



Marine & Offshore

Certificate number: 49810/A1 BV

File number: ACM 135/2210/006

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 Technology GmbH & Co. KG

Attendorn - GERMANY

for the type of product

PIPE COUPLING WITH O-RING SEAL

MEGAPRESS PRESS-FITTING SYSTEM

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships

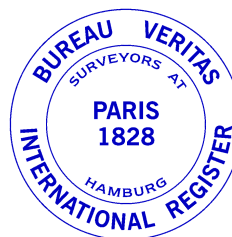
This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 16 Jun 2022

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 08 May 2018,

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 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.

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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 Press-Fitting System

1.1 Design:

- Carbon steel cold press system
- Press-fittings with O-ring seal
- The crimping is achieved with a special crimping tool
- An SC-contour on the fittings provides a visual indication of a non-pressed fitting

1.2 Technical data:

Nominal diameter	DN15 to DN50	DN65 to DN100
Nominal pressure [MPa]	1.6	

-Temperature range: -20°C - +110°C

1.3 Material specification:

Tubes	Black-, zinc plated-, industrially painted- and powder coated black carbon steel
Fittings	Specially shaped galvanized fittings (Zinc-Nickel coating)
O-ring DN15 to DN50	EPDM / HNBR
O-ring DN65 to DN100	FKM

2. DOCUMENTS AND DRAWINGS

2.1 Manufacturer's catalogue "Megapress G mit SC – Contour / F4" - DE 3/16 Katalog 2016

2.2 Manufacturer's catalogue "Megapress S XL" - DE Katalog 10/2017

3. TEST REPORTS

- 3.1 Test Report No. 006-12, Fire resistance of pipeline components according ISO 19921 carried out at "Internationale Hydraulik Akademie GmbH" in Dresden - Weixdorf / GERMANY on 09/07/2012.
- 3.2 Test Report No. 007-12, Fire resistance of pipeline components according ISO 19921 carried out at "Internationale Hydraulik Akademie GmbH" in Dresden - Weixdorf / GERMANY on 09/07/2012.
- 3.3 Test Report No. 008-12, Fire resistance of pipeline components according ISO 19921 carried out at "Internationale Hydraulik Akademie GmbH" in Dresden - Weixdorf / GERMANY on 09/07/2012.
- 3.4 Test Report No. 001-13, Fire resistance of pipeline components according ISO 19921 carried out at "Internationale Hydraulik Akademie GmbH" in Dresden - Weixdorf / GERMANY on 09/07/2012.
- 3.5 Test Report No. 051-17, Fire resistance of pipeline components according ISO 19921 carried out at "Internationale Hydraulik Akademie GmbH" in Dresden - Weixdorf / GERMANY on 04/10/2017.
- 3.6 Test Report No. 052-17, Fire resistance of pipeline components according ISO 19921 carried out at "Internationale Hydraulik Akademie GmbH" in Dresden - Weixdorf / GERMANY on 04/10/2017.
- 3.7 Test Report No. 120003993, tightness-, vibration-, pressure pulsation-, burst pressure, pull-out and vacuum test in accordance with IACS Test Rule P2.11.5, carried out at "Materialprüfungsamt Nordrhein-Westfalen" in Dortmund / GERMANY on 30/07/2012.
- 3.8 Test Report No. 120005114, tightness-, vibration-, pressure pulsation-, burst pressure, pull-out and vacuum test in accordance with IACS Test Rule P2.11.5, carried out at "Materialprüfungsamt Nordrhein-Westfalen" in Dortmund / GERMANY on 04/12/2017.

4. APPLICATION / LIMITATION

4.1 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:

Flammable fluids (flash point $\leq 60^{\circ}\text{C}$)	
Cargo oil lines	(4)
Crude oil washing lines	(4)
Vent lines	(3)

Inert gas	
Water seal effluent lines	
Scrubber effluent lines	
Main lines	(2)(4)
Distribution lines	(4)

Flammable fluids (flash point $> 60^{\circ}\text{C}$)	
Cargo oil lines	(4)
Fuel oil lines	(2)(3)
Lubricating oil lines	(2)(3)
Hydraulic oil	(2)(3)
Thermal oil	(2)(3)

Sea water	
Bilge lines	(1)
Water filled fire extinguishing systems, e.g. sprinkler systems	(3)
Non water filled fire extinguishing systems, e.g. foam, drencher systems	(3)
Fire main (not permanently filled)	(3)
Ballast systems	(1)
Cooling water system	(1)
Tank cleaning services	
Non-essential systems	

Fresh water	
Cooling water system	(1)
Condensate return	(1)
Non-essential systems	

Sanitary/Drains/Scuppers	
Deck drains (internal)	(6)
Sanitary drains	
Scuppers and discharge (overboard)	

Sounding/Vent	
Water tanks/Dry spaces	
Oil tanks (flash point $> 60^{\circ}\text{C}$)	(2)(3)

Miscellaneous	
Starting/Control air	(1)
Service air (non-essential)	
Brine	
CO ₂ system	(1)
Steam	(5)

Footnotes:

- (1): Inside machinery spaces of category A - only approved fire resistant types
(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 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.
(5): Slip type slip-on joints may be used for pipes on deck with a design pressure of 10 bar or less.
(6): Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.

- 4.2 The sealing material must be suitable for the intended services.
- 4.3 Assembly instructions given by the manufacturer are to be complied with.
- 4.4 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.
- 4.5 The use of Megapress pipe fittings for combustible media is to be restricted on case by case ship basis and only for fire safe types.

5. PRODUCTION SURVEY REQUIREMENTS

- 5.1 The fittings are to be supplied by **Viega Technology GmbH & Co. KG** 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 **Viega Technology 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:

Viega Supply Chain GmbH & Co. KG, Attendorn / GERMANY

6. MARKING OF PRODUCT

Each fitting is to be clearly marked with at least:

- Manufacturer's name or logo
- Type designation
- 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 **Viega Technology GmbH & Co. KG, Attendorn / 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 units and the conditions of this approval.
- 7.2 This certificate supersedes the Type Approval Certificate N° 49810/A0 BV issued on 16 June 2017 by the Society.

*** END OF CERTIFICATE ***