



CERTIFICATE NUMBER  
EFFECTIVE DATE  
EXPIRY DATE  
ABS TECHNICAL OFFICE

22-2328858-PDA-DUP  
13-Dec-2022  
12-Dec-2027  
Houston ESD - Piping

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

### **VIEGA GMBH & CO. KG**

located at

**VIEGA STRASEE 1, , D-99518 GROSSHERINGEN, Germany**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product:** Pipe Press Fitting System

**Model:** MegaPress CuNi 90/10 Press System, MegaPress 316 Press System, MegaPress 304 FKM Press System

**Endorsements:**

**Tier:** 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 12/Dec/2027 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

*John Vincent Ulep*

John Vincent Bog-Acon Ulep, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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**Product:** Pipe Press Fitting System  
**Model:** MegaPress CuNi 90/10 Press System, MegaPress 316 Press System, MegaPress 304 FKM Press System

**Endorsements:**

**Intended Service:**

For use in Class III piping systems as per IACS 2.7.4 Table 7  
Inert Gas: water seal effluent lines (4), scrubber effluent lines (5),  
Flammable Fluids (flashpoint > 60° C)\*: fuel oil lines (9), lubricating oil lines (10), hydraulic oil (11), thermal oil (12),  
Sea Water: water filled fire extinguishing systems (14), ballast system (16), cooling water system (17), non-essential systems (19),  
Fresh Water: cooling water systems (20), condensate return (21), non-essential system (22),  
Sanitary/Drains/Scuppers: deck drains (internal)(23), sanitary drains (24), scuppers and discharge (overboard)(25),  
Sounding/Vent: water tanks/dry spaces (26), oil tanks (f.p.>60°C)(27),  
Miscellaneous: service air (non-essential)(29), brine (30), steam (33)

**Description:**

MegaPress Stainless Steel Cold Press Compression Coupling fittings and pipe systems with Smart Connect for the US sizes 1/2" to 4". The Smart Connect feature enables quick identification of unpressed fittings. The fittings are offered with different sealing elements EPDM and FKM. The press connection is performed by a hydraulic press tool.

MegaPress CuNi 90/10 Cold Press Compression Coupling fittings and pipe systems with Smart Connect for the US sizes 1/2" to 4". The Smart Connect feature enables quick identification of unpressed fittings. The fittings are offered with a FKM sealing element. The press connection is performed by a hydraulic press tool. Integral with EPDM, FKM and HNBR sealing elements and SC.

**Rating:**

Stainless fittings:

These fittings are designed to be installed with ASTM A312 stainless steel pipes.  
The pipe wall thickness may be Schedule 10 or Schedule 40.  
The fittings may also be used with Schedule 80 pipe limited to the maximum pressure listed above.  
The fittings are an approved fire resistant type.  
Applications as per 4-6-2/Table 9 &10 of the Marine Vessels Rules for compression coupling.  
Slip on joint requirements shall not apply to MegaPress Stainless fittings.

M.A.W.P. 1/2" – 2 1/2" 16 bar (232 psi), 1.6 MPa

M.A.W.P. 3" 12.5 bar (181 psi), 1.25 MPa

M.A.W.P. 4" 10 bar (145 psi), 1.0 MPa

Vacuum lines 170 mbar absolute (-12.04 psi/-24.5 in Hg/-0.083 MPa) acc. to the IACS test methods P2.11.5.5.7.

Maximum Operating Temperature

FKM: 23°F – 284°F (-5°C - 140°C)

EPDM: 14°F – 230°F (-10°C - 110°C)

HNBR: -40°F – 180°F (-40°C - 82°C)

CuNi fittings:

The fittings are designed to be installed with Class 200 and Schedule 40 90/10 copper nickel pipe.  
The fittings are an approved fire resistant type.

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Applications as per 4-6-2/Table 9 &10 of the Marine Vessels Rules for compression couplings.  
Slip on joint requirements shall not apply to MegaPress CuNi 90/10 fittings.

M.A.W.P. ½” – 3” 16 bar (232 psi), 1.6 MPa  
M.A.W.P. 4” 12.5 bar (181 psi), 1.25 MPa  
Vacuum lines 170 mbar absolute (-12.04 psi/-24.5 in Hg/-0.083 MPa) acc. to the IACS test methods P2.11.5.5.7.

Maximum Operating Temperature  
FKM: 23°F – 284°F (-5°C - 140°C)  
EPDM: 14°F – 230°F (-10°C - 110°C)  
HNBR: -40°F – 180°F (-40°C - 82°C)

**Service Restriction:**

1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
2. The fittings are to be installed in accordance with the manufacturer's recommendation / limitations / requirements.
3. EPDM should not be used in flammable fluid applications.
4. Flammable fluid applications require a HNBR or FKM sealing element.
5. The MegaPress 316, MegaPress 304 FKM is not to be used in any direct connection to the shell of the vessel (only inboard of required shell valves).
6. Only to be used in class III piping and not to be used in class I and class II piping per 4-6-2/Table 11 of the Marine Vessels Rules.
7. MegaPress 316, MegaPress 304 FKM is not to be used in the piping section directly connected to the vessel's side below the bulkhead deck of passenger vessels and freeboard deck of cargo vessels or tanks containing flammable fluids per 4-6-2/5.9.1( f) of the Marine Vessels Rules.

**Comments:**

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. Each particular application, including deck/bulkhead penetrations, of the press fitting system is to be specifically approved in connection with the relevant system and installation.
3. The manufacturer's instructions regarding compatibility of pipe/ fitting/ sealing ring materials and working media are to be followed.
4. For temperatures below -18 °C (0 °F) Charpy Impact test is required as per 2-3-13/15 of the Marine Vessels Rules.

**Notes/Drawing/Documentation:**

Supporting Documentation (Ref. task T1683223)  
Dwg. 021-17 Test Certificate 021-17\_316\_2, dated 23-05-2017, Revision-A, Testing Facility: IHA; Pages: 7;  
Dwg. 022-17 Test Certificate 021-17\_304\_2, dated 23-05-2017, Revision-A, Testing Facility: IHA; Pages: 7;  
Dwg. 024-17 Test Certificate 021-17\_316\_12, dated 23-05-2017, Revision-A, Testing Facility: IHA; Pages: 7;  
Dwg. 025-17 Test Certificate 021-17\_304\_12, dated 23-05-2017, Revision-A, Testing Facility: IHA; Pages: 7;  
Dwg. Prüfbericht 120004999 - 120004999\_MPA\_Megapress Stainless dated 26-07-2017, Revision:-, Testing Facility: MPA NRW; Pages:77;  
Dwg. 304 Stainless Dwg - MegaPress Stainless 304 Drawings dated 11.29.2016,  
Dwg. 316 Assembly Drawings - Assembly drawings Megapress Stainless 316,  
Dwg. CuNi Drawings - MegaPress CuNi Drawings,  
Dwg. IM-MP (Stainless) 591324 1017, Installation Manual-MP (Stainless) 591324 1017,  
Dwg. PI-MP 590042 0416 (MegaPress Stainless),  
Dwg. PI-MP 590078 0616 (MegaPress Copper Nickel) - Product Instructions 590078 0317(MegaPress CuNi 90-10),  
Dwg. Prüfbericht Nr 120005000 vom – MPA\_Megapress CuNi dated 14-09-2017, Revision A, Testing Facility: MPA NRW; Pages:51;  
Dwg. IM-MP (CuNi) 593258 1017 - Viega MegaPress CuNi System Installation Manual, Pages: 27;  
Dwg. 023-17 Test Certificate 023-17\_Cunife\_2, dated 23-05-2017, Revision-A, Testing Facility: IHA; Pages: 7;  
Dwg. 026-17 Test Certificate 026-17\_Cunife\_12, dated 23-05-2017, Revision-A, Testing Facility: IHA; Pages: 7;

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**Terms of Validity:**

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**STANDARDS**

**ABS Rules:**

Rules for Conditions of Classification, Part 1 - 2022 Rules for Building and Classing Marine Vessels 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:  
2022 Marine Vessels Rules: 4-6-1/5, 4-6-1/7, 4-6-2/3, 4-6-2/5.1, 4-6-2/5.9 and 4-6-2/Table 4/Table 10/Table 11/Table 12;

Rules for Conditions of Classification, Part 1 - 2022 Rules for Building and Classing Mobile Offshore Units 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:  
2022 Mobile Offshore Units Rules: 4-2-1/5, 4-2-1/11.13, 4-2-2/5;

Rules for Conditions of Classification, Part 1 - 2022 High Speed Craft 1-1-4/11.9, 1-1-A2, 1-1-A3, which covers the following:  
2022 High Speed Naval Craft Rules: 4-4-2/13.7

**National:**

N/A

**International:**

IACS UR P2.11.2001/Rev.5 2021;  
SO 19921 : 2005

**Government:**

USCG Ltr 16714/ 46 CFR 56 20193660  
NAVSEA Letter Ser05Z\_181 14 Apr 22 Viega MegaPress CuNi

**EUMED:**

N/A

**OTHERS:**

N/A