Certificate no.:
TAA00003JT

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Remote Control System Diesel Engine and Main Propulsion

with type designation(s)
Remote Control System (M-800 series)

issued to
Nabtesco Corporation
Kobe, Hyogo Pref., Japan

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.

This type approval covers security capabilities in accordance with DNV security profile 1 and IACS UR E27, subject to conditions stated in this certificate.

Issued at **Høvik** on **2025-02-03**
This Certificate is valid until **2027-02-02**.
DNV local unit: **Japan 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 USD 300 000.

Product description

The Main Engine and Main Propulsion Remote Control system (M-800 Series) enables remote control of the vessel's diesel engine and main propulsion from the ship's bridge and/or control room, and has functions for outputting commands to control the engine speed (rpm), propeller pitch and for monitoring engine status. Equipped with network functions and a liquid-crystal display, the system provides operability and expandability.
This certificate covers hardware and software as described in "Asset Inventory" in "Specification of remote control system for UR E27" Rev b.

Approval conditions

Product certificate
Each delivery of the application system to vessels with class notation Cyber secure(Essential) is to be certified according to Pt.6 Ch.5 Sec.21. Certification test is exempted as long as the system is correctly represented by this type approval.

Application software control
All changes in software are to be recorded while the system is in use on board. Documentation of major changes is to be forwarded to DNV for evaluation and approval before implemented on board.

Major changes to the type approved system affecting future deliveries shall be informed to DNV. If the changes are considered to affect functionality for which rule requirements apply, a new functional type test may be required, and the certificate may have to be renewed to identify the new version. Minor changes are covered by this type approval.

This type approval certificate confirms compliance with requirements as specified in the table below.

This TA certificate covers:	For each delivery to vessels with DNV class notation Cyber secure(Essential), the following information shall be submitted:
Type approval of cyber security capabilities and system architecture in accordance with security profile 1: DNV-RU-SHIP Pt.6 Ch.5 Sec.21	System topology (F030), demonstrating system architecture and interfaces with other systems and equipment. Inventory/equipment list (F071), demonstrating consistency with asset inventory. Test report (F262) demonstrating configuration of security capabilities.
In addition to the documents above, any modifications in the delivered system compared with the type approved system shall be documented and submitted for approval. For further description of document content, see DNV-CG-0550.	

For newbuilding projects, identical deliveries to sister vessels with the same DNV project ID are to be documented and submitted in one common transmittal.

Application/Limitation

The type approved product do not include functionality for remote access to the product for maintenance and configuration.

The type approved products shall be installed in restricted areas. Access to the components shall be restricted and controlled. The Wing Unit may be installed in open deck area.

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.

Tests carried out

Applicable tests according to DNV-RU-SHIP Pt.6 Ch.5 Sec.21 edition July 2023, security profile 1.

Place of manufacture

Nabtesco Corporation. Kobe, Hyogo Pref., Japan

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 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.

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

END OF CERTIFICATE