Certificate no.:
TAA00003FT

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Condition Monitoring System

with type designation(s)
K-CMS

issued to
Kongsberg Maritime AS Avd Skonnertvegen
Ranheim, **Norway**

is found to comply with
DNV rules for classification – Ships Pt.6 Ch.5 Sec.21 Cyber security

Application:

The Type Approval covers security capabilities in accordance with DNV security profile 1 and IACS UR E27 Rev.1, subject to conditions stated in this certificate.

Issued at **Høvik** on **2025-06-05**

This Certificate is valid until **2027-06-04**.
DNV local unit: **East & South Norway CMC**

Approval Engineer: **Knut Omberg**

for **DNV**

Digitally signed by: Jarle Coll Blomhoff
Location: DNV Høvik, Norway

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.

Product description

This TA certificate applies for the Kongsberg Condition Monitoring System (K-CMS) with CMA software version 2.31.x, consisting of devices listed below. Asset inventory 110-0055847 includes a complete list of assets, including software and versions.

Device	Manufacturer	Type approval
Computer MC360, K-CMS 2.0 (K-IMS Connect)	Lenovo	TAA000038U
HSIO-100-A, HSIO-100-B	Kongsberg Maritime	TAA00001FG
Network switch EDS-405A, EDS-408A	Moxa	TAA000006N, TAA000006K
Serial converter MGate MB3170/3270	Moxa	TAA000006T

K-CMS is designed to provide information on operational status of the monitored machinery, provide advice for decision support, and provide input for predictive maintenance. The information is displayed in the condition monitoring application (CMA) hosted in the K-CMS workstation locally on board and, if the K-CMS is connected to the K-GSN router, hosted in the cloud.

See 'Type approval documentation' below for conditions related to modifications of the type approved product.

Approval conditions

If the type approved system is part of scope (SuC) for class notation Cyber secure(Essential,+), it shall be delivered with a vessel-specific product certificate (PC). The product certificate shall be issued based on the following verification as per DNV-RU-SHIP Pt.6 Ch.5 Sec.21:

a) It shall be demonstrated that the architecture of each delivery is documented in a project-specific system topology F030 and that this is consistent with type approved document System topology K-CMS 110-0055850.

b) It shall be demonstrated that each delivery is correctly represented by a vessel-specific asset inventory (F071) and that this inventory is consistent with type approved document Asset inventory K-CMS 110-0055847.

c) It shall be demonstrated by a declaration or test report (Z261) that each delivery has been configured and hardened as per the type approved document Security Configuration Guideline K-CMS 110-0096753.

If a delivered system differs from the type approved system, this shall be described and submitted for assessment.

Application/Limitation

The K-CMS LAN shall be dedicated for the K-CMS, i.e., only connected to sensors and the K-GSN router (see TAA00003F4) as per topology diagram 110-0055850. The K-CMS workstation may be implemented in the K-IMS workstation (ref. TAA00003F5).

Type Approval documentation

Asset Inventory K-CMS, 110-0055847 rev. G
System Topology K-CMS, 110-0055850 rev. C
Security Capabilities K-CMS, 110-0059744 rev. E
Test Procedure K-CMS, 110-0059937 rev. E
Security Configuration Guideline K-CMS, 110-0096753 rev. B
K-CMS Moxa Security Configuration, 110-0112040 rev. B
K-CMS Operational Security Information, 110-0082037 rev. A
Condition Monitoring Application (CMA), On-premise User Manual, P-CMS/FE rev. J

Documentation of major changes to the type approved system shall be informed to DNV. If the changes are found to affect functionality covered by this TA certificate, relevant document assessment shall be carried out and type testing may be required. The TA certificate shall then be renewed, identifying the new version. Major modifications are identified by updating either of the first two numbers in the version identifier.

Minor changes are covered by this type approval. Minor modifications to the type approved system is identified by updating the last number in the version identifier.

At renewal of this TA certificate a complete change log of the type approved product shall be submitted.

Tests carried out

Tested in accordance with requirements for security profile 1 (SP1) as per document test procedure K-CMS, 110-0059937, on 4th and 5th of September 2024.

Marking of product

Components are marked with product name and type as listed in the table above.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials. The main elements of the assessment are:

- Ensure that type approved documentation is available
- 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
- Review documented evidence of adherence to Secure Development Lifecycle processes

Periodical assessment is to be performed at renewal of this certificate.

END OF CERTIFICATE