

**MARINE DIVISION**

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Certificate number: 07546/C0 BV

File number: ACM 135/2303/005

Product code: 2130H

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

## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**Eaton Fluid Connectors GmbH Lohmar Germany**

Lohmar - GERMANY

*for the type of product*

**SCREW COUPLINGS**

WALFORM WD

**Regulations and standards:**

- 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 did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.*

**This certificate is valid until: 06 Apr 2014**

At Neuilly, on: 06 Apr 2009

**For BUREAU VERITAS,**  
By order of the Secretary

Approval office

Local office: BV HAMBURG

Surveyor: J. Bauermeister

L.COURREGELONGUE



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. 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 :

The WALFORM tube fitting comprises just three components:

- Fitting body to DIN
- Nut
- Captive seal

The tube is reshaped by a machine.

#### 1.1 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, 12	630
S	16	500
S	20, 25, 30, 38	400

#### 1.2 Materials and/or components :

Tube : St 37.4, St 52.4, Stainless steel 1.4571

Fitting body and Nut : Steel

Captive seal : FPM (viton)

### 2. DOCUMENTS AND DRAWINGS :

Series L and S, as per Manufacturer's catalogue RV 192 D/GB/F 988 F5-IV.

### 3. TEST REPORTS :

Test report documentation according to DIN

Flame test WTD 71

### 4. APPLICATION / LIMITATION :

4.1 May be used for the following services on board:

- Flammable fluids (flash point  $\leq 60^{\circ}\text{C}$ ) - cargo oil 5, crude oil washing 5, vent lines 3
- Inert gas - water seal, scrubber effluent, main 2+5, distributions lines 5
- Flammable fluids (flash point  $>60^{\circ}\text{C}$ ) - cargo oil 5, fuel oil 2+3, lubricating oil 2+3, hydraulic oil 2+3, thermal oil lines 2+3
- Sea water - bilge/ballast/cooling water 1, fire main/water spray/foam/sprinkler systems 3, tank cleaning, non-essential lines
- Fresh water - cooling water 1, condensate return 1, non-essential lines
- Deck drains (internal) 4, sanitary drains
- Sounding and venting - water tanks, dry spaces, oil tanks 2+3 (flash point  $>60^{\circ}\text{C}$ )
- Steam (restrained type, on deck with a design pressure of 1.0 MPa or less)
- Miscellaneous - service air (non-essential), brine, non essential systems

Footnotes:

- 1- Inside machinery spaces of category A - only approved fire resistant type acc. to IACS req. as amended.
- 2- Not inside machinery spaces of category A or accommodation spaces. May be accepted in other machinery spaces provided the joints are located in easily visible and accessible positions
- 3- Approved fire resistant type acc. to IACS req. as amended.
- 4- Above free board deck only.
- 5- In pump rooms and open decks - only approved fire resistant type acc. to IACS req. as amended.

4.2 WALFORM tube fittings are to be at any time accessible.

4.3 The bulkhead unions are not to be used as fittings in way of watertight or oil tight bulkheads or decks.

4.4 In all cases, the associated pipes are to be suitably adjusted, aligned and anchored.

4.5 The assembly instructions given by the Manufacturer are to be complied with.

4.6 The wall thickness and the material of tubes used are to be in accordance with the Bureau Veritas Rules.

**5. PRODUCTION SURVEY REQUIREMENTS :**

5.1 The products are to be manufactured, examined and tested by the manufacturer in accordance with the approved type described in this certificate and Bureau Veritas Rules and Regulations stated on the front page of this certificate.

5.2 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 The manufacturer 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 Bureau Veritas certificate is not required for the product to be fitted on board units to be classed with Bureau Veritas.

**6. MARKING OF PRODUCT**

The product is 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 **EATON Fluid Connectors GmbH** will accept full responsibility for informing shipbuilders or their sub-contractors of the proper method of fittings and general maintenance of the flared pipe fittings and of the conditions of this approval.

7.3 This Certificate supersedes the Type Approval Certificate N° 07546/B0 BV issued on 23/09/2002 by the Society.

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