



Marine & Offshore

Certificate number: 59389/A0 BV

File number: .

Product code: 21031

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

www.veristar.com

TYPE APPROVAL CERTIFICATE

*This certificate is issued to***SITEF SERVICE SRL**

TERAMO - ITALY

*for the type of product***METALLIC HOSES (FLEXIBLE PIPES) ASSEMBLIES**

CORRUGATED FLEXIBLE METAL HOSE

TYPE KZ100B

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: 08 Jul 2025****For Bureau Veritas Marine & Offshore,**

At BV GENOA, on 08 Jul 2020,

Sandro BRUSEGAN



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.veristarnb.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=y6qg7obgeu>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Corrugated Flexible Metal Hose reinforced by one metallic wire braid

1.1 Dimensions and ratings

Type KZ100 B

| Size (mm) | 6 | 8 | 10 | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|----------------|-----|-----|-----|----|----|----|----|----|----|----|----|----|-----|
| Max. WP (bar)* | 150 | 140 | 100 | 70 | 64 | 43 | 49 | 35 | 38 | 26 | 25 | 16 | 10 |

* Pressure at 20°C

Total length: 500mm

Range of Temperature: 0°C to +450°C

Fittings: BSP connection and loose Flange PN10, DN 65, 80 and 100

1.2 Material specification

| | |
|----------------------|-------------------------------|
| Hose | AISI 316, AISI 321 |
| Braid | Stainless Steel |
| End fittings | AISI 303, AISI 304, AISI 316 |
| Collar/Flange | AISI 303, AISI 304, AISI 316L |

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

The hose and fittings are covered under the TAC 24018/B0 BV.

2. DOCUMENTS AND DRAWINGS

- KUZUFLEX Industrial Catalog as provided on 19/05/2020
- Test Proposal for KZ100B Rev.3 as provided on 09/06/2020
- Drawing N° STF20_X_DN16 BV "FLEX TRECCIATO DN16" Rev.0 dated 08/06/2020
- Drawing N° STF20_X_DN20 BV "FLEX TRECCIATO DN20" Rev.0 dated 08/06/2020
- Drawing N° STF20_X_DN32 BV "FLEX TRECCIATO DN32" Rev.0 dated 08/06/2020
- Drawing N° STF20_X_DN65 BV "FLEX TRECCIATO DN65" Rev.0 dated 08/06/2020
- Declaration from Licensor and Licensee dated 27/04/2020

No departure from the above documentation 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

3.1 Type test reports including burst test at 4 times the design pressure witnessed by a BV Surveyor dated 26/06/2020

Items tested: DN10, DN16, DN20, DN32 and DN65

4. APPLICATION / LIMITATION

4.1 The hoses with end fittings may be used in the following systems on board: Sea water and fresh water, compressed air, lubricating oil, hydraulic oil, liquid fuel, steam and condensate, air conditioning and water spraying fire system.

4.2 The hoses are to be limited to a length necessary to provide for relative movement between fixed and flexibly mounted items of machine/equipment or systems and are only to be used in lengths up to 2 m. The hoses are to be installed in clearly visible and readily accessible locations at all times.

4.3 The use of stainless steel is to be restricted as per the requirements of Bureau Veritas Rules.

4.4 The use of loose flanges is only permitted for Class III water pipes.

4.5 Tapered threaded end fittings are not to be used for oil circuits in engine rooms nor any place containing an ignition source unless otherwise suitably screened at the Society's Surveyor satisfaction.

4.6 End fittings as per manufacturer's specification. The hoses are to be entirely assembled in the manufacturer's workshop.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be supplied by **SITEF SERVICE S.r.l.** 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 hose assembly is to be hydraulically pressure tested to 1.5 times the maximum working pressure and provided with the manufacturer's pressure test report and conformity of production.

5.5 For information, **SITEF SERVICE S.r.l** has declared to Bureau Veritas the following production site:

SITEF SERVICE S.r.l.
VIA ATTILIO DI SANTE S.N.
Z.I. SANT'ATTO
64100 TERAMO
ITALY

6. MARKING OF PRODUCT

Each hose assembly shall be marked with at least:

- Manufacturer's name or logo
- Type designation
- Maximum working pressure
- Date of manufacture
- Society's brand as relevant

7. OTHERS

It is **SITEF SERVICE S.r.l.**'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.

***** END OF CERTIFICATE *****