1301.00                            |                      |
|      |     | Zust. Änderungen                               | Datum                                 | Name                 |
|      |     | Dateiname 99_1301_00.DWG                       |                                       |                      |
|      |     |  |                                       | Blatt<br>-<br>BI     |