



CERTIFICATE NUMBER 19-HG1858884-PDA
EFFECTIVE DATE 03-Jun-2019
EXPIRATION DATE 02-Jun-2024
ABS TECHNICAL OFFICE
Hamburg Engineering Services

CERTIFICATE OF
Product Design Assessment

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

WILH. SCHULZ GMBH
located at
KUHLESHUETTE 111, D-47809 KREFELD, 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 Seamless and welded pipes and fittings

Model WS

This Product Design Assessment (PDA) Certificate remains valid until 02-Jun-2024 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



Efstratios Maliatsos
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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Tier: 2 - PDA Issued

Product: Seamless and welded pipes and fittings
Model: WS
Intended Service:
For use in ships piping systems.

Description:
Pipes and fittings (elbows, tees, reducers, caps):

1. OD 21.3 to 1066.8 mm, wall thickness 2.11 to 49.99 mm, made of Austenitic Stainless Steel (pipes acc. to ASTM A312/ ASME SA 312/ DIN EN 10216-5/ 10217-7 fittings acc. to ASTM A403/ ASME SA 403/ DIN 2609/ DIN EN 10253-4) or Duplex (pipes acc. to ASTM A790/ ASME SA 790/ ASTM A 928/ ASME SA 928/ DIN EN 10216-5/ DIN EN 10217-7. fittings acc. to ASTM A815/ ASME SA 815/ DIN 2609/ DIN EN 10253-4), or Carbon Steel (pipes acc. to ASTM A333/ ASME SA 333/ DIN EN 10216-5/ DIN EN 10217-7, fittings acc. to ASTM A234/ ASME SA 234 or A420/ ASME SA 420/ DIN 2609/ DIN EN 10253-4)
2. OD 114.3 to 609.6 mm, wall thickness 2.22 to 49.99 mm + 3,0 mm Clad made of Carbon Steel + Cladding Grade N06625 or N08825 (pipes acc. to ASTM A333/ ASME SA 333 + Clad / API 5LD, fittings acc. to ASTM A860/ ASME SA 860 with Clad).
3. OD 33.4 to 273.0 mm, wall thickness 2.11 to 12.7 mm made of Titanium (pipes acc. to ASTM B337/ ASME SB 337/ B862/ ASME SB 862 DIN 17850/ VdTÜV 230, fittings acc. to ASTM B366/ ASME SB 366) or Aluminium (pipes acc. to ASTM B241/ ASME SB 241/ DIN1746/ EN754. fittings acc. to ASTM B361/ ASME SB 361.
4. OD 33.4 to 609.6 mm, wall thickness 2.11 to 12.7 mm made of Cu/Ni (Copper Nickel Alloy) 90/10, EEMUA 144/146 (pipes acc. to EEMUA No. 144/ DIN 86018/ 85004/ DIN86088/ 89, ASTM B467/ ASME SB467, fittings acc. to EEMUA No. 146).
5. OD 33.4 to 609.6 mm, wall thickness 2.11 to 49.99 mm made of Nickel Alloy, e.g. N06625/ N08825 (pipes acc. to ASTM B444/ ASME SB 444/ B705/ ASME SB 705 for N06625 and ASTM B423/ ASME SB 423 for N08825, fittings acc. to ASTM B366/ ASME SB 366).

Rating:
Pressure/ temperature ratings as per relevant standard.
For diameter and thickness details refer to the Description field.

Service Restriction:
Unit Certification is required for this product (Class I and II pipes).

Comments:
1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in these products.
2) The use of each particular pipe and fitting is to be specifically approved for the relevant application. In this conjunction, the manufacturer is to certify that the piping component complies with the standard to which the component is designed, fabricated and tested and to report the results of tests so conducted. Materials, pressure/ temperature ratings and standard of compliance are to be identified and the pipes/ fittings marked as applicable.

Notes/Drawing/Documentation:
Drawing no. 53845, Elbow 90°, Revision: 1, Pages: 1
Drawing no. 53799, Reduced Tee, Revision: 1, Pages: 1
Drawing no. 53827, Exc Red, Revision: 1, Pages: 1
Drawing no. 55483, Cap Blank, Revision: 1, Pages: 1

Terms of Validity:
This Product Design Assessment (PDA) Certificate 19-HG1858884-PDA, dated 03/Jun/2019 remains valid until

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Tier: 2 - PDA Issued

02/Jun/2024 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:

ABS Rules for Conditions of Classification (2019) 1-1-4/7.7, 1-1-A3 and A4 which covers the following:
2019 Rules for Building and Classing Marine Vessels 4-6-2/5.5
2019 Rules for Building and Classing Steel Vessels 4-6-2/5.5
2019 Rules for Building and Classing Steel Vessels Under 90 Meters (295 feet) in Length 4-4-2/13.1 and 4-4-2/13.3
2019 Rules for Building and Classing Offshore Support Vessels 4-6-2/5.5
2019 Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways 4-3-2/13.1.1 and 4-3-2/13.3

ABS Rules for Conditions of Classification – Offshore Units and Structures (2019) 1-1-4/9.7, 1-1-A2 and A3 which covers the following:

2019 Rules for Building and Classing Mobile Offshore Units 4-2-2/11.1 and 4-2-2/11.3
2019 Rules for Building and Classing Mobile Offshore Drilling Units 4-2-2/11.1 and 4-2-2/11.3

ABS Rules for Conditions of Classification – High Speed Craft (2019) 1-1-4/11.9, 1-1-A2 and A3 which covers the following:

2019 Rules for Building and Classing High-Speed Craft 4-4-2/13.1 and 4-4-2/13.3

National:

None

International:

None

Government:

None

EUMED:

None

OTHERS:

None