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Test Report: Containment Systems

Client	Blobel Umwelttechnik GmbH Henleinstrasse 29a 86368 Gersthofen, Germany
Test objects	Designation: **Containment systems / Retention barriers** (Category 2: Manual, fixed, rotatable) Designation (dimensions): Type BL/BED (250x30) Designation (dimensions): Type BL/BDD (250x30)
Order	Participation in the leak testing of mobile containment systems for firefighting water retention based on VdS Guidelines 2564-1
Test result	Leaktightness Type BL/BED: **37 ml/m/h** (< 50 ml/m/h) Leaktightness Type BL/BDD: **13 ml/m/h** (< 50 ml/m/h)
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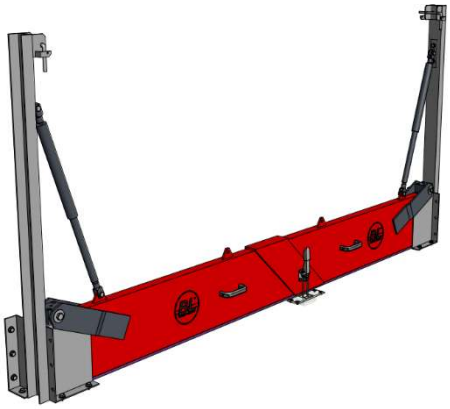
Project number	1180345-K2-20 / 2931886
Test date Report completion	22 December 2017 16/11/2018
Scope of report	3 pages

Type BL/BED

Type BL/BDD



Date: 16/11/2018
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The document consists of 4 pages.
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1 Basis

With the letter dated 18 July 2018, TÜV SÜD Industrie Service GmbH (TÜV SÜD) was engaged by Blobel Umwelttechnik GmbH, Henleinstrasse 29a, 86368 Gersthofen, Germany as follows: Participation in the leak testing of mobile containment systems for firefighting water retention based on VdS Guidelines 2564-1, dated October 2004.

2 Actions / Notes

On 22 December 2017 and 16 August 2018 measurement meetings with leak testing based on Chap. 5.8 of the VdS Guidelines 2564-1 took place in the factory hall-type buildings of Blobel Umwelttechnik GmbH. Once in the hall at Ziegelleistr. 5 and once at Henleinstrasse 29a each in 86368 Gersthofen, Germany.

The following systems were examined: Type BL/BED and Type BL/BDD.

Test sequence (based on Chap. 5.8 of the VdS Guidelines 2564-1):

- One-hour leak test

The following deviations from the leak test in accordance with Chap. 5.8 of VdS 2564-1 were found:

1. Substrate “Diamond height of 2 mm to DIN 59 220”:

   VdS 2564-1 specifies: “Diamond plate (checker plate) with a diamond height of 2 mm top DIN 59220 is used to simulate the substrate of the subsequent use conditions.” The diamond height was 1.2 mm.
   Products to DIN 59220 have a diamond (pattern) height of 1 mm to 2 mm. The question here is therefore whether the protection objective “leaktightness” to VdS 2564-1 really has to be verified for a diamond height of 2 mm or 1 mm to 2 mm, i.e. whether this is a transfer error from DIN 59220. To what extent a 2 mm, i.e. 0.8 mm higher diamond height than present actually influences the leaktightness test cannot be reliably foreseen without testing. But the diamond height used is standard and conforms to DIN 59220. The objective of the diamonds is to simulate the usual roughness of the substrate in the test. This is also achieved properly by a diamond height of 1.2 mm. The diamond height is therefore representative for different roughnesses.

2. Test period of the main test at least 4 h and at least 1 h for the repeat testing:

   A test period of 1 h was chosen instead of 4 h. A repeat test was not performed. In this case the moisture penetration was observed and no significant time changes were found. The reduction in the test period is therefore justified.

3 Test result

Blobel Umwelttechnik GmbH had the following containment systems / retention barriers successfully tested with the following test result.

Category 2: "Manual system, fixed, rotatable"		**Leak rate**		**Verification fulfilled**
Test object Type	**Test length / height [mm] / [mm]**	**Exist. [ml / m / h]**	**All. [ml / m / h]**	
Type BL/BED Seal Type DPV PVC foam, anthracite / closed-cell ρ = 100-125 kg/m³	2,500/300	0	50	**yes**
Type BL/BDD Seal Type DPV PVC foam, anthracite / closed-cell ρ = 100-125 kg/m³	2,500/300	0	50	**yes**

The test showed: the containment systems / retention barriers Type BL/BED and Type BL/BDD conform to the leaktightness based on Chap. 5.8 of VdS 2564-1.

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