



Marine & Offshore

Certificate number: 19411/D0 BV

File number: ACC 173/04

Product code: 6505I

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

Skipper Electronics AS

Oslo - NORWAY

for the type of product

SEACOCKS / THROUGH-HULL FITTINGS

Single and double bottom penetration SB 60, DB 60, SB 100, DB 100 for SKIPPER speed log sensor

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units

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: 18 Feb 2028

For Bureau Veritas Marine & Offshore,

At BV OSLO, on 18 Feb 2023,

Rune MARSTEIN

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.

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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

SKIPPER single and double bottom penetrations

SB 60, DB 60, SB 100, DB 100 for SKIPPER speed log sensor

1.1 Type designation

| Type | Installation for | Bottom penetration |
|-------------------|--------------------------|--------------------|
| SB Ball Valve 60 | SKIPPER speed log sensor | Single |
| DB Ball Valve 60 | SKIPPER speed log sensor | Double |
| SB Gate Valve 100 | SKIPPER speed log sensor | Single |
| DB Gate Valve 100 | SKIPPER speed log sensor | Double |

1.2 Material specification

| Part | Material |
|----------------------|--------------------------|
| Bottom flange | AISI 316 stainless steel |
| Intermediate element | AISI 316 stainless steel |
| Intermediate tube DB | St.52.3N Steel |
| Intermediate flange | AISI 316 stainless steel |
| Valve body and ball | AISI 316 stainless steel |

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

2.1 Drawings

- N° SB-60-Rev-A Single bottom EML224 and N° DB-60-Rev-A Double bottom EML224
- Parts N° DB-1021-Rev-01, DB-1022-Rev-00, DB-1028-Rev-00, DB-1029-Rev-01, DB-1030-Rev-00, DB-1031-Rev-00, DB-2026-Rev-01, DB-1021-Rev-01 Casted, DB-2051-Rev-01 Casted
- N° SB-100-Rev-A Single bottom Ball Valve and N° DB-100-Rev-A Double bottom Ball Valve
- N° SB-100-Rev-B Single bottom Ball Valve and N° DB-100-Rev-B Double bottom Ball Valve
- N° DB-2046-Rev-01 DB-100-Sensors
- Parts N° SB-2019-Rev-00, DB-2021-Rev-00, DB-2026-Rev-01, DB-2028-Rev-00, DB-2029-Rev-01, DB-2031-Rev-00, DB-2048-Rev-00

2.2 Operation and installation manuals

- N° DM-BDB100 dated 25/03/2020 for DB-100-SA/SB
- N° DM-BSB100 dated 26/08/2021 for SB-100-SA/SB
- N° DM-BSB60 dated 06/08/2014 for SB-60-SA

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

Not applicable.

4. APPLICATION / LIMITATION

- 4.1 May be used as installation for echo sounder, doppler log sensor and EM log sensor.
- 4.2 The transducer, sensor elements and associated components are to be of approved type.
- 4.3 SKIPPER Electronics AS has to inform its clients about proper methods of arrangement, fitting and general maintenance of the products.
- 4.4 The mounting to the hull is to be approved for each application on board ships.
- 4.5 The valves are to be located in an accessible area for installation, operation, disassembling and inspection.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be supplied by **Skipper Electronics AS** in compliance with the type and the requirements described in this certificate.

5.2 This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 BV product certificate is required.

5.4 Each valve housing is to be subjected to hydrostatic test at 1.5 times the design pressure and not less than 0.5 MPa.

5.5 For information, **Skipper Electronics AS** has declared to Bureau Veritas the following production site:

Skipper Electronics AS
Ryensvingen 5, P.O.Box 151,
0612 Oslo,
NORWAY

6. MARKING OF PRODUCT

The products is to be marked with:

- Manufacturer's name or logo
- Type designation
- Society's brand as relevant

7. OTHERS

It is **Skipper Electronics AS'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.

This certificate supersedes the Type Approval Certificate N° 19411/C0 BV issued by the Society.

*** END OF CERTIFICATE ***