



## Brodstrojarski simulator *Engine Simulator*

### Norcontrol PPT 2000

Simulator se sastoji od jedne instruktorske stanice i četiri studentske stanice (simultani rad 12 studenata).

**Modul 1:** model broda VLCC, pet cilindara, dvotaktni sporohodni dizel motor (MAN – B&W Type 5 LMC 90).

**Modul 2:** model broda VLCC, simulator rukovanja teretom i balastom

**Modul 3:** putnički brod, konfiguracija strojarnice: dizelsko električno postrojenje (4400 V/60 Hz) s kompletnim sustavom generatora i električnog postrojenja.

*Norcontrol PPT 2000 engine room simulator was installed in 2000 year. It is a computer-aided system with one instructor consol and four student consoles. The simulator offers three possible training options (modules): a slow-speed diesel engine propulsion, a diesel-electric propulsion and a crude oil tanker cargo handling system. The optimum simulator classroom capacity is 2 students per console and maximum capacity is 12 students.*

#### **Module 1**

*composition consists of an engine room and cargo handling systems that correspond to the configuration of a 150 000 dwt VLCC tanker. Engine room consists of a five cylinder slow speed diesel main propulsion engine type MAN B&W LMC 90 with auxiliary systems. Module comprises steam generation system with a double pressure D type auxiliary boiler with two burners, exhaust gas boiler, condensate and feed water system. Bridge control, steering gear system and waste heat recovery system are also included in the module. Electrical system comprises two diesel generators, one turbo generator, one shaft generator and 180 kW emergency generator. The cargo system consists of four steam turbine driven centrifugal cargo pumps, one steam turbine driven ballast pump and the inert gas system. Cargo handling system is included in another module.*

#### **Module 2**

*includes simulation of inert gas distribution, cargo and ballast handling systems (loading, discharging, ballasting and deballasting) on the same ship (VLCC tanker). Module also includes stability and stress analysis simulation.*

#### **Module 3**

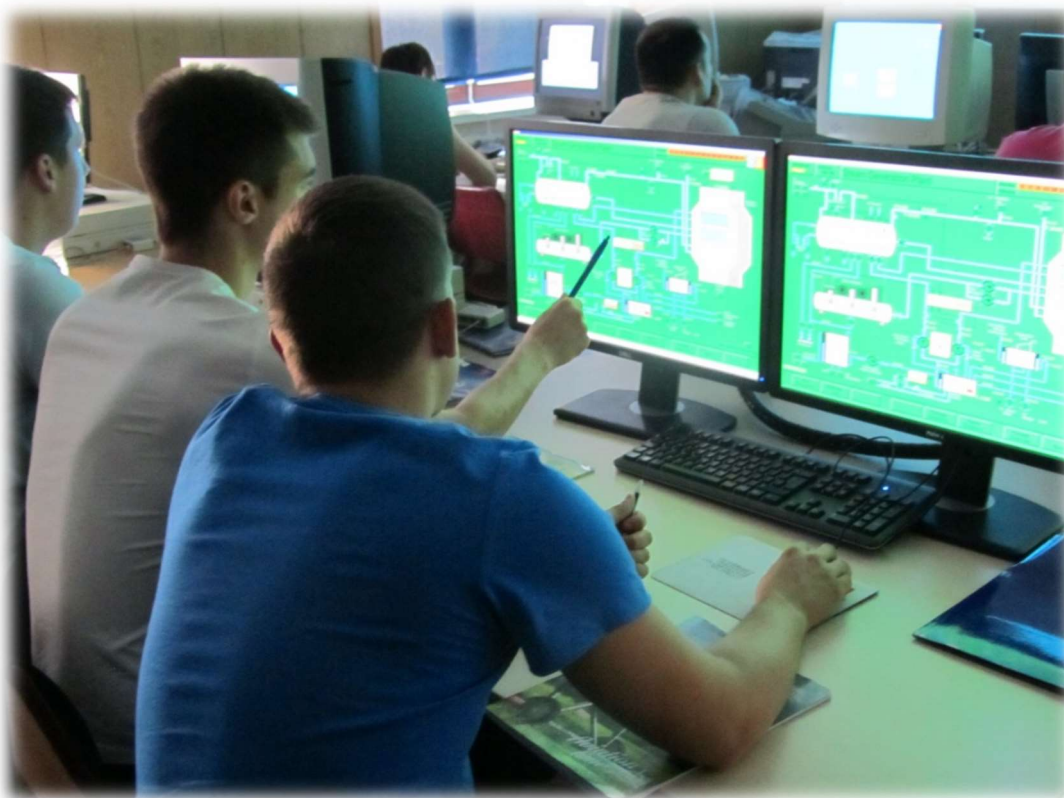
*includes cruising passenger ship with diesel-electric propulsion with auxiliary systems (4400V/60Hz).*

## Kongsberg K – strojarski simulator i simulator rukovanja teretom

### *Engine simulator and cargo handling simulator*

- *Installed in 2016*
- *Engine Room Simulator*
- *Liquid Cargo Handling Simulator*
- *4 students' working stations and 1 instructor's station*

1. K – Sim Engine MAN B&W 5 L 90MC L11 VLCC (1 instruktora i 4 studentske stanice) – jedan motor, jedan vijak
2. K – Sim Engine Sulzer 12 RT-Flex 82C L11 Container Vessel (1 za instruktora) – jedan motor, jedan vijak
3. K – Sim Engine Sulzer 12 RTA 84C L11 Container Vessel (1 za instruktora) – jedan motor, jedan vijak
4. K – Sim Engine Steam Propulsion Dual Fuel SP11 LNG Carrier (1 za instruktora) – dva kotla, jedna parna turbine i jedan vijak
5. K – Sim Engine Diesel Electric - Dual Fuel DE-DF21 LNG Carrier (1 za instruktora i 4 za studentske stanice) – 4 DGs, 2 PEMs i 1 vijak
6. K – Sim Cargo CHS VLCC – Double Hull Very Large Crude Carrier – 210 000 GRT (1 za instruktora i 4 za studentske stanice)
7. K – Sim Cargo CHS CC – Chemical Carrier – 37 000 GRT (1 za instruktora)
8. K – Sim Cargo CHS LNG – Liquefied Natural Gas Carrier – S (Sphere Tanks) – 1 for instructor
9. K – Sim Cargo CHS Product Carrier – 84 000 GRT (1 za instruktora)
10. K – Sim Cargo CHS LNG – M (Membrane Tanks) - (1 za instruktora)
11. K – Sim Cargo CHS LPG – Liquefied Petroleum Gas Carrier (1 za instruktora)
12. K – Sim Engine LM 2500 Gas Turbine – GT22 (20 MW) – for Water Brake Load or Electrical



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