

STATEMENT OF COMPLIANCE

Particulars of Product

Name of Product: **Machinery Operation Simulator**Type designation: **K-Sim Engine Diesel Electric Dual Fuel LNG DE21**

Particulars of Manufacturer

Manufacturer: **Kongsberg Digital AS**Manufacturer address: **Maritime Simulation, Horten, Norway**

This is to confirm:

That the above product is found to comply with Class A- Standard for Certification of Maritime Simulators No. DNVGL-ST-0033 March 2017.

Application

The above Standard is based on requirements in the STCW Convention, Regulation I/12.

This Statement is valid until **2022-06-15**, provided the requirements for the retention of the Statement will be complied with.

Issued at **Sandefjord** on **2017-06-19**


Nils Gunnar Bøe
for **Area Manager**

for **DNV GL**




Capt. Aksel David Nordholm
Auditor



Application/Limitation


STCW Competence

Reference

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/2.6	Manage troubleshooting restoration of electrical and electronic control equipment to operating condition
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
Table A-III/6.8	Maintenance and repair of automation and control systems of main propulsion and auxiliary machinery
Table A-III/6.9	Maintenance and repair of bridge navigation equipment and ship communication systems
Table A-III/6.10	Maintenance and repair of electrical, electronic and control systems of deck machinery and cargo-handling equipment
Table A-III/6.11	Maintenance and repair of control and safety systems of hotel equipment
Table A-III/7.5	Contribute to the maintenance and repair of electrical systems and machinery on board

Sec. 4, Table C1 Physical realism, *The following additional requirements for simulators used for training ship's electrical officers (STCW Table A-III/6 -7) Class S apply*

2.2.2	It shall be possible to simulate auto slow-down and emergency shutdown.
2.2.4	It shall be possible to simulate testing of the 24V D.C. power supply to the navigation, communication and engine room control console in event of power failure.
2.2.5	It shall be possible to simulate safe methods of testing the insulation for rotor and stator.
2.2.6	It shall be possible to simulate of reading a power factor meter with reference to four segments.
2.2.7	It shall be possible to simulate testing of the devices and relays provided for generator protection.
2.2.8	It shall be possible to simulate tests related to AVR (Automatic Voltage Regulator).
2.2.12	It shall be possible to simulate routine tests on an emergency generator.
2.2.13	It shall be possible to simulate how a generator circuit breaker OCR (Over Current Relay) is set and tested.
2.2.15	It shall be possible to simulate the procedure for megger testing a high voltage system.
2.2.16	It shall be possible to simulate paralleling of generators using synchro-scope and demonstrate the method to parallel, if synchro-scope is faulty.
2.2.18	It shall be possible to simulate recovery from "dead ship" condition.
2.2.19	It shall be possible to simulate methods to test the "Preferential Tripping Sequence"
2.2.20	It shall be possible to simulate methods to test auto "Cut In" of stand by generator.
2.2.21	It shall be possible to simulate methods of diagnosing single phasing fault.
2.2.22	It shall be possible to simulate operation and maintenance of variable speed motor starters.
2.2.23	It shall be possible to simulate operational test methods of oily water separator monitors.
2.2.24	It shall be possible to simulate test methods for level alarms and function tests of bilge pumping arrangement.



Job Id:
Statement No: **011/170615**
DNV GL Id No: **10564901**

2.2.26 It shall be possible to simulate the function test of OWS (oily water separator) and PPM (parts per million) unit