DNV·GL

Certificate No:
TAA0000108

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Burner Management System

with type designation(s)
LOK16.140A27, LOK16.140A17, LOK16.250A27, LOK16.250A17, LOK16.650A27, LOK16.650A17 with Flame Detectors RAR

Issued to
Siemens AG
Rastatt, Germany

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

Location classes:

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

Temperature	**A**
Humidity	**B**
Vibration	**A**
EMC	**A**
Enclosure	**Required protection according to the Rules to be provided upon installation on board.**

This Certificate is valid until **2022-01-10**.

Issued at **Hamburg** on **2017-01-11**
DNV GL local station: **Essen** for **DNV GL**

Approval Engineer: **Andreas Andrecht**

Duy Nam Le
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.

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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

Tests carried out

Applicable tests according to DNV Standard for Certification No. 2.4

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)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and 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