



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA0000109
Revision No:
1

This is to certify:

That the Burner Management System

with type designation(s)

LAL 1.25, LAL 2.14, LAL 2.25, LAL 2.65, LAL 3.25 with Flame Detectors QRB1, QRB3 or RAR

Issued to

Siemens AG
Rastatt, Germany

is found to comply with

DNV rules for classification – Ships and offshore units

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Type LAL 3.25 for incinerator use only.

Location classes:

Temperature A

Humidity B

Vibration A

EMC A

Enclosure Required protection according to the Rules to be provided upon installation on board.

Issued at **Hamburg** on **2022-01-13**

This Certificate is valid until **2027-01-12**.

for **DNV**

DNV local station: **Essen**

Approval Engineer: **Didier Girardin**

.....
Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

The following type designations are included in this type approval:

- LAL 1.25 with flame detector QRB1 and QRB3
- LAL 2.14 with flame detector QRB1, QRB3, RAR
- LAL 2.25 with flame detector QRB1, QRB3, RAR
- LAL 2.65 with flame detector QRB1, QRB3, RAR
- LAL 3.25 with flame detector QRB1, QRB3, RAR

Application/Limitation

The following documentation of the actual application is to be submitted for approval in each case:

- Reference to this Type Approval Certificate
- Functional description
- System block diagram
- Power supply arrangement (may be part of the system block diagram)
- List of control and monitored points

The Type Approval covers hardware listed under Type Designations. In each case the hardware is used in application to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system. Reference to applied hardware as listed above, as well as reference to this certificate is to be made through the equipment list covering the application system in question.

Reference is made to DNV Rules for Ships Pt. 4 Ch. 9 - Control and Monitoring Systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

Type Approval documentation

See Annex

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

Inspection on factory samples, selected at random from the production line (where practicable)

- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE



Job Id: 262.1-024573-2
Certificate No: TAA0000109
Revision No: 1

ANNEX
Type Approval documentation
hidden