



Marine & Offshore

Certificate number: 55048/A0 BV

File number: ACM 153/1013/2

Product code: 1532H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

EagleBurgmann Espey GmbH
Moers - GERMANY

for the type of product

WATERTIGHT SHAFT BULKHEAD PENETRATION DEVICES
BULKHEAD SHAFT SEAL ESPEY WDK-BHS

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 22 Nov 2023

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 22 Nov 2018,

Adama Diene



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Bulkhead Shaft Seals Espey WDK-BHS
Shaft Diameter 100 mm up to 350 mm

1.1 Design:

Watertight bulkhead shaft seals, basically composed of a Housing in two parts and Multi-part Seal Rings with Tension springs and Detent. The Bulkhead seals are used for Shaft Diameters from 100 mm up to 350 mm.

1.2 Technical data:

Shaft Diameter [mm]	Max. Shaft Speed [min ⁻¹]	Max. effective Pressure [bar]	Max. Temperature [°C]
100	7643	3	225
110	6945		
120	6366		
130	5876		
140	5457		
150	5093		
160	4775		
170	4494		
180	4244		
190	4021		
200	3820		
210	3638		
220	3472		
230	3321		
240	3183		
250	3056		
260	2938		
270	2829		
280	2728		
290	2634		
300	2546		
310	2464		
320	2388		
330	2315		
340	2247		
350	2184		

1.3 Material:

Housing	Stainless Steel (1.4571)
Sealing Ring	Carbon-PTFE-Compound
Tension spring	1.4571
Detente	1.4571

2. DOCUMENTS AND DRAWINGS :

2.1 Documents:

- Eagle Burgmann Catalogue Carbon Floating Ring Seals, Ref.: EPCE/E2/1.000/08.12/9.7.1 ©Eagle Burgmann Espey, Germany.

- Technical Info Bulkhead Seal Espey WDK-BHS

2.2 Drawings:

Designation	Drawing Number	Revision
Bulkheadseal	ESPEY-WDK-BHS	01

3. TEST REPORTS :

3.1 Leakage test on Espey WDK-BHS Diameter 100 mm, Report No. HN2294452.

3.2 Leakage test on Espey WDK-BHS Diameter 320 mm, Report No. HN2316164.

4. APPLICATION / LIMITATION :

4.1 The Bulkhead Shaft Seals are intended to be used exclusively to seal rotating ship shafts against bulkheads to avoid a flooding of related compartments in case of accidents.

4.2 The used materials have to be suitable for the intended services.

4.3 The bulkhead seals will be fitted according to the Manufacturer's instructions and BUREAU VERITAS Rules requirements.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 The bulkhead seals are to be supplied by the Manufacturer in compliance with the type described in this certificate.

5.2 This type of product is within the category HBV of BUREAU VERITAS Rule Note NR320.

5.3 **Eagle Burgmann Espey GmbH** has to make the necessary arrangements to have its works recognized by BUREAU VERITAS in compliance with the requirements of NR320 for HBV product:

Eagle Burgmann Espey GmbH, Moers/GERMANY.

6. MARKING OF PRODUCT :

Each bulkhead seal is to be clearly marked with at least

- Size

- Serial Number

7. OTHERS :

This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the products at any time and that **Eagle Burgmann Espey GmbH, Moers/GERMANY** will accept full responsibility for informing shipbuilders, ship owners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

*** END OF CERTIFICATE ***