



CERTIFICATE NUMBER 21-2152223-PDA
EFFECTIVE DATE 24-Aug-2021
EXPIRATION DATE 23-Aug-2026
ABS TECHNICAL OFFICE GCD Materials

CERTIFICATE OF Product Design Assessment

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

ZHEJIANG BNJIS STAINLESS STEEL CO., LTD.

located at

**NO. 3, JINGANG AVENUE, JINGANG INDUSTRIAL ZONE, TASHI,
LISHUI, China, 323799**

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, Stainless Steel

**Model ASTM A213, A312 TP304L, TP310S, TP316L, TP321 with O.D. 17.15 mm X W.T. 2.31 mm,
O.D. 88.9 mm X W.T. 5.49 mm, O.D. 219 mm X 12.7 mm**

This Product Design Assessment (PDA) Certificate remains valid until 23/Aug/2026 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

Bin-Hong Wang, Director of Engineering

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)

ZHEJIANGBNJISSTAINLESSSTEEL CO. LTD.

NO. 3, JINGANG AVENUE, JINGANG INDUSTRIAL ZONE, TASHI

LISHUI ZHEJIANG

China 323799

Telephone: 0578-7336006

Fax: 0578-7330577

Email: 327239695@qq.com

Web: NA

Tier: 5 - Unit Certification Required

Product: Pipe, Stainless Steel

Model: ASTM A213, A312 TP304L, TP310S, TP316L, TP321 with O.D. 17.15 mm X W.T. 2.31 mm,
O.D. 88.9 mm X W.T. 5.49 mm, O.D. 219 mm X 12.7 mm

Endorsements:

Intended Service:

Marine and Offshore Applications - Seamless Steel Tubes and Pipes (Process Piping only), piping system for other fluids (including water, air, gas, non-flammable hydraulic oil)

Description:

Product: Seamless Stainless Steel Tubes

Grades/Standards: ASTM A213 & A312, TP304L, TP310S, TP316L, TP321

Manufacturing process: Cold rolled & Cold drawn

Delivery Condition: Solution Treated

Rating:

Pipe Size: max. O.D. 219 mm, max. W.T. 12.7 mm

Service Restriction:

1. Unit Certification is required for this product used in Piping Class I & II except for hydraulic piping. Otherwise, Unit Certification is not required for this product.
2. In order to unit certify the material, the pipes/tubes are to be tested for all the applicable mechanical tests and witnessed to the satisfaction of an attending ABS Surveyor to meet the requirements of approved grades and standards/Rules.
3. 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.

Comments:

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. All Steel Pipe Fittings are to be suitable for the intended piping system in accordance with 4-6-1/Table 1 of the ABS Marine Vessels Rules.
3. The piping component is to bear permanent identification, such as manufacturer's name or trademark, standard of compliance, material identity, pressure rating, etc., as required by the standard of compliance or the manufacturer's specification.
4. All tubes (pipes) are to be hydrostatically or NDE tested during manufacturing as per ABS Marine Vessels Rules 2-3-12/29.1. In addition, Class I & II pipes are to be hydrostatically tested as per ABS Marine Vessels Rules 4-6-2/7.3.

Notes/Drawing/Documentation:

Drawing No. Client's feedback, Client's feedback about PDA listing, Revision: 0, Pages: 1

Drawing No. TP304L Test Report, Test Report from Zhejiang BNJIS Stainless Steel Co., Ltd. dated 26 May 2021, Revision: 0, Pages: 1

Drawing No. TP310S Test Report, Test Report from Zhejiang BNJIS Stainless Steel Co., Ltd. dated 26 May 2021, Revision: 0, Pages: 1

Drawing No. TP316L Test Report, Test Report from Zhejiang BNJIS Stainless Steel Co., Ltd. dated 26 May 2021, Revision: 0, Pages: 1

Drawing No. TP321 Test Report, Test Report from Zhejiang BNJIS Stainless Steel Co., Ltd. dated 26 May 2021, Revision: 0, Pages: 1

Drawing No. NA0, Product Design Approval Applicant Document for Seamless Steel Pipe, Revision: 0, Pages: 1

Drawing No. NA1, ABS PDA Test Plan, Revision: 0, Pages: 1

Drawing No. TA Application Form and Asbestos Free Declaration, TA Application Form and Asbestos Free Declaration, Revision: 0, Pages: 1

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Web: NA

Tier: 5 - Unit Certification Required

Terms of Validity:

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STANDARDS

ABS Rules:

ABS Marine Vessels Rules (2021): 1-1-4/7.7, 1-1-A3, 1-1-A4, 2-3-12, 4-6-1, 4-6-2

ABS Mobile Offshore Units (2021): 1-1-4/9.7, 1-1-A2, 1-1-A3, 2-3-12, 4-2-1, 4-2-2

National:

ASTM A213/A213M (2021)

ASTM A312/A312M (2021)

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA