



Marine & Offshore

Certificate number: 51586/B0 BV

File number: ACM 135/2210/8

Product code: 2170H

*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*

**Viega GmbH & Co. KG**

Attendorn - GERMANY

*for the type of product*

**MECHANICAL JOINTS - COMPRESSION COUPLINGS - PRESS TYPE**

MEGAPRESS CuNiFe PRESSFITTING SYSTEM, APPROVED FIRE RESISTANT TYPE

**Requirements:**

BUREAU VERITAS Rules for the Classification of Steel Ships

*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 is a renewal of certificate N° 51586/A1 BV expiring on 12/03/2023*

**This certificate will expire on: 12 Mar 2028**

**For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 24 Nov 2022,

Heiko Lange

***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](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 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 4 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

**Megapress CuNiFe pressfitting system, approved fire resistant type.**

#### 1.1 Design:

Megapress CuNi 90/10 cold press fittings and pipe systems with smart connect, made of copper-nickel alloy (C706000), assembled with a FKM or EPDM sealing element, which provides the tightness of the coupling when deformed by a hydraulic press tool. The smart connect feature enables quick identification of unpressed fittings.

#### 1.2 Technical data:

<b>Outside diameter [mm]</b>	21.3 (1/2")	26.7 (3/4")	33.4 (1")	42.4 (1 1/4")	48.3 (1 1/2")	60.3 (2")	73 (2 1/2")	88.9 (3")	114.3 (4")
<b>Wall thickness acc. to MIL-T-16420K (SH) 1979-04 [mm]</b>	1.65	1.65	1.65	1.83	1.83	2.11	2.11	2.41	2.77
<b>Wall thickness acc. to ASTM B466/B466M-14 [mm]</b>	2.79	2.79	3.3	3.56	3.81	3.81	5.08	5.59	6.10
<b>Maximum working pressure [MPa]</b>	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.25

- Temperature range with EPDM: -10°C – +110°C (14°F – 230°F)

- Temperature range with FKM: -5°C – +140°C (23°F – 284°F)

#### 1.3 Material specification:

<b>Sleeve</b>	Copper-nickel alloy - CuNiFe
<b>Bite ring</b>	420 SST
<b>Separator ring</b>	PBT
<b>Sealing element</b>	EPDM / FKM
<b>Press connection</b>	Copper-nickel alloy - CuNiFe

### 2. DOCUMENTS AND DRAWINGS:

Manufacturer's Megapress CuNi 90/10 drawings attached to test report no. 120005000 dated 14.09.2017 and Megapress CuNi 90/10 XL drawings attached to test report no. 120005268-1 dated 31.10.2018.

### 3. TEST REPORTS:

- 3.1 Test report no. 023-17, fire resistance of pipeline components according ISO 19921 carried out at "Internationale Hydraulik Akademie GmbH" in Dresden - Weixdorf / GERMANY on 31.05.2017.
- 3.2 Test report no. 026-17, fire resistance of pipeline components according ISO 19921 carried out at "Internationale Hydraulik Akademie GmbH" in Dresden - Weixdorf / GERMANY on 31.05.2017.
- 3.3 Test report no. 120005000, tightness-, vibration-, pressure pulsation-, burst pressure, pull-out and vacuum test in accordance with IACS Test Rule P2.11.5:2016-03 in connection with seamless copper-nickel tubes, carried out at "Materialprüfungsamt Nordrhein-Westfalen" in Dortmund / GERMANY on 14.09.2017.
- 3.4 Test report no.: 120005268-1, carried out at "Materialprüfungsamt Nordrhein-Westfalen" in Dortmund / GERMANY dated: 31.10.2018.
- 3.5 Test report no.: 052-18, carried out at "Internationale Hydraulik Akademie GmbH" in Dresden - Weixdorf / GERMANY on 31.08.2018.

### 4. APPLICATION / LIMITATION:

- 4.1 These couplings are used as compression type couplings only.
- 4.2 The couplings with O-ring may be used for class III piping systems. The application of the couplings and their acceptable use for each service is indicated in the table below.

## Application:

<b>Flammable fluids (flash point &gt; 60°C)</b>	
- Cargo oil lines	(4)
- Fuel oil lines	(2)(3)
- Lubricating oil lines	(2)(3)
- Hydraulic oil	(2)(3)

<b>Inertgas</b>	
- Water seal effluent lines	
- Scrubber effluent lines	
- Main lines	(2)(4)
- Distribution lines	(4)

<b>Sea water</b>	
- Bilge lines	(1)
- Ballast system	(1)
- Cooling water system	(1)
- Water filled fire extinguishing systems	(3)
- Non water filled fire extinguishing systems	(3)
- Fire main (not permanently filled)	(3)
- Tank cleaning services	
- Non-essential systems	

<b>Fresh water</b>	
- Condensate return lines	(1)
- Cooling water system	(1)

<b>Miscellaneous</b>	
- Service air (non-essential)	

*Footnotes:*

(1): Inside machinery spaces of category A - only approved fire resistant types.

(2): Not inside machinery spaces of category A or accommodation spaces. It may be accepted in other machinery spaces provided the joints are located in easily visible and accessible positions.

(3): Approved fire resistant types except in cases where such mechanical joints are installed on exposed open decks, as defined in SOLAS II-2/Reg. 9.2.3.3.2.2(10) and not used for fuel oil lines.

(4): Only in pump rooms and open decks - only approved fire resistant types.

4.3 The packing material must be compatible with the fluid to be conveyed and the maximum working temperature.

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

4.5 In all cases, the associated pipes are to be suitably supported and anchored. The joints are to be at any time accessible, excepting inside tanks where permitted by the BUREAU VERITAS Rules.

**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 The pipe couplings are to be supplied by **Viega GmbH & Co. KG** in compliance with the type and the requirements described in this certificate.

5.2 This type of product is within the category HBV of BUREAU VERITAS Rule Note NR320 and as such does not require a BUREAU VERITAS product certificate.

5.3 **Viega GmbH & Co. KG** has to make the necessary arrangements to have its works recognised by BUREAU VERITAS in compliance with the requirements of NR320 for HBV products.

5.4 For information, **Viega GmbH & Co. KG** has declared to BUREAU VERITAS the following production site:  
**Viega Supply Chain GmbH & Co. KG, Attendorn / GERMANY**

**6. MARKING OF PRODUCT:**

Each pipe coupling is to be clearly marked with at least:

- Manufacturer's name or logo
- Type designation
- Size
- Nominal pressure
- Batch information

**7. OTHERS:**

- 7.1 It is **Viega GmbH & Co. KG**'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.
- 7.2 This certificate supersedes the Type Approval Certificate N° 51586/A1 BV issued on 10 Jan 2019 by the Society.

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