



CERTIFICATE NUMBER 19-HG1892870-PDA
EFFECTIVE DATE 16-Sep-2019
EXPIRATION DATE 15-Sep -2024
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

ELWA ELEKTRO-WAERME GMBH & CO. KG

located at

FRAUENSTR 26, D-82216 MAISACH, 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 **Pressure Vessel**

Model **Type 4600**

This Product Design Assessment (PDA) Certificate remains valid until expiration date 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

Dimitrios Nikolakis
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)

ELWA ELEKTRO-WAERME GMBH & CO. KG

FRAUENSTR 26

D-82216 MAISACH

Germany

Telephone: NA

Fax:

Email: sales@elwa.com

Web: www.elwa.com

Tier: 4 - Enrolled in PQA Program

Product: Pressure Vessel**Model:** Type 4600**Intended Service:**

Continuous flow heater.

Description:

Continuous flow heater 7 to 290 ltr.

Medium: Water or Oil

Material of Shell/Heads P265GH

For more details click on link 'Additional Product Information'

Rating:

Working/Test Pressure 10/15 bar

Max. working Temperature for water 95°C

Max. working Temperature for oil 150°C

Service Restriction:

Unit Certification is required for this product in accordance with section 4-1-1/Table 5 of the Marine Vessels Rules (Group II)

Comments:

- Material test reports are to be made available to the Surveyors and are to be traceable to materials used.
- Welding procedure qualification records, welder qualifications and production welds are to be to the satisfaction of the Bureau's Surveyors.
- The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:

See attached document.

Terms of Validity:

This Product Design Assessment (PDA) Certificate 19-HG1892870-PDA, dated 16/Sep/2019 remains valid until 15/Sep/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:**2019 Marine Vessel Rules, 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-1-1/Table 5, Section 4, 4-4-1/7, 4-4-1/Table 2, 4-4-1/1.9
2019 Mobile Offshore Drilling Units Rules, 1-1-4/9.7, 1-1-A2, 1-1-A3, 1-1-4

ELWA ELEKTRO-WAERME GMBH & CO. KG

FRAUENSTR 26

D-82216 MAISACH

Germany

Telephone: NA

Fax:

Email: sales@elwa.com

Web: www.elwa.com

Tier: 4 - Enrolled in PQA Program

National:

AD 2000 Merkblaeter (German pressure vessel code), July 2019

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA

Attached to 19-HG1892870-PDA covering
 ELWAs Pressure Vessel Type 4600
 Issuance Date: 16-Sep-2019
 Expiry Date: 15-Sep-2024

ELWA –ELEKTROWAERME-MUENCHEN/Pressure Vessel Type 4600			
Size/Type	Vessel Length [mm]	Nominal Content [liter]	Shell Diameter [mm]
4603/4603-V	850/1050	7/9	114,3
4606/4606-V	850/1050	15/19	168.3
4609	850	21	200
4612/4612-V	850/1050	20/25	200
4618	850	32	250
4620-V	1250	30	200
4624/4624-V	1050/1250	40/47	250
4636/4636-V	1050/1250	57/67	300
4648/4648-V	1050/1250	78/93	350
4660/4660-V	1050/1250	103/122	400
4672/4672-V	1100/1300	140/165	450
4696/4696-V	1100/1300	166/196	500
46128/46128-V	1150/1350	208/243	550
46152/46152-V	1150/1350	248/290	600

See next page for approved Drawings

Drawing List

Engineering Office:	Hamburg Engineering Department	
Submitter:	ELWA ELEKTRO-WAERME GMBH & CO. KG	
Drawing No	Revision No	Drawing Title
PDA Application ELWA for Revalidation with Declaration of Conformity	-	PDA Application ELWA for Revalidation with Declaration of Conformity

Drawing List as covered by T1164539 of 18 March 2014

Engineering Office:	Hamburg Engineering Department	
Submitter:	ELWA ELEKTROWAERME MUENCHEN	
Drawing No	Revision No	Drawing Title
27387_PressureVessel	-	27387_PressureVessel
27829_KVE-18 idw	-	27829_KVE-18 idw
Correspondence	-	OrderConfirmation
Correspondence	-	TypeApproval_ELWA
Correspondence	-	ABSTAAconfirmatio