



Type Approved  
to STCW 95

# Engine Room CBT

## PC-Based Engineroom Simulators & CBT modules

**Engine Room CBT** is a unique simulator and multimedia training package, which extensively covers the subject of marine power plant equipment. The package provides 34 individual training modules, with 2D and 3D simulators. It has been type approved to STCW 95 and offers excellent value to marine engineering colleges & training centres.

**Engine Room CBT** consists of the following modules:

- Air Conditioning Plant 3D
- Auxiliary Steam Boiler Installation
- Biological Sewage Treatment Plant
- Controllable Pitch Propeller Installation
- Combined Oil Fired and Exhaust Gas Boiler
- Diesel Engine Generators
- Diesel Engines
- EcoStream
- Emergency Power Plant 3D
- Electric Power Plant
- Fixed Delivery Pump Steering Gear Installation
- Freshwater Generator
- Freshwater Generator 3D
- Fuel Conditioning Module 3D
- Fuel Oil Treatment Plant
- Hydrophore Installation
- Hydrophore Installation 3D
- Marine Compressors
- Marine Diesel Engine Monitoring Systems
- Marine Heat Exchangers
- Marine Hydraulic Machinery
- Marine Pumps
- Oily Water Separator
- Remote Control System for MAN B&W LMC engines
- Remote Control System for SULZER RTA Engines
- Refrigeration Plant
- Refrigeration Plant 3D
- Reverse Osmosis Desalination System
- Rotary Vane Steering Gear
- S-type Separation System
- Variable Delivery Pump Steering Gear
- Aqua Freshwater Generator
- Diesel Engines
- Gas Turbine

**The main educational tasks which can be accomplished by Engine Room CBT:**

- familiarisation with the principles of operating auxiliary shipboard systems & equipment
- training in marine power plant operation
- training in emergency procedures
- preparation for competency assessment

**Engine Room CBT's main features:**

- Realistic presentation of marine power plant equipment, with control panels and system installation diagrams
- Accurate mathematical modelling of each type of plant to ensure that the simulator will react to the trainee's actions exactly as it would in real life
- Interactive training - control panels contain switches, pressure gauges, control and alarm lamps, and allow actions such as opening or shutting valves
- Sound and graphics ensure that the modules realistically portray the equipment and reflect the consequences of trainee actions
- Some modules can simulate faulty operation, something which would not be possible under real conditions

**A typical module consists of four parts:**

- § System description
- § Operating instructions
- § Test
- § Interactive simulator

**System description**

This describes the application, working principles and main components of the installation, together with different kinds of illustration (pictures, photos, diagrams etc). By clicking on the appropriate part of the installation diagram, the part name appears.

**Operating instructions**

This contains a step-by-step description of preparations for starting the plant, automatic and manual control functioning and stopping the plant, with graphics illustrating the consecutive phases of the plant operation.

**Test**

The test is intended to assess the knowledge gained by the trainee from the two first parts of the module. The trainee must give the correct answer to randomly selected questions. This enables the trainee to carry out the test more than once without having to answer the same questions. At the end of each test the trainee is given a score.

**Simulator**

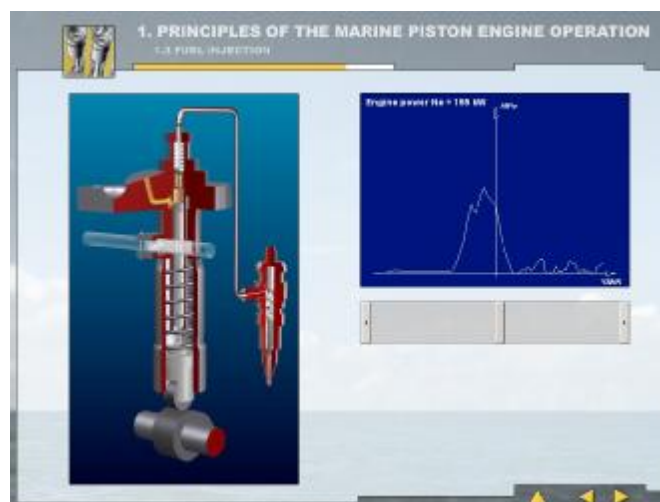
Finally, the trainee must set the valves on the installation diagram to their proper positions and start the pump, the compressors etc. by operating the switches and buttons on the panel. This enables the trainee to put into practice the theoretical knowledge he has gained.

The following pages contain screen shots of some of the modules in Engine Room CBT.

