



Marine & Offshore
Division

Certificate number: 09825/D0 BV

File number: ACM 135/0509/003

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

Eifeler Maschinenbau GmbH

Euskirchen - GERMANY

for the type of product

SCREW COUPLINGS

DS-RING and DSW-RING

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: 13 Nov 2020

For BUREAU VERITAS,

At BV HAMBURG, on 13 Nov 2015,

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 & Offshore Division 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 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

DS-Ring and DSW-Ring

1.1 Identification and Technical data:

EMB DS-Ring: Cutting ring with 2 edges

EMB DSW-Ring: Cutting ring with 2 edges + elastomer - type seal

Series	Tube Diameter [mm]	Nominal Pressure [bar] (Steel fittings)
Low pressure (LL)	4 - 8	100
Medium pressure (L)	6 - 10	500
	12 - 18	400
	22 - 42	250
High pressure (S)	6 - 10	800
	12 - 16	630
	20 - 38	400

Reduction of pressure-rating applies depending on material and service temperature as per manufacturer's catalogue.

1.2 Material:

Fitting: Steel (DIN 3859-1), brass or stainless steel (DIN 17440)

Seal: NBR/FPM/PTFE

1.3 Temperature range depending on for the used Materials:

Material	Minimum allowable Temperature [°C]	Maximum allowable Temperature [°C]
Carbon Steel	-40	+250
Stainless Steel	-60	+400
NBR	-35	+100
FPM	-25	+200
PTFE	-60	+200

2. DOCUMENTS AND DRAWINGS

- Manufacturer's catalogue N° 1.000 D/GB/F - 0903

- Drawings N° HN70, HN106, HN26, HN226, HN283, HN284

3. TEST REPORTS

BUREAU VERITAS qualification test performed in MPA's laboratory in the presence of the Society's Surveyor:

- Assembly test, static pressure test, impulse test, flame resistance test, burst test, vacuum test

Test report N° 120239199

4. APPLICATION / LIMITATION

4.1 Screw couplings intended to be used on hydraulic oil piping on board ships.

4.2 The Screw couplings are to be at any time accessible.

4.3 For Bulkhead unions, the requirements given in BUREAU VERITAS Rules Part C, Ch. 1, Sec 10, [5.3] have to be complied with.

4.4 When soft seals are used for Bulkhead unions, it must be ensured that water, oil or fire cannot penetrate through the watertight bulkheads or decks.

4.5 The manufacturer's assembly instructions are to be complied with.

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

4.7 The wall thickness and the material of the used tubes are to be in accordance with the BUREAU VERITAS Rules.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The Screw couplings are to be supplied by **Eifeler Maschinenbau GmbH** 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.

5.3 **Eifeler Maschinenbau GmbH** has to make the necessary arrangements to have its works recognised by BUREAU VERITAS in compliance with the requirements of NR320 for HBV products:

Eifeler Maschinenbau GmbH

Euskirchen / GERMANY

6. MARKING OF PRODUCT

Each screw coupling is to be clearly marked to avoid any wrong utilization as per the manufacturer's instructions:

- Manufacturer's name or logo
- Model
- Size
- Nominal Diameter
- Nominal Pressure.

7. OTHERS

7.1 This approval is given on the understanding that the Society reserves the right to require check test to be carried out on the units at any time and that **Eifeler Maschinenbau GmbH, Euskirchen/GERMANY** will accept full responsibility for informing shipbuilders, ship owners or their sub-contractors of the proper methods of fitting and general maintenance of the Pipe Screw-Joints and of the conditions of this approval.

7.2 This certificate supersedes Type Approval Certificate No. 09825/C1 BV issued on 25/01/2012 by the Society.

*** END OF CERTIFICATE ***