



Marine & Offshore

Certificate number: 52000/B0 BV

File number: ACM137/2303/4

Product code: 0728H

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

JAMES WALKER & CO. LTD.

Cockermouth - UNITED KINGDOM

for the type of product

MATERIAL FOR SEALING GLAND

Bi-O-Lion seal material

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: 30 Jul 2029

For Bureau Veritas Marine & Offshore,

At BV LONDON, on 30 Jul 2024,

Jonathan WATSON

This certificate was created electronically and is valid without signature



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.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=tynccxg9c6>

BV Mod. Ad.E 530 June 2017

This certificate consists of 2 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Bi-O-Lion : rubber material for sealing gland.

Bi-O-Lion is a fluorocarbon terpolymer based synthetic rubber, reinforced with carbon black & peroxide cured. It is specially compounded to have enhanced resistance to Environmentally Acceptable Lubricants (EAL).

Temperature range: -16°C to 210°C (3°F to 410°F)

2. DOCUMENTS AND DRAWINGS :

Material data sheet for polymer type FKM rev. 0 dated 2016/10/19

3. TEST REPORTS :

Test of a pair of Bi-O-Lion Seals T552 dated 2014/09/10

1000 hours dynamic test on Bi-O-Lion Walkersels with biodegradable oil & Sea / Tap Water T631 dated 2015/10/06

4. APPLICATION / LIMITATION :

4.1 - Material intended for Oil Lubricated Propeller Shaft Seals.

4.2 - This sealing gland system is eligible for Tailshaft Modified Survey Periodicity as per BV Rules NR 467 Part A Ch 2 Sec2 [5.5.3] provided that all the requirements are complied with (depending on the material of the shaft, the keyway, the oil analysis and consumption recorder, the monitoring of stern tube bearing temperature and the nature of the protection against corrosion).

4.3 - This sealing gland system is compatible with the requirements of additional notation MON-SHAFT (BV Rules NR467 Part F Ch 5, Sec 2) provided that all other requirements are complied with.

4.4 - Due consideration is to be paid to the Manufacturer's recommendations concerning the installation, inspection, operation and maintenance of the seal.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The **Bi-O-Lion Seal Material** are to be supplied by **JAMES WALKER & CO. LTD.** 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 and as such does not require a BV product certificate.

5.3 - **JAMES WALKER & CO. LTD.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **JAMES WALKER & CO. LTD.** has declared to Bureau Veritas the following production site(s):

JAMES WALKER & CO. LTD.
Gote Road
Cockermouth
Cumbria
UNITED KINGDOM

6. MARKING OF PRODUCT :

- Type
- Serial number

7. OTHERS :

7.1 - It is **JAMES WALKER & CO. LTD.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 52000/A0 BV issued on 19 Mar 2018 by the Society.

*** END OF CERTIFICATE ***