



CERTIFICATE NUMBER
17-LD1586887-PDA

DATE
11 Jan 2017

ABS TECHNICAL OFFICE
London Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of
TUBACEX TUBOS INOXIDABLES, S.A.U.

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: **Steel Pipe and Tubes**

Model: **Seamless Stainless and Alloy Tubes & Pipes- Hot Finished**

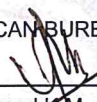
This Product Design Assessment (PDA) Certificate 17-LD1586887-PDA, dated 11/Jan/2017 remains valid until 10/Jan/2022 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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.

AMERICAN BUREAU OF SHIPPING


Mohammed K.M. Abbas
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 the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

TUBACEX TUBOS INOXIDABLES

TRES CRUCES 8

A-01140227

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Web: www.tubacex.com

Tier: 5 - Unit Certification Required

Product: Steel Pipe and Tubes

Model: Seamless Stainless and Alloy Tubes & Pipes- Hot Finished

Intended Service:

For use in piping systems in marine and offshore facilities.

Description:

Sizes: ½" Sch 10 to 8" Sch XXS

Material Grades: TP304-304L, TP304-304H, TP316-316L, TP316H, TP321, TP321H, TP347, TP347H, TP317-317L, TP309S, TP309H, TP310S, TP310H, UNS S31254, UNS N8904, UNS N8810 (800H), UNS N8811 (800HT), TP304-304H, TP321, TP321H, TP347, TP347H, TP317-317L, TP310S, TP304, TP304H, TP316, TP321, TP321H, TP347, TP347H, UNS S31803, UNS S31803 - S32205, UNS32750, UNS S32760, UNS N8810, UNS N8811, UNS N08825, UNS N08020

Rating:

Pressure / temperature ratings as per relevant standard.

Service Restriction:

Unit Certification is required for this product for use in Class I, and Class II piping, except for hydraulic and Class III piping, as per section 4-6-1/7.1.1 of ABS Steel Vessel Rules.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in the product.

Notes/Drawing/Documentation:

1) Tubacex Tubos Inoxidables, Inspection Certificate nos. 527080 dated 02-08-11, 526173 dated 20-07-11, 525011 dated 07-07-11, 521661 dated 01-06-11, 523103 dated 16-06-11, 531750 dated 21-10-11, 528630 dated 14-09-11, 529460 dated 26-09-11, 529916 dated 30-09-11, 530454 dated 06-10-11, 528672 dated 15-09-11, 531185 dated 17-10-11, 530310 dated 05-10-11, 530150 dated 04-10-11, 528644 dated 14-09-11, 511607 dated 14-02-11, 524945 dated 06-07-11, 517849 dated 18-04-11, 511617 dated 14-02-11, 525551 dated 14-07-11, 530370 dated 05-10-11, 523096 dated 16-06-11, 522313 dated 08-06-11, 527182 dated 03-08-11, 528864 dated 19-09-11, 526644 dated 27-07-11, 531293 dated 18-10-11, 530630 dated 10-10-11, 527282 dated 05-08-11, 530150 dated 04-10-11, 529750 dated 28-09-11, 528647 dated 14-09-11, 527159 dated 02-08-11.

Terms of Validity:

This Product Design Assessment (PDA) Certificate 17-LD1586887-PDA, dated 11/Jan/2017 remains valid until 10/Jan/2022 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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STANDARDS

TUBACEX TUBOS INOXIDABLES

TRES CRUCES 8

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Tier: 5 - Unit Certification Required

ABS Rules:

2017 ABS Steel Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-1/7, 4-6-2/3

2017 ABS Mobile Offshore Drilling Units 1-1-4/9.7, 1-1-A2, 1-1-A3

National:

NA

International:

ASTM A312-16a (2016) , ASME SA312 (2015), ASTM A213 - 15c (2015) , ASME SA213 (2015), ASTM A376 -14 (2014), ASME SA376(2015), ASTM A790-16(2016) , ASME SA790 (2015), ASTM B407-08a (2014), ASME SB407 (2015), ASTM B423-11 (2016), ASME SB423 (2015), ASTM B729-05 (2014), ASME SB729 (2015)

Government:

NA

EUMED:

NA

OTHERS:

NA