

PSV-3D - Platform Supply Vessel Engine Room Simulator

PSV-3D models typical platform supply vessel engine rooms consisting of four medium-speed main engines with reduction gears and controllable pitch propellers.



PSV-3D has been developed to comply with:

- STCW Code: Section A-1/12 and Section B-1/12.
- ISM Code: Section 6 and Section 8.

The main educational tasks which can be accomplished using **PSV-3D**:

- Learning typical ship's engine room operating routines.
- Learning to operate a ship's engine room. The user can carry out any operational task starting from different set-ups, both pre-prepared and saved by a user.
- Learning how to take corrective action when faults occur. Different faults can be simulated and mixed during the simulator run-time or loaded from disk.

PSV-3D is suited for training both merchant and navy fleet crew at maritime academies and marine vocational training centres.

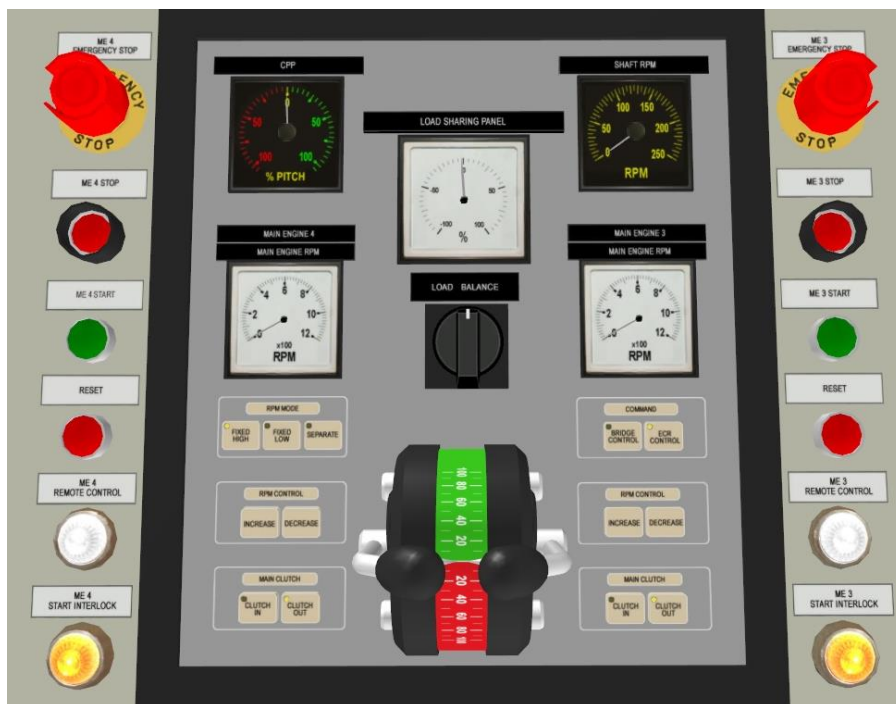
PSV-3D – PSV Engine Room Simulator

The main purpose of the simulator is the practical preparation of the trainee for engine room operation, in particular:

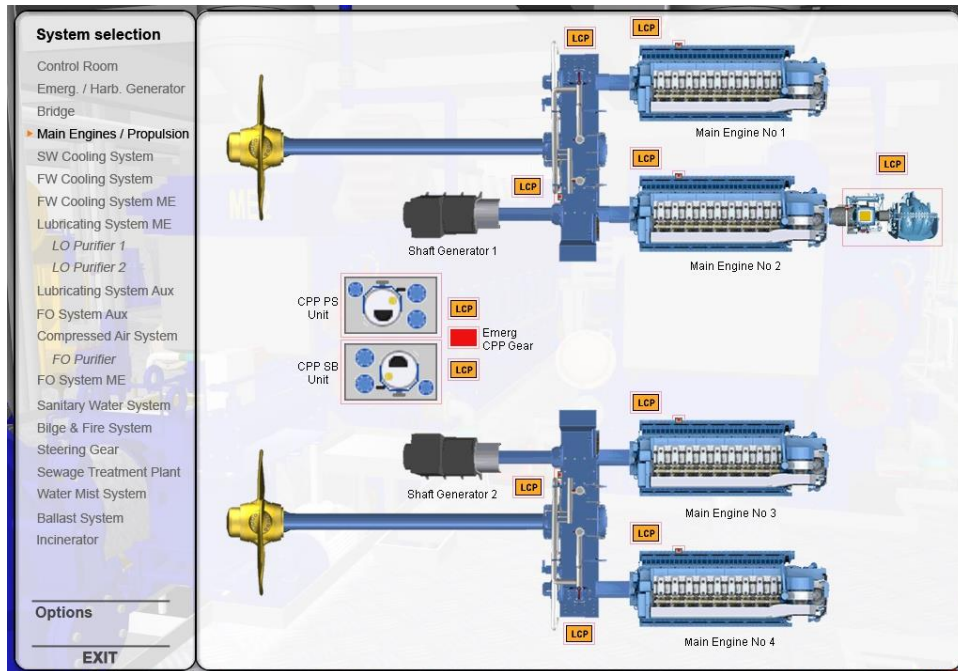
- familiarization with the basic engine room installation (compressed air system, fresh & sea water cooling system, lubricating & fuel oil system, gear & CPP hydraulic system)
- main engines and auxiliary equipment starting procedures
- propulsion system manoeuvring (main engines, reduction gear, CPP)
- power management system operation



The control room enables remote control of engine room equipment.

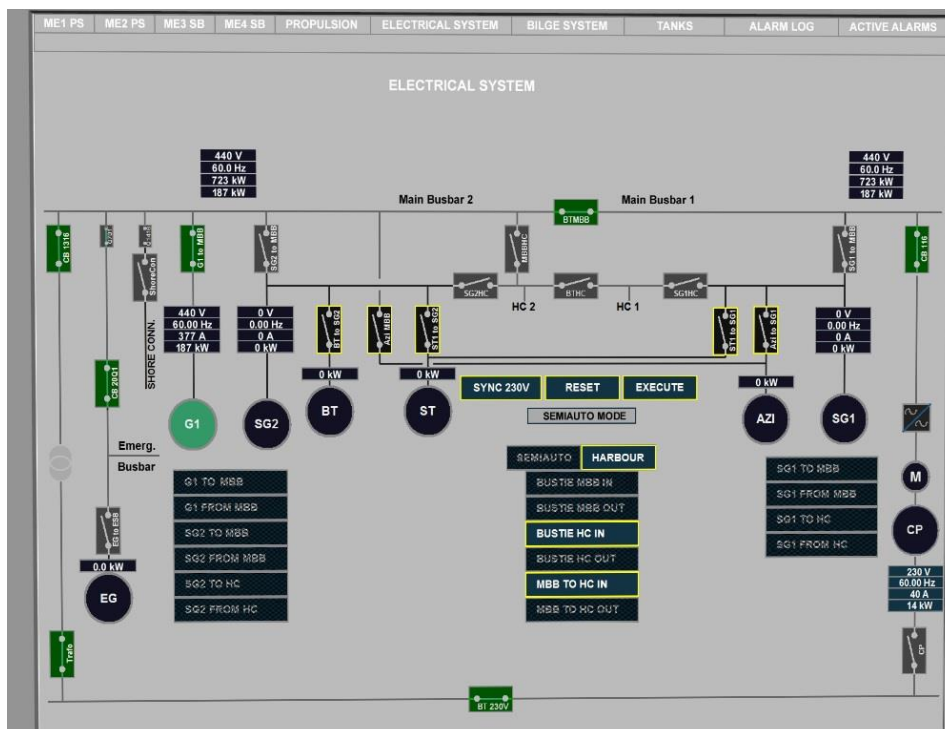


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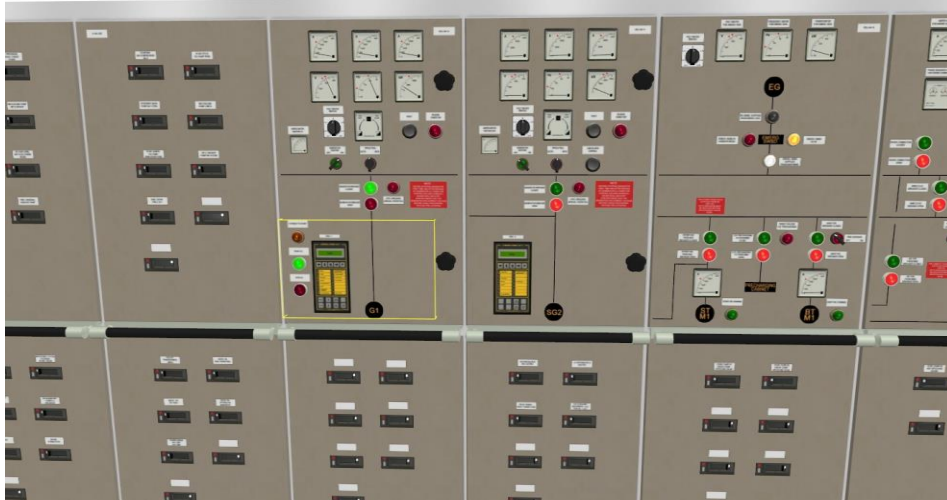


PSV-3D models an engine room comprising four 4-stroke diesel ME with two diesel engine generators and two shaft generators. The propulsion system includes two reduction gears with two controllable pitch propellers. Both CPP's revolutions and pitch are controlled simultaneously.

The Electric Power Plant is equipped with a modern Power Management System for automatic control of generators according to actual power demand.

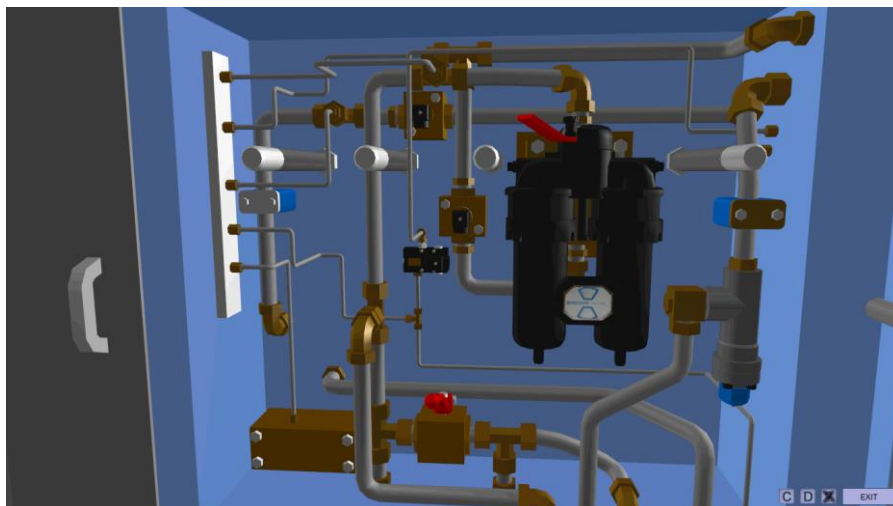


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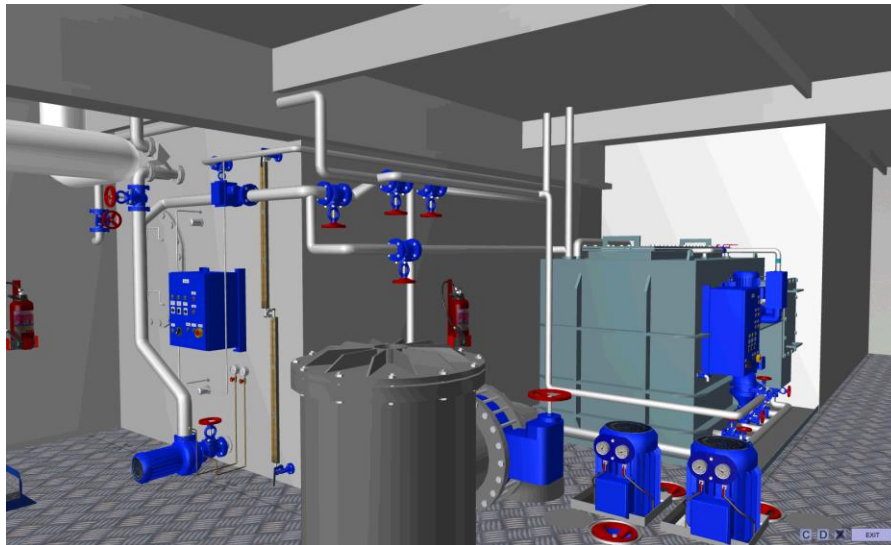


PSV-3D simulator models the following systems:

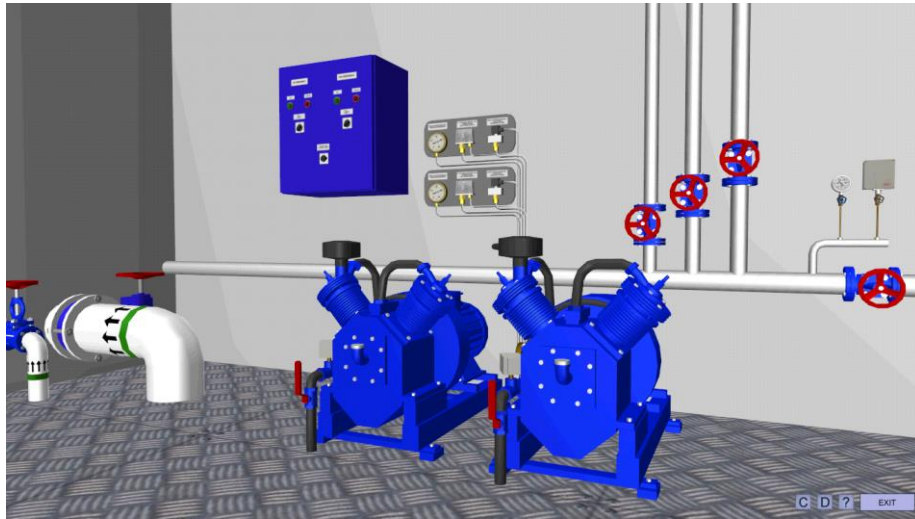
- Fuel System
- Cooling System
- Lubricating System
- Compressed Air System
- Power Plant
- Emergency Generator
- Sanitary Water System
- Bilge & Fire System
- Steering Gear
- Sewage Treatment Plant
- Water Mist System
- Hot water boiler
- Incinerator



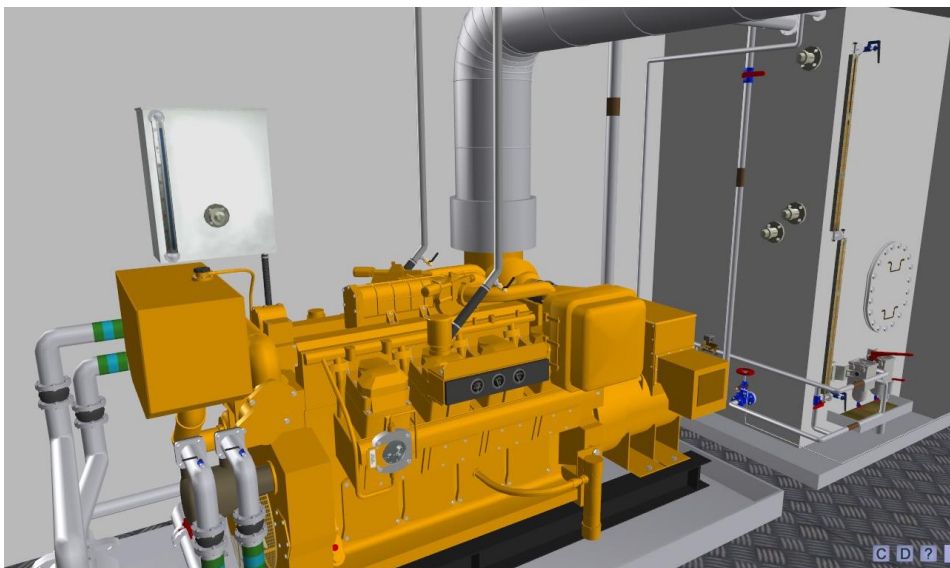
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The 3D model includes animated virtual controls such as switches, gauges and lamps.



The Zoom technique allows easy navigation in the 3D environment and easy access to details.

Here is a list of **PSV-3D** main features:

- A highly realistic simulator for ship's engine room training which can also be used as a low cost introductory simulator.
- The mathematical model simulates a typical ship's engine room with four 4-stroke, medium speed engines, driving through reduction gears the controllable pitch propellers.
- All vital auxiliary systems have been implemented.
- The user interface includes virtual controls and alarms and creates very realistic environment. The 3D virtual reality with active valves, tank level indicators and selected

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digital gauges enable comfortable engine room operation and monitoring.

- Multichannel digitized sound provides a very realistic ships' engine room feel. The sound effects include: engine sound correlated with engine speed, the sound of a diesel generator starting and running, open indicator valve sound, alarm and machine telegraph buzzers.
- Emergency procedure training including fire simulations

