Certificate no.:
TAA00003EX

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Engine Control System

with type designation(s)
UNIC

issued to
Wärtsilä Finland Oy
Vaasa, Pohjanmaa, Finland

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

Application:

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

Issued at **Høvik** on **2024-08-27**
This Certificate is valid until **2026-08-26**.
DNV local unit: **Finland CMC**

for **DNV**

Approval Engineer: **Pål Børre Kristoffersen**

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 Wärtsilä UNIC Type Approval consists of the following systems:

Product name: “UNIC monitoring and control system for engine”.
Product name: “UNIC for GVU”
Product name: “NOR control and monitoring system”.
Product name: “TC Wash control system”

Product function:
The UNIC automation system is an embedded engine management system.
UNIC handles all tasks related to engine safety, control and monitoring.

The Gas Valve Unit controls the valves and handles alarm situations for the Gas Valve Unit (GVU). The system also controls inerting of the pipe between GVU and engine with nitrogen. Furthermore, it handles the logic for the exhaust gas fan and related startblocking of engine.

The NOR system is designed to reduce NOx emissions after the engine.

Turbocharger washing unit makes automatic turbocharger washing according to operator demand.
Control system monitors the engine state to make the wash at optimum conditions.

Application/Limitation

This type approval covers cyber security capabilities at security profile 1 for the systems listed in Product description.

The type approved products shall be installed in restricted areas. Access to the components shall be restricted and controlled.

The type approved products shall be installed with the included firewall controlling all external communication.

The type approved products shall be installed with an external logging device (“syslog server”). This logging device shall have capacity for permanent storage.

Any network connections to other ship functions shall be dedicated to this purpose. This includes Modbus TCP networks.

If the type approved product is used in applications subject to cyber security requirements by DNV rules for classification, correct configuration shall be verified by DNV.

Major changes affecting the type approved security capabilities shall be informed to DNV. Such modifications may require witnessing of type testing and update of this type approval certificate to reflect new products or versions listed in Product description.

Tests carried out

Tested in accordance with requirements for DNV rules Pt.6 Ch.5 Sec.21 security profile 1, edition July 2023. Relevant manuals and instructions of Wärtsilä’s management system have been verified for compliance with IACS UR E27 chapter 5.

Marking of product

The product shall 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 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

A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE