



MARINE DIVISION

Certificate number: 10197/C0 BV

File number: ACM 135/2209/002

Product code: 2130H

*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*

**VOSS Fluid GmbH**

Wipperfurth - GERMANY

*for the type of product*

**SCREW COUPLINGS**

ES-4 TUBE COUPLINGS

**Requirements:**

BUREAU VERITAS Rules for the Classification of Steel Ships

*This certificate is issued to attest that BUREAU VERITAS 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 Jan 2017****For BUREAU VERITAS,**

At BV HAMBURG, on 30 Jan 2012,

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. 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 Division available on the internet site [www.veristar.com](http://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 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 SCHEDULE OF APPROVAL**

### **1. PRODUCT DESCRIPTION**

#### **ES-4 Tube Couplings**

##### **1.1 Product range:**

as per VOSS Catalogue 9177003102

##### **1.2 Rating:**

Series	Tube OD [mm]	Nominal Pressure [bar]
L	6, 8, 10	500
L	12, 15, 18	400
L	22, 28, 35, 42	250
S	6, 8, 10	800
S	12, 14, 16	630
S	20, 25, 30, 38	420

##### **1.3 Material specification:**

<b>Tubes</b>	Seamless precision steel DIN 2391 C
<b>Couplings</b>	Steel
<b>Sealing</b>	NBR (-35 °C to +100 °C) / FPM (-25 °C to +200 °C)

### **2. DOCUMENTS AND DRAWINGS**

According to VOSS Catalogue 9177003102, Edition 2011

### **3. TEST REPORTS**

3.1 Qualification Tests performed in the manufacturer's own laboratory in the presence of a Society's surveyor.

- Test report 12000412 (MPA-NRW) dated 28/01/2000
- Test report UB: AEV 001/00/1 (VOSS)

3.2 Examination Report No. AEL 214/06/1, tests performed at VOSS Automotive GmbH, Wipperfurth/GERMANY:

- Leakage test
- Bursting pressure test
- Vacuum test
- Pull-off test

3.3 Test Report No. C101/06, tests performed at IMA, Dresden/GERMANY:

- Pressure pulsation test
- Vibration test

3.4 Fire resistance Tests performed at WTD 71, Kiel/GERMANY. Tests Reports no. 61070/105 – 108

### **4. APPLICATION / LIMITATION**

4.1 May be used for piping systems on board ships.

4.2 The VOSS pipe and flange couplings are to be at any time accessible.

4.3 Couplings with soft component are not to be used for "fire-safe" systems.

4.4 For Bulkhead unions, the requirements given in BUREAU VERITAS Rules Part C, Ch. 1, Sec 10, [5.3] have to be complied with. When using soft seals, it must be ensured that water, oil or fire cannot penetrate through the watertight bulkheads or decks.

4.5 Assembly instructions given by the manufacturer are to be complied with.

**5. PRODUCTION SURVEY REQUIREMENTS**

5.1 The Tube Couplings are to be manufactured, examined and tested by the manufacturer in accordance with the approved type described in this certificate and in accordance with BUREAU VERITAS Rules stated on the front page of this certificate.

5.2 The Production sites are to be recognized by BUREAU VERITAS as per NR 320 for HBV products. To this end, the manufacturer has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 **VOSS Fluid GmbH** has declared to BUREAU VERITAS that the products detailed in this certificate are manufactured at the production site stated on the front page of this certificate.

5.4 Water Pressure Test should be carried out through watertight bulkhead for Bulkhead unions.

**6. MARKING OF PRODUCT**

The products are to be marked with at least:

- Manufacturer's name or logo
- Model
- Size

**7. OTHERS**

7.1 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 **VOSS Fluid GmbH, Wipperfurth/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 products and the conditions of this approval.

7.2 This certificate supersedes the Type Approval Certificate N° 10197/B0 BV issued on 26/09/2006 by the Society.

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