



Confirmation of Product Type Approval

Company Name: VIEGA GMBH & CO. KG

Address: VIEGA STRASEE 1, D-99518 GROSSHERINGEN, Germany

Product: Pipe Press Fitting System

Model(s): MegaPress CuNi 90/10 Press System, MegaPress 316, MegaPress 304 FKM, (formerly known as Viega MegaPress CuNi 90/10, Viega MegaPress CuNi 90/10 XL Viega MegaPress Stainless, Viega MegaPress Stainless XL)

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	17-1683223-1-PDA-DUP	12-AUG-2020	26-NOV-2022
Manufacturing Assessment (MA)	16-AG3180761	04-AUG-2016	03-AUG-2021
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

For use in Class III piping. –Flammable Fluids (flashpoint < 60° C)* : cargo oil lines (1), crude oil washing lines (2), vent lines (3), Inert Gas: water seal effluent lines (4), scrubber effluent lines (5), main lines (6), distribution lines (7), Flammable Fluids (flashpoint > 60° C)*: cargo oil lines (8), fuel oil lines (9), lubricating oil lines (10), hydraulic oil (11), thermal oil (12), Sea Water: bilge lines (13), water filled fire extinguishing systems (14), non-water filled extinguishing systems (15), fire main (not permanently filled)(16), ballast system (17), cooling water system (18), tank cleaning services (19), non-essential systems (20), Fresh Water: cooling water systems (21), condensate return (22), non-essential system (23), Sanitary/Drains/Scuppers: deck drains (internal)(24), sanitary drains (25), scuppers and discharge (overboard)(26), Sounding/Vent: water tanks/dry spaces (27), oil tanks (f.p.>60°C)(28), Miscellaneous: starting/control air (29), service air (non-essential)(30), brine (31), CO² system (32), steam (33)

*Flammable fluid applications require a HNBR or FKM sealing element.

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 - Feature. (*Flammable fluid applications

require a HNBR or FKM sealing element.)

The fittings are an approved fire resistant type. Applications per 4-6-2/Tables 9 &10 of the MVR for compression couplings/IACS P2.7.4 Rev. 9, Mechanical Joints 4-6-2/Tables 6 & 7. *Flammable fluid applications require a HNBR or FKM sealing element.

Ratings

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. ½" – 2 ½" 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.

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 Restrictions

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 1 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 High Speed Naval Craft 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, Drawings and Documentation

Drawing List as per Attachment PDA 17-1683223-1-PDA

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 26/Nov/2022 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.

ABS Rules

Rules for Conditions of Classification, Part 1 - 2020 Rules for Building and Classing Marine Vessels 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2020 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 - 2020 Rules for Building and Classing Mobile Offshore Units 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2020 Mobile Offshore Units Rules: 1-1-4/9.7, 1-1-A2 & A3, 4-2-1/5, 4-2-1/11.13, 4-2-2/5 and 4-2-2/5.7;

Rules for Conditions of Classification, Part 1 - 2020 High Speed Craft 1-1-4/11.9, 1-1-A2, 1-1-A3, which covers the following:

2020 High Speed Naval Craft Rules: 4-6-2/5.9;

International Standards

IACS UR P2.11.2001/Rev.4 2016; ISO 19921 : 2005;

EU-MED Standards

NA

National Standards

NA

Government Standards

USCG Ltr 16714/ 46 CFR 56 2019-3660

Other Standards

NA



A handwritten signature in blue ink, appearing to read "James W. ...".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 07-Jul-2021 8:18

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

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 prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does

not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.