

PRODUCT CERTIFICATE

Particulars of Product

Name of Product:	Dynamic Positioning Simulator
Class notation:	INTEGRATED SIMULATOR SYSTEM, DYNPOS,TUG, ICE
Type designation:	K-Sim Offshore DP manouvre Trainer (Bridge B)
In use for simulation at:	Kongsberg Maritime Training, Grilstad - Trondheim

Particulars of Manufacturer

Manufacturer:	KONGSBERG DIGITAL AS - Maritime Simulation
Manufacturer address:	Horten, Norway

This is to certify:


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 Certificate is valid until **2022-06-12**, provided the requirements for the retention of the Certificate will be complied with.

Issued at **Sandefjord** on **2017-06-12**



Nils Gunnar Bøe
Area Manager

for **DNV GL**




Capt. Aksel David Nordholm
Auditor



Application/Limitation

Table 8-2 Competencies addressed by dynamic positioning simulator class

<i>DNVGL ST-0023 reference</i>	<i>Competence Class</i>	<i>Class A (DP)</i>	<i>Class B (DP)</i>	<i>Class C (DP)</i>	<i>Class S (DP)</i>
[7.3.1]	Controlling the vessel using manual and joystick controls	A	B	C	(S)
[7.3.1]	Changing operational modes between auto DP to joystick to manual controls to autopilot and vice versa	A	B	C	(S)
[7.3.1]	Principles and planning of DP operations in depth	A	B	C	(S)
[7.3.1]	Awareness of industrial mission failures that might affect DP operations	A	B		(S)
[7.3.1]	Effective management of the DP control/bridge team	A	B	(S)	
[7.3.1]	DP information input systems	A	B	C	(S)
[7.3.1]	Detailed understanding of the DP computer/control system(s), including changing between systems and the various modes of operation	A			
[7.3.1]	Thruster units and associated systems	A	B	C	(S)
[7.3.1]	Power supplies	A	B	(S)	
[7.3.1]	Equipment redundancy, availability and maintenance requirements	A	B	(S)	
[7.3.1]	Operational capabilities and footprints	A	B	(S)	
[7.3.1]	Comprehensive knowledge of system functional specifications, one-line diagrams, equipment operator manuals and the vessel's operations manuals	A	B	(S)	
[7.3.1]	Comprehensive knowledge of the vessel's communications systems	A	B	(S)	
[7.3.1]	Effective communication with the engine control room	A	B	(S)	
[7.3.1]	Knowledge of emergency procedures and actions due to failures of: – generator/power – thrusters – sensors – computers – commands – feedback – any other systems/equipment relevant to the DP	A	B	(S)	
[7.3.1]	Knowledge of the vessel's FMEA and an understanding of the implications of all identified failure modes	A	B	(S)	