Certificate No: LR2649974TA
Issue Date: 02/09/2026
Expiry Date: 01/09/2031

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**MAN Truck & BUS SE**
Address	33,Vogelweiherstr., Nuernberg, 90441, Germany
Type	Control Systems
Description	MAN Truck & Bus Engine Control System for 4 stroke diesel engines for multi propulsion- and genset generator application. Control system for Emissions Abatement Plant for Combustion Machinery.
Trade Name	MAN Engine Control System (ECS)
Application	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4 in General Power Distribution Zones as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 2020.
Specified Standard	• Manufacturer's Specification • Part 5, Chapter 2, Section 7 and Chapter 24, Section 9 Rules and Regulations for the Classification of Ships, July 2025 • Part 6, Chapter 1 and Chapter 2 Rules and Regulations for the Classification of Ships, July 2025 • IACS UR E10 Rev. 7

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Thomas Milow

Electrical & Control - Senior Specialist to
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Other Conditions

The complete installation is subject to a separate plan appraisal according to applicable Rules and Regulations when installed on Lloyd's Register classed vessels.

Any aspects complying with MARPOL are not covered by this Type Approval Certificate.

All machinery aspects, relevant for the engineering department, are to be covered by another valid approval.

Any aspects complying with Part 6, Chapter 1, Section 2.16 (Cyber resilience) of the Rules and Regulation for ships (July 2024) are not covered by this Type Approval Certificate.

Project specific aspects like interconnection to other units or interfaces to other systems are not covered by this Type Approval Certificate. These aspects will be part of the case by case plan approval process considering project specific plant configuration details. This information has to be submitted by the appointed integrator to the responsible Lloyd's Register Technical Support Office (TSO) for each project.

The following has to be verified during project related Factory – and Harbor acceptance tests as found applicable:

- Related alarms, safeguards as shutdowns (refer to Part 5, Chapter 2 ,Table 2.7.1 and Table 2.7.2) are to be tested to the local/attending Surveyor's satisfaction during Factory Acceptance Tests (FAT) and Harbor Acceptance Tests (HAT). Required test schedules for harbor and sea acceptance trials are to be submitted for approval by the appointed/responsible system integrator on a project-related basis. Program for trials of diesel engines see Part 5, Chapter 2, Section 11.
- The utilized Software Versions needs to be clearly identified in the relevant FAT, HAT and SAT test schedules. Any changes of the Software Versions are to be documented as well with the information to the attending/local Surveyor

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This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document TSO/24-026732-E-001 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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