## AQUA FRESHWATER GENERATOR



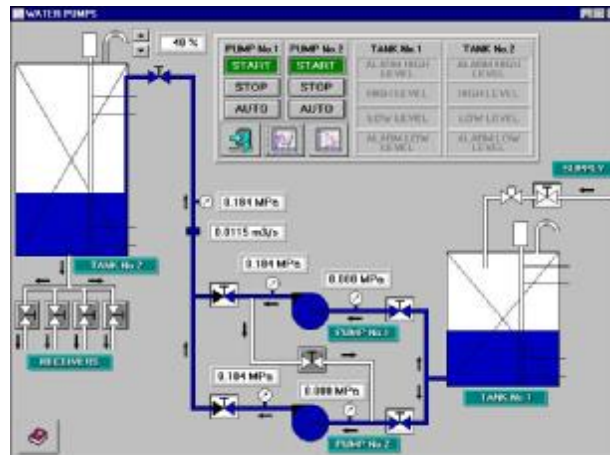
## DIESEL ENGINES



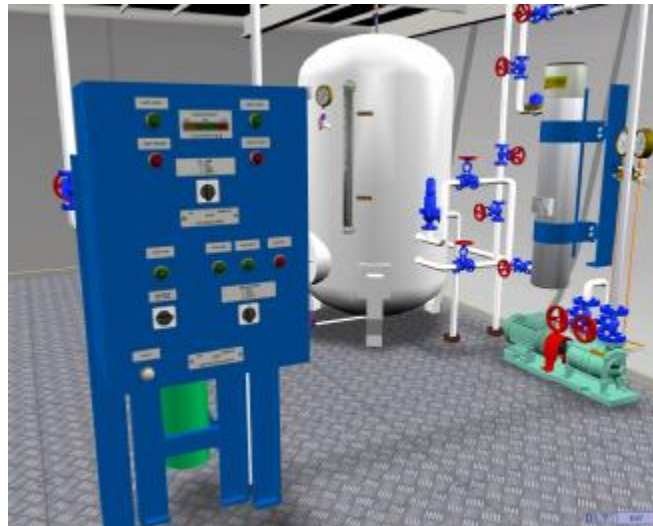
## GAS TURBINE



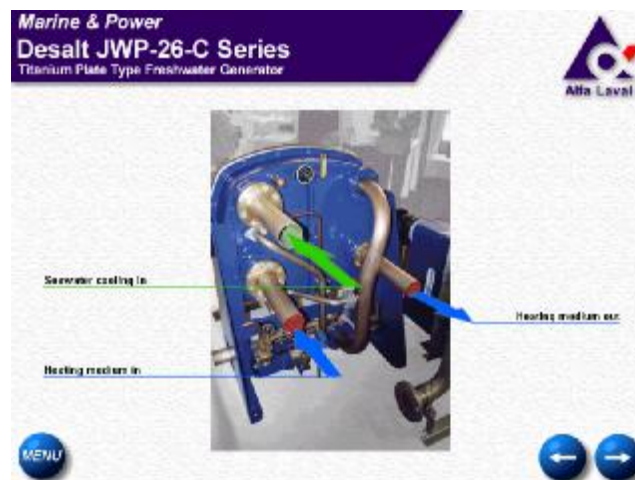
## MARINE PUMPS



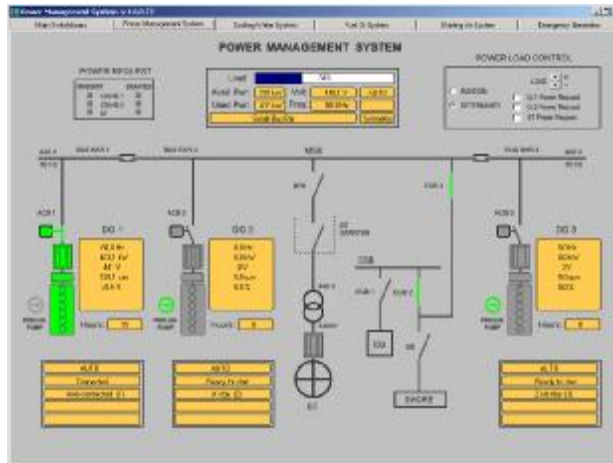
## HYDROPHORE SIMULATION



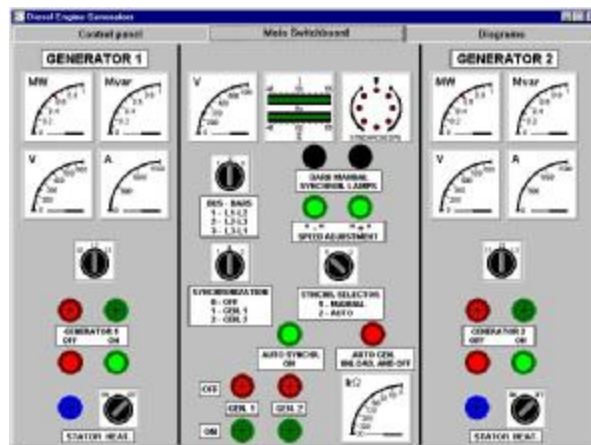
## FRESHWATER GENERATOR



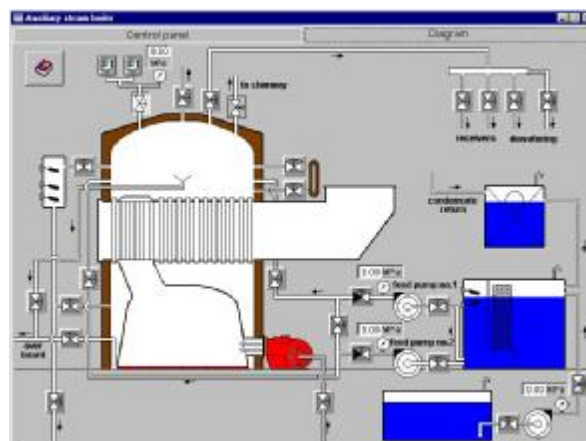
## ELECTRIC POWER PLANT



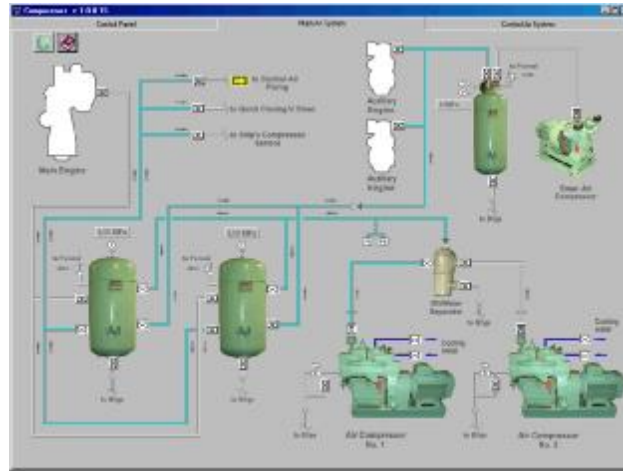
## DIESEL ENGINE GENERATORS



## AUXILIARY STEAM BOILER



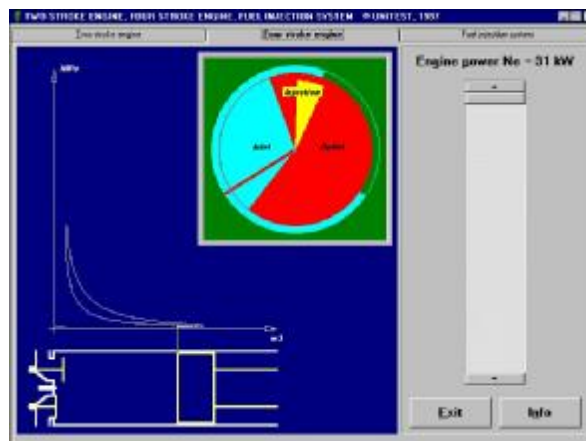
## MARINE COMPRESSORS



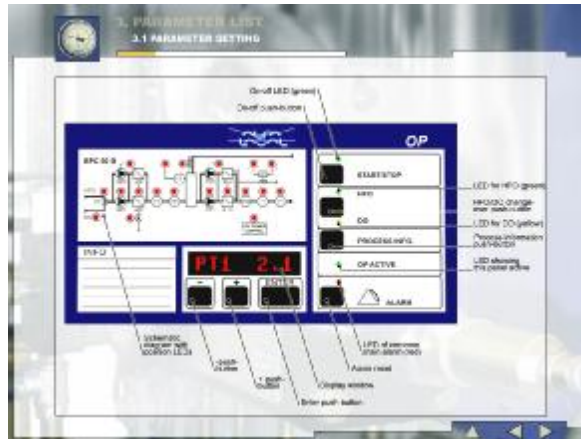
## EMERGENCY POWER PLANT



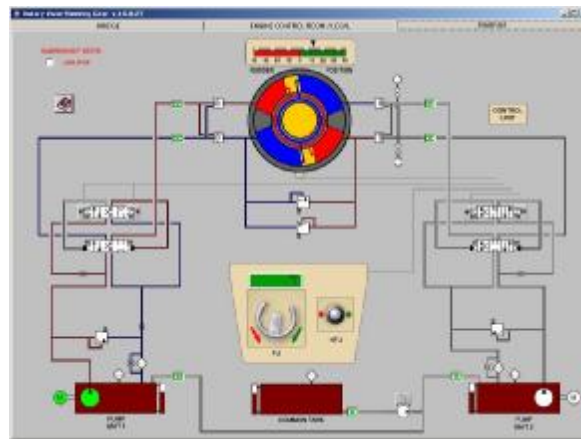
## FOUR-STROKE DIESEL ENGINE



## FUEL CONDITIONING



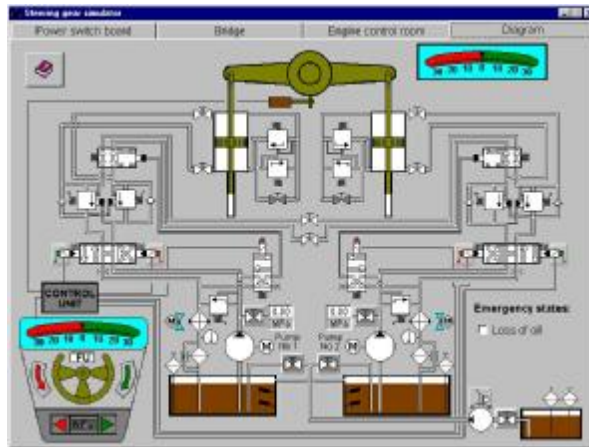
## ROTARY VANE STEERING GEAR



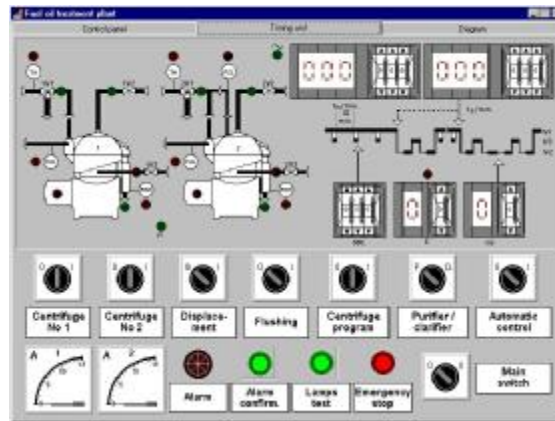
## REFRIGERATION PLANT



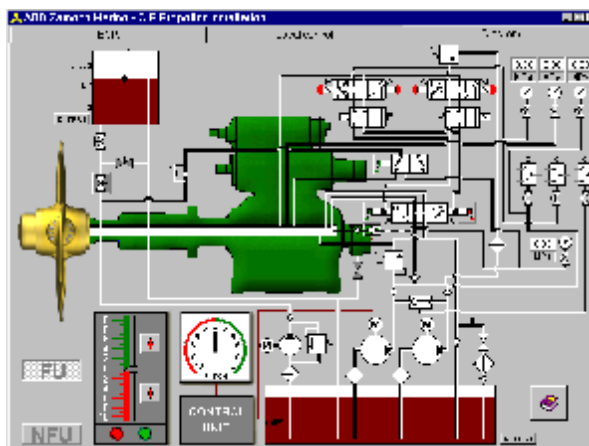
## STEERING GEAR



## FUEL OIL TREATMENT PLANT

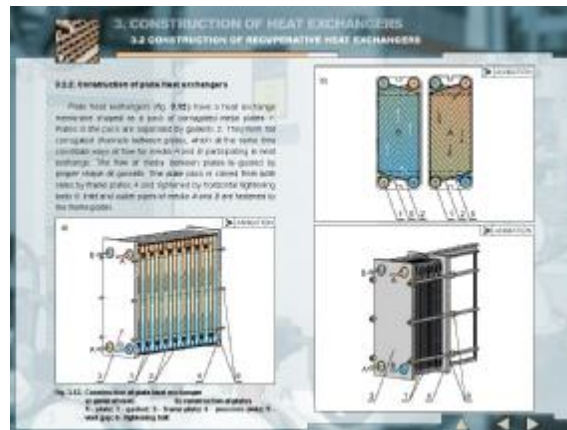


## CONTROLLABLE