NIPPON KAIJI KYOKAI

Certificate No. 15-034

Statement of Product Quality

THIS IS TO CERTIFY that the below-mentioned simulator is found to comply with the NK Standard for Certification of Maritime Education & Training Simulator Systems and the following applicable standards:

Product description:

Engine Room Simulator

Physical and Cloud-Based Online Installations

Type designation:

ERS 5000 TechSim

Manufacture:

Wärtsilä Voyage Limited

10 Eastgate Avenue, Eastgate Business park, Little Island, Cork, Ireland

Applicable Standards:

1) STCW 2010 Manila amendments	**Regulation I/12**
2) STCW 2010 Manila amendments	**Code A / Table A- III**
3) IMO model course 2.07	**Engine Room Simulator**
4) IMO model course 7.02	**Chief Engineer Officer and Second Engineer Officer**
5) IMO model course 7.04	**Officer in Charge of an Engineering Watch**

Date of Initial Registration : 3 June, 2015
Validity : 18 June, 2023
Issued at Tokyo on 19 June, 2020

NIPPON KAIJI KYOKAI

(H. Takano)
Director of Innovation Development Division

NIPPON KAIJI KYOKAI Certificate No. 15-034

APPENDIX-A
Simulator System

Simulator system specification

Documentation (identity)	General Product Guidelines: ■ TechSim 5000 Installation and Configuration Guide for version 8.8 ■ TechSim 5000 version 8.8 Instructor Manual ■ e-Tutor 5000 Wärtsilä Evaluation and Assessment System ■ TechSim 5000 version 8.8 General Trainee Manual ■ Standard Hardware Recommendations Specification for Wärtsilä simulators for version 1.101 ■ TechSim 5000 version 8.8 Visual Tuning User Guide Ship Model Product Guidelines: ■ MAN B&W 6S50MC-C Diesel Engine – Product Tanker ■ MAN B&W 6S60MC-C Diesel Engine – Tanker LCC (Aframax) ■ MAN Diesel 32/40 Twin Medium Speed Engine + CPP – Ro-Pax Ferry ■ AZIPOD Diesel-Electric Cruise Ship ■ Steam Turbine (Kawasaki UA-400) LNG Carrier ■ Dual Fuel Diesel-Electric LNG Carrier ■ ANZAC 2 Frigate ■ Offshore Patrol Vessel (OPV) ■ Patrol Vessel PV3000 - 4 x MTU 20V 1163 TB93 and 2 x PTI Propulsion Electric Motor ■ Wärtsilä V46F Diesel-Electric Royal Princess ■ MAN B&W Cam-Less Electronic Engine – Containership ■ MAK M43C – Azipod DE Eurodam ■ Platform Supply Vessel
Documentation reviewed (date)	Initial: 15 May, 2015 Renewal: 18 April, 2018 Occasional: 11 June, 2020
Tests and physical inspection performed (date)	Initial: 21 and 22 May, 2015 (at Portsmouth in UK) Renewal: 15 May, 2018 (at Portsmouth in UK) Occasional: 15 June, 2020 (at Tokyo by online)

(*H. Takano*)
Director of Innovation Development Division

APPENDIX-B
Application/Limitation (1/2)

Application/Limitation

The simulator system, as described above, gives the capability to simulate a realistic environment in physical and cloud based online installations for all of the following competencies:

STCW-2010 Manila amendments	Competence
Table A-III/1.1	Maintain a safe engineering watch
Table A-III/1.3	Use internal communication systems
Table A-III/1.4	Operate main and auxiliary machinery and associated control systems
Table A-III/1.5	Operate fuel, lubrication, ballast and other pumping systems and associated control systems
Table A-III/1.6	Operate electrical, electronic and control systems
Table A-III/1.11	Maintain seaworthiness of the ship
Table A-III/2.1	Manage the operation of propulsion plant machinery
Table A-III/2.2	Plan and schedule operations
Table A-III/2.3	Operation, surveillance, performance assessment and maintaining safety of propulsion plant and auxiliary machinery
Table A-III/2.4	Manage fuel, lubrication and ballast operations
Table A-III/2.5	Manage operation of electrical and electronic control equipment
Table A-III/2.8	Detect and identify the cause of machinery malfunctions and correct faults
Table A-III/2.10	Control trim, stability and stress
Table A-III/2.11	Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea and protection of the marine environment
Table A-III/2.14	Use leadership and managerial skills
Table A-III/4.2	For keeping a boiler watch: Maintain the correct water levels and steam pressures
Table A-III/6.1	Monitor the operation of electrical, electronic and control systems
Table A-III/6.2	Monitor the operation of automatic control systems of propulsion and auxiliary machinery
Table A-III/6.3	Operate generators and distribution systems
Table A-III/6.4	Operate and maintain power systems in excess of 1,000 Volts
Table A-III/6.5	Operate computers and computer networks on ships
Table A-III/6.6	Use internal communication systems

APPENDIX-B
Application/Limitation (2/2)

Wärtsilä Engine Room Simulator (ERS 5000 TechSim) contains the following ship models:

- MAN B&W 6S50MC-C Diesel Engine – Product Tanker
- MAN B&W 6S60MC-C Diesel Engine – Tanker LCC (Aframax)
- MAN Diesel 32/40 Twin Medium Speed Engine + CPP – Ro-Pax Ferry
- AZIPOD Diesel-Electric Cruise Ship
- Steam Turbine (Kawasaki UA-400) LNG Carrier
- Dual Fuel Diesel-Electric LNG Carrier
- ANZAC 2 Frigate
- Offshore Patrol Vessel (OPV)
- Patrol Vessel PV3000 - 4 x MTU 20V 1163 TB93 and 2 x PTI Propulsion Electric Motor
- Wärtsilä V46F Diesel-Electric Royal Princess
- MAN B&W Cam-Less Electronic Engine – Containership
- MAK M43C – Azipod DE Eurodam.
- Platform Supply Vessel

NIPPON KAIJI KYOKAI

(H. Takano)
Director of Innovation Development Division