

The Engine Room Simulator is developed for 3 general types of propulsion systems, with similarities both for Navy vessels or for the merchant fleet vessels:

- a four stroke, medium speed engine **S.E.M.T. Pielstick 16 PC2.2 V-40** propulsion system;
- a two stroke, slow speed engine **MAN B&W 6S60MC propulsion system**;
- a Combined Diesel or Gas propulsion system for a ANZAC type frigate.

The exercises for ship maneuvering and for free sea navigation can be held in different areas, such the most important straights (Bosforus, Canakkalle, Gibraltar, Mallaca, Dover and Belt), the Suez Channel, five major harbours and the Romanian Harbours (Constanta, Mangalia, Midia, Sulina).

After completing the simulator exercises, the students can replay the entire action and have the possibility to emphasis the mistakes or the correct actions taken, so they will have a superior feed-back action after completing the course.

The entire complex have 85 computers with an energy consumption of 55kW.

The element that gives to this simulator an unique characteristic in Romania, is the possibility to realize Joint Exercises with both simulator modules, and in that way the exercise will achieve the highest level of complexity, by simulating an entire ship with all complex activities onboard.

The combined training of bridge officers and engineering specialists will ensure achieving the goal of improving interoperability between the two type of specialists, realized in almost the same conditions.



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SHIP'S MANEUVRING JOINT SIMULATOR

The joint simulator for ship's manoeuvring have the following training capabilities for more than 20 ship types (**2 general cargo vessels, 3 container ships, 2 ore carriers, 3 tankers, 1 LPG carrier, 3 passenger vessels, 2 tugs and 5 military vessels**):

- Harbour entering / departing manoeuvres;
- Straights passing manoeuvres;
- Search And Rescue operational training, according to the actual international regulations;
- Training with ships formations according to the NATO procedure;
- Replenishment At Sea Manoeuvres
- Familiarization and basic operational training for Engineering Teams (both for Merchant Fleet and for Romanian Navy)
- Advanced Bridge Team Management, Engine Team Management and Crisis Management Training;
- Complex training for crews in order to facilitate the knowledge regarding the onboard systems interaction;
- Damage Control basic and advanced training;
- Practicing joint manoeuvring of ships in formations;
- Practicing refuelling at sea operations;

Some other features of the simulator complex are:

- Highly realistic presentation of sea surface, weather, visibility and illumination effects
- Built-in database on astronomic objects and climatic conditions
- Full control from the Instructor station
- Dynamic changes of visual conditions and parameters before or during the exercise

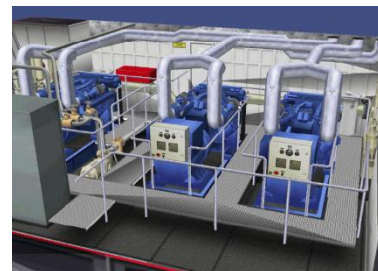


The simulator complex consists of:

The Bridge Subsystem:

- 2 x Instructor Stations
- 1 x Main Bridge (HFOV 240°) as per IACS class A requirements
- 1 x Intermediary Bridge (HFOV 120°)
- 3 x Secondary Bridges (HFOV 90°)
- 6 x Virtual Bridges Class

Training, analysis and debriefing room; GMDSS Communication simulator (on all bridges)



The Engine Room Subsystem:

- Instructor Station
- Full Mission simulator of Tanker LCC (slow speed diesel), Ro-Ro (Semi Rapid diesel) and Anzac frigate software (CODOG medium speed Diesels and Gas turbine propulsion plant)
- MCR
- MSB and EPP controls
- 5 x LOP
- Emergency Generator Room
- Integration with Bridge Simulators
- Training, analysis and debriefing room

