



## Engine Room Simulator Training

### Course syllabus:

- Introduction
- Familiarization
- Plant
- Instruments, alarms, diagrams
- Operating control
- Working procedures
- Marine auxiliary engines equipment and systems
- Diesel generator
- Steam generator
- Steam turbogenerator
- Steam pumps
- Main diesel propulsion engine
- Failures
- Watchkeeping

### Training Simulators:

- ☐ KONGSBERG– MAN B&W 5L90MC ver. MC90-V
- ☐ TRANSAS– ENGINE ROOM SIMULATOR ERS 4000

**Course duration:** 40 hours performed in 4 to 5 days

### Venue:

- Faculty of Maritime Studies Rijeka, Studentska 2, 51000 Rijeka, Croatia
- Classrooms are fully equipped (computer, video projector, course equipment required)

### Course Certificate:

The Faculty of Maritime Studies Rijeka will issue a course certificate specifying the course name, duration and the period of attending to each participant upon successful completion of the course, also specifying the training details (teaching aids).

### **Transas ERS 4000 ver. 7.3**

Transas ERS 4000 ver. 7.3 simulator was installed in 2007 year. It is also a computer-aided system with one instructor consol and six student consoles. The simulator offers two possible training options (modules): slow-speed diesel engine propulsion of crude oil tanker and steam propulsion plant for LNG tanker. The maximum capacity for the simulator classroom is 14 students.

**Module 1** simulates 65 000 dwt LCC tanker with a MAN B&W 6 S 60 diesel engine and all necessary auxiliary systems. The electrical plant includes main switchboard, two diesel generators, one turbo generator, one shaft generator, an emergency switchboard, a shore supply switchboard and power transformers. Auxiliary plant includes steam plant system, ballast system, bilge water system, steering gear system, water desalination plant, sewage treatment system, incinerator, inert gas system, fire alarm system, foam and CO2 systems, provision cooling and air conditioning system.

**Module 2** simulates 137 585 m3 LNG tanker with a 29540 kW cross-compound, double reduction geared main propulsion steam turbine type Kawasaki UA – 400. The propulsion plant also includes two Mitsubishi main water tube boilers with dual fuel burners and internal economizers, two turbo generators and one diesel generator. The electrical plant voltage is 6600 V and frequency is 60 Hz. Auxiliary plant is the same as in the module 1.

Both modules include evaluation and assessment system intended for the quantitative assessment of the students' performance during the fulfillment of an exercise.

The Instructor station software consists of three modules:

- On-line class – for teaching and monitoring the execution of exercises by the students;
- Exercise Editor – creating new exercises and editing existing ones;
- Debriefing – viewing and debriefing recorded exercises.

The engine room simulator can also be integrated with NTPro 4000 navigational simulator.