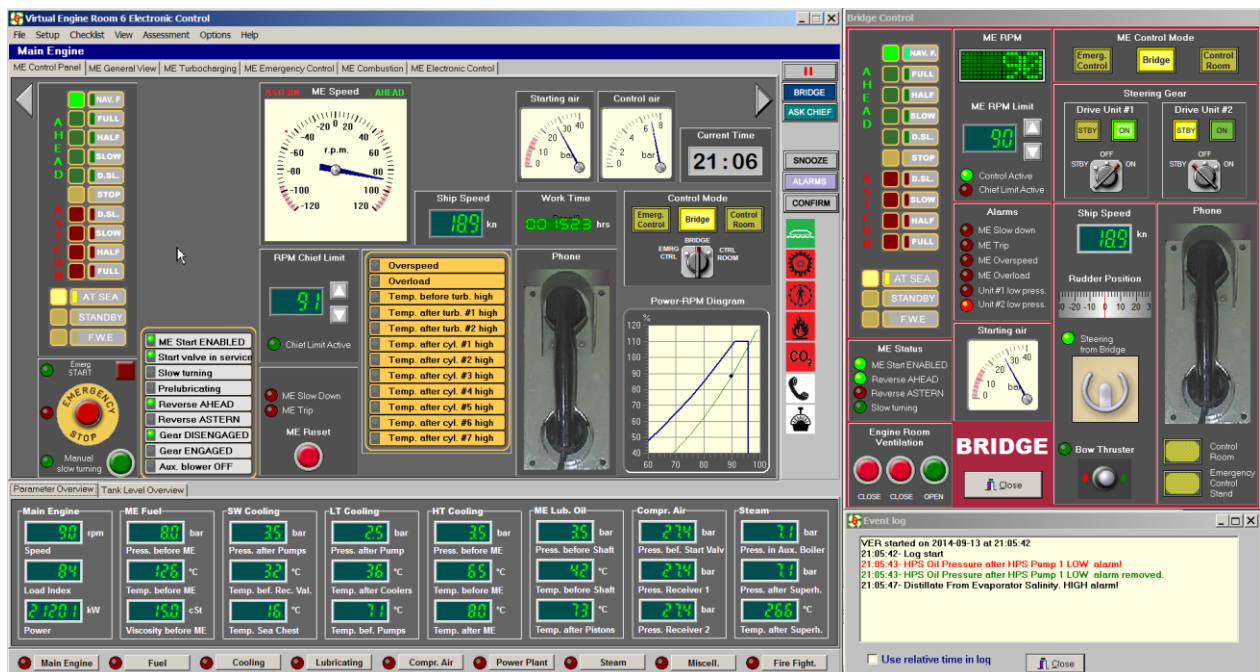# Virtual Engine Room 6

Virtual Engine Room 6 (VER6) is a PC-based full mission engine room simulator which models two main engines: a conventional, camshaft controlled low speed diesel and an electronically controlled version of the same engine.

VER6 has been developed to comply with:
- STCW 2010 Code (with Manila Amendments).
- ISM Code: Section 6 and Section 8.

VER6 is type-approved by an EU classification company.

Main educational tasks accomplished with **VER6**:

- Learning typical ship's engine room **operating routines** with the support of the integrated **checklists**.

- Ship's engine room **operation training**. The user will be able to accomplish any operational task starting from pre-prepared or previously saved **exercises**.

- Training in **corrective action** when faults occur. Different faults can be mixed in the run-time or loaded from disk.

- **Standardised and automated assessment** divided into 14 STCW compatible tests. These tests provide an independent and objective trainee evaluation.

Virtual Engine Room 6

The low speed diesel engine with camshaft control modelled by VER6 is an extended and improved version of the successful VER 4.8 software. VIT system and exhaust gas analyzer have been implemented as well.
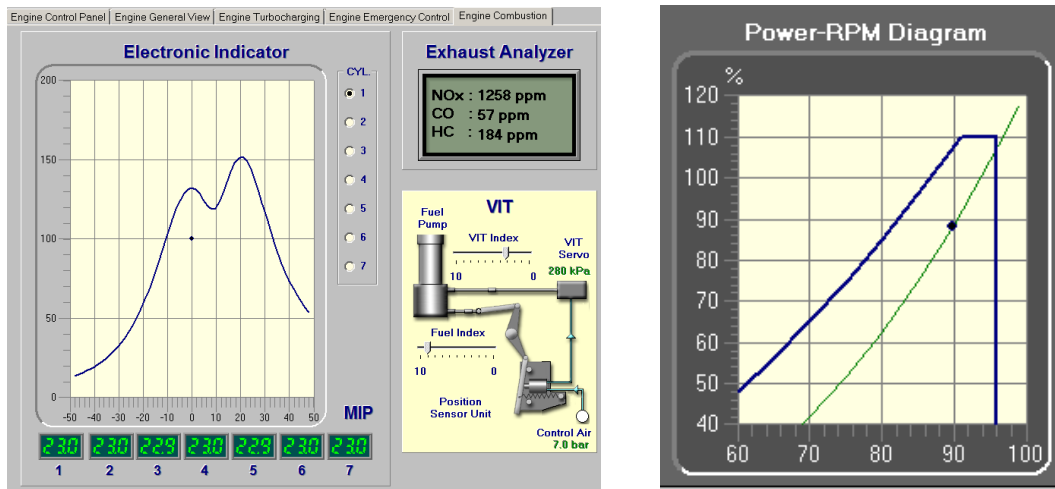
The low speed diesel engine with electronic control is an extended and improved version of the well-known VER 5 EC software.
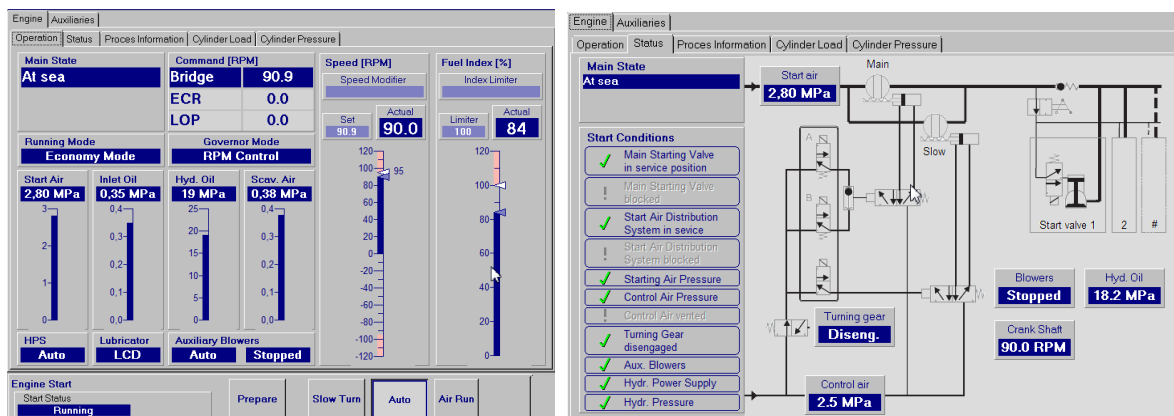

VER6 main features:

- A **highly realistic simulator** with virtual controls for ship's engine room training.

- **Mimic diagrams** with active valves, pump status indicators, tank level indicators and selected digital gauges make the system easy to use.

- Multichannel **digitised sound** provides a very realistic ship's engine feel.

- **Synthesized speech** emulates the chief engineers advices

- **Computer Aided Assessment** (CAA) is fully integrated and includes 3 generic and 14 STCW compatible tests, with a **Test Editor** to create new tests and to edit existing tests.

- **Exercise recording and replay** at a different speed.

- **Integrated checklists** with synthesized voice instruction.

**VER6** simulator model includes the following systems:
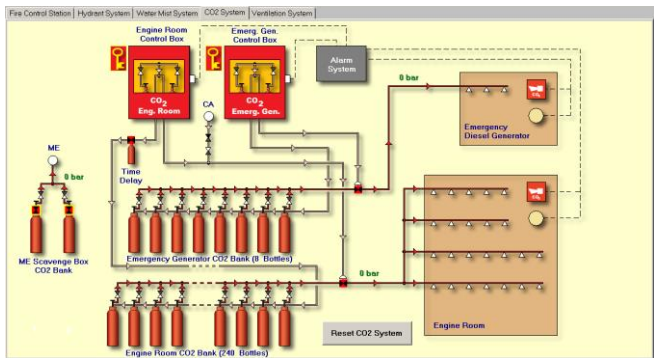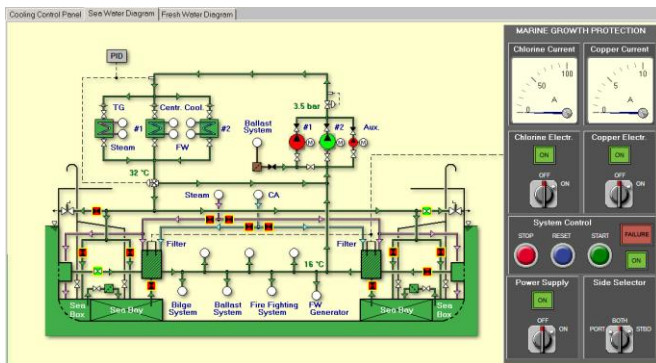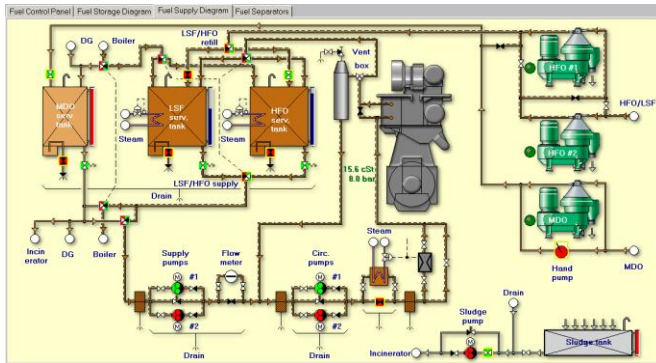
- Main engine (2 stroke, low speed, 7 cylinders, fixed pitch propeller)
- Two complete main engine models: conventional with a camshaft and electronically controlled
- Main engine remote control system (manual from CR, automated from the bridge and the emergency control at the engine side)
- Fuel system (MDO, HFO and Low Sulphur Fuel, including storage system and separators).
- Lubricating system (LO circulation and separator, LO storage and stern tube lubricating).
- Cooling system (sea water and fresh water central cooling).
- Compressed air system.
- Sewage treatment plant.
- Sludge and garbage incinerator.
- Steam system (auxiliary boiler, waste heat recovery, superheated steam, consumers).
- Power plant (2 diesel generators, 1 shaft generator, 1 turbo generator and 1 emergency diesel generator, multiple power consumers with separate circuits and bow thruster).
- Bilge system with oily water separator.
- Ballast system.
- Steering gear.
- Refrigerating system.
- Domestic water system
- Air conditioning system
- Simplified own ship model with ship speed modelling.
- **Engine room ventilation system.**
- **Inert gas system.**
- **Turbo pump.**
- **Engine room ventilation system.**
- **Water mist firefighting system.**
- **CO_2 firefighting system.**
- **PID controllers**

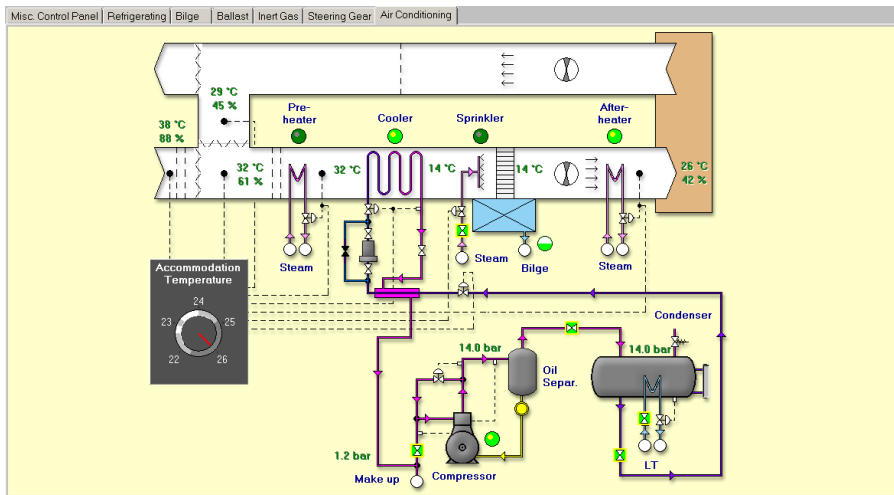**VER6** includes multiple PID simulators which can be set both automatically and manually.
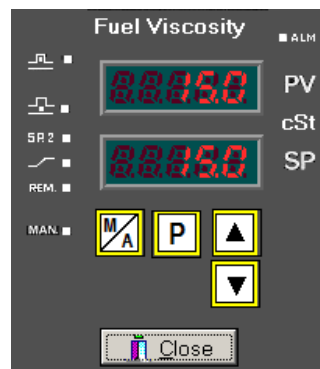
**VER6** offers different types of user interface:
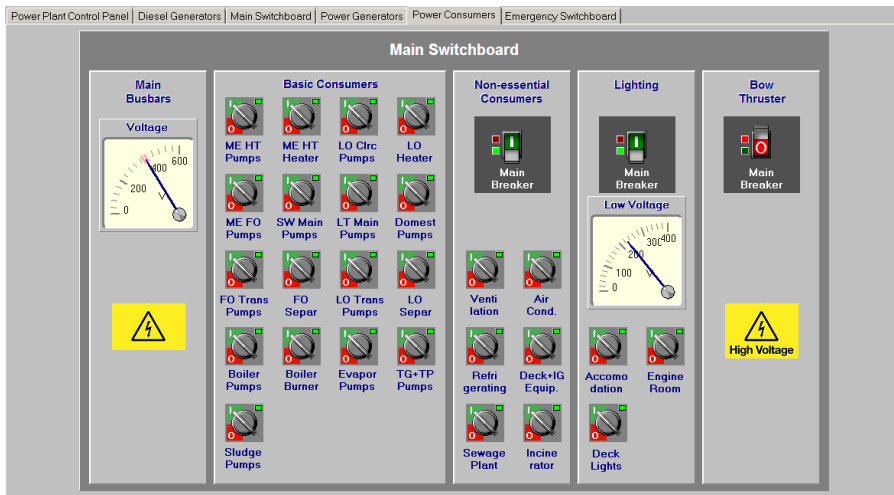
The control panels include very realistic, animated virtual controls like switches, gauges and lamps. The control panels imitate the most important parts of the control room equipment.

Mimic diagrams present the layout of all vital engine room systems. They include active valves, animated status indicators and tank level gauges.
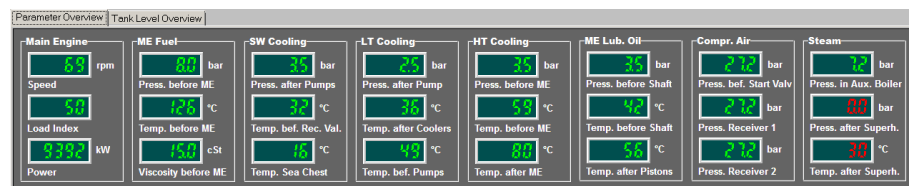
**The Parameter Overview** shows the most important parameters from the whole engine room
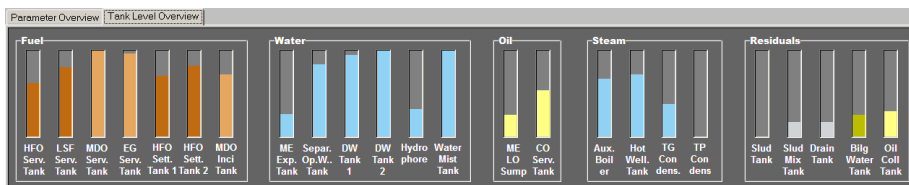
The Tank Level Overview shows the liquid level in the most important tanks from the whole engine room

Other **VER6** features are shown below:

The green **Checklist window** shows instructions relevant to the selected checklist.
The appropriate system window will always open when a new checklist step is shown in the checklist window.
The control lamp, switch or gauge specified in the checklist step "blinks" in order to make it easier to identify.
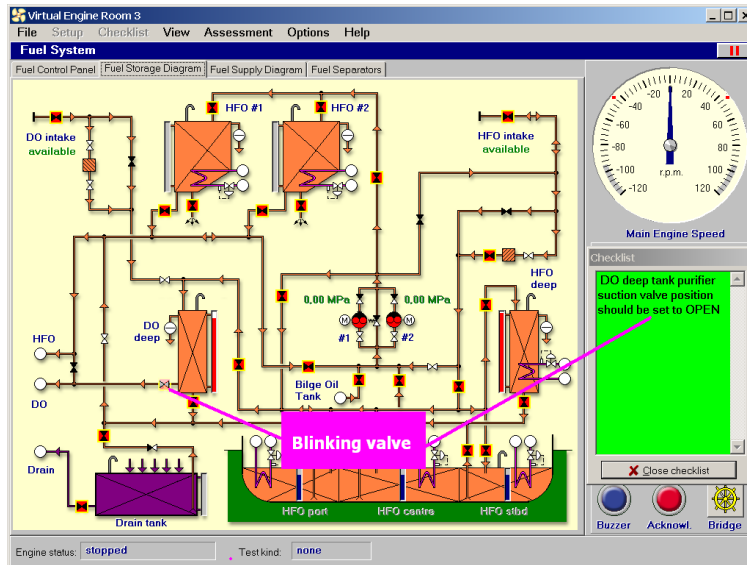
The **Assessment window** includes:

- A full list of errors with related penalty points.
- The total number of penalty points.
- Score in %
- The final results (Passed or failed).
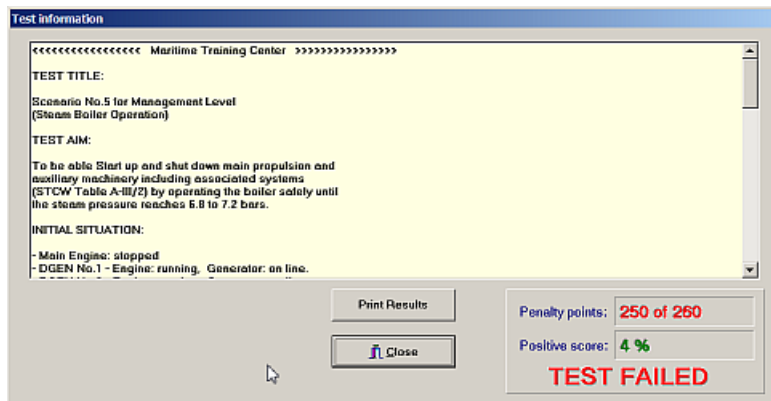
The **Test Editor** enables to create the new custom tests and to edit the existing tests.

It is possible to edit both: the parameter test conditions (limit value plus the logic condition) and the state test conditions (required status). It is possible to assign the penalty points for every test condition.

Please contact PC Maritime for further information or for a demo.