



CERTIFICATE NUMBER 18-GE1750071-PDA

EFFECTIVE DATE 06-June-2018

EXPIRATION DATE 05-June-2023

ABS TECHNICAL OFFICE Genoa Engineering Department

## CERTIFICATE OF Product Design Assessment

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

**SITINDUSTRIE MARINE SAS**

located at

16 Rue Max Planck, Technopole De Chateau Gombert,  
Marseille, France 13013

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, Copper and Copper Alloy

Model ASTM B466/B467 - C70600/C71500, EEMUA234-7060X, EN 12449-CUNI10FE1.6MN

This Product Design Assessment (PDA) Certificate remains valid until 05-June-2023 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

Cristina Generale  
Senior Engineer

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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**Tier: 5 - Unit Certification Required**

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**Product:** Pipe, Copper and Copper Alloy

**Model:** ASTM B466/B467 - C70600/C71500, EEMUA234-7060X, EN 12449-CUNI10FE1.6MN

**Intended Service:**

Sea water systems for Offshore Units, Steel Vessels, MODUs, and Offshore Facilities.

**Description:**

Copper Alloy Seamless and Welded Pipes

**Rating:**

Pipe Size: All standard pipe size

Pipe Pressure: 20 bar, in accordance with Standards

Pipe Temperature: refer to Service Restrictions

**Service Restriction:**

1. Unit Certification is required for Class I and II pipes & tubes, except hydraulic piping. Otherwise, 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. Copper and copper alloy pipes & tubes may be used for Classes I and II systems, provided they are of the seamless drawn type. Seam-Welded Tube is only to be used for class III piping in accordance with 4-6-2/3.3 of the 2018 Steel Vessels Rules.
3. Copper and copper alloys are not to be used for fluids having a temperature greater than the following:  
Copper-nickel: 300 degree Celsius  
All other copper and copper alloys: 200 degree Celsius
4. The scope of Type Approval is to comply with MSC.1/Circ.1221 dated 11 December 2006

**Comments:**

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. Selection of the pipes and tubes are subject to the wall thickness calculation, which takes into account the design pressure and temperature of the piping system and the materials of the selected fittings and all applicable additional allowances (e.g. erosion, corrosion, and thread depth for threaded pipe) in accordance with 4-6-2/5.1.1 & 5.1.2 of the 2018 Steel Vessels Rules and to the minimum wall thickness requirement in accordance with 4-6-2/5.1.3 of the 2018 Steel Vessels Rules.

**Notes/Drawing/Documentation:**

- Drawing No. 09112017-1, ABS Witnessed reports - Certificates 4747 09, Revision: 1, Pages: 1. Test date 09 Nov 2017. Test Place Soissons
- Drawing No. 09112017-2, ABS Witnessed reports - Hydrotest updated, Revision: 1, Pages: 1. Test date 09 Nov 2017. Test Place Soissons
- Drawing No. 09112017-3, ABS Witnessed reports - Scope, Revision: 1, Pages: 1. Test date 09 Nov 2017. Test Place Soissons
- Drawing No. 20180119011, 1 Material specification 01, Revision: 1, Pages: 1
- Drawing No. 20180119012, 1 Material specification 02, Revision: 1, Pages: 1
- Drawing No. 20180119013, 1 Material specification 03, Revision: 1, Pages: 1
- Drawing No. 20180119014, 1 Material specification 04, Revision: 1, Pages: 1
- Drawing No. 20180119015, 1 Material specification 05, Revision: 1, Pages: 1
- Drawing No. 20180119016, 1 Material specification 06, Revision: 1, Pages: 1
- Drawing No. 20180119021, 2 Hydrostatic test 01, Revision: 1, Pages: 1. Test date 09 Oct 2017. Test Place Marseille
- Drawing No. 20180119022, 2 Hydrostatic test 2, Revision: 1, Pages: 1. Test date 09 Oct 2017. Test Place Soissons
- Drawing No. ABS FORM - TA, ABS FORM - TA, Revision: 0, Pages: 1
- Drawing No. ABS PDA table - Sitindustrie Marine-20180319, Document Table, Revision: 1, Pages: 1
- Drawing No. ISO 9001-14001-18001 M, MARSEILLE, Revision: 0, Pages: 1

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**Tier: 5 - Unit Certification Required**

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Drawing No. ISO 9001-14001-18001 S, SOISSONS, Revision: 0, Pages: 1

**Terms of Validity:**

This Product Design Assessment (PDA) Certificate 18-GE1750071-PDA, dated 06/Jun/2018 remains valid until 05/Jun/2023 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

**STANDARDS**

**ABS Rules:**

Rules for Condition of Classification (2018): 1-1-4/7.7, 1-1-A3 and A4, which covers the following:

Rules for Building and Classing Steel Vessels (2018): 4-6-2/3.3, 4-6-2/5.17

Rules for Building and Classing Steel Vessels Under 90 Meters (295 Feet) in Length (2018): 4-4-2/5

Rules for Conditions of Classifications – Offshore Units and Structures (2018): 1.1.4/9.7, 1-1-A2 and A3, which covers the following:

Rules for Building and Classing Mobile Offshore Drilling Units (2018): 4-4-2/5

**National:**

EN 12449 Edition 2016

ASTM B466 Edition 2018

ASTM B467 Edition 2014

**International:**

NA

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

EEMUA 234 Edition 2015 (Incorporating EEMUA 144, 145 and 146)