



Work Order - WO0038936
Product Design Assessment (PDA)
Seamless and welded pipes and fittings,
Model: WS
PDA No.: 24-0038936-PDA

Attention: Ms. Heike Ballik, WILHELM SCHULZ GMBH (WCN: 147802)

The documents shown in the attached list are reviewed in accordance with the applicable requirements indicated in the PDA along with the service restrictions and comments.

We recommend that you monitor the ABS Rules, Guides and other standards used in the Assessment. These Rules, Guides and standards often change on an annual basis, and you must comply with the new Rules, Guides and standards in order for the product to be used on an ABS classed vessel or facility contracted under the new Rules, Guides or specifications.

Additionally, we acknowledge the PDA request form warranting that the materials used in the product(s) are free from asbestos.

For any clarifications, contact Mr. Konstantinos Chronakis at +49 40 3785 8704 or kchronakis@eagle.org.

Very truly yours,

Pier Carazzai
Vice President of Engineering

Electronically Signed by: Efstratios Maliatsos



Documents List

Drawing No.	Rev. No.	Title	Status
-	0	Application for revalidation of 19-HG185884-PDA	Document Retained
-	0	Declaration of Conformity 19-HG185884-PDA	Document Retained

Electronic copies of the documents appropriately stamped, are available in the ABS Client Portal.

Included: PDA Certificate



CERTIFICATE NUMBER	24-0038936-PDA
EFFECTIVE DATE	24-Jul-2024
EXPIRY DATE	23-Jul-2029
ABS TECHNICAL OFFICE	Hamburg Engineering Department

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

Endorsements:

Tier: 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 23/Jul/2029 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
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)

WILH. SCHULZ GMBH

KUHLESHUETTE 111

D-47809 KREFELD

Germany

Telephone: 49-2151-517145

Fax: 49-2151-517182

Email: ballik@wschulz.com

Web: www.wschulz.com

Tier: 2 - PDA Issued

Product: Seamless and welded pipes and fittings

Model: WS

Endorsements:

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:

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 23/Jul/2029 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever

WILH. SCHULZ GMBH

KUHLESHUETTE 111

D-47809 KREFELD

Germany

Telephone: 49-2151-517145

Fax: 49-2151-517182

Email: ballik@wschulz.com

Web: www.wschulz.com

Tier: 2 - PDA Issued

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.

STANDARDS

ABS Rules:

ABS Rules for Conditions of Classification (2024) 1A-1-4/7.7, 1A-1-A3 and A4, which covers the following:
2024 Rules for Building and Classing Marine Vessels: 4-6-1/5, 4-6-2/5.5

ABS Rules for Conditions of Classification (2024) 1B-1-4/9.7, 1B-1-A2 and A3, which covers the following:
2024 Rules for Building and Classing Mobile Offshore Units: 4-2-1/5, 4-2-2/11.1, 11.3

ABS Rules for Conditions of Classification (2024) 1C-1-4/11.9, 1-1-A2 and A3, which cover the following:
2024 Rules for Building and Classing High Speed Craft: 4-4-2/13.1, 13.3

National:

None

International:

None

Government:

None

EUMED:

None

OTHERS:

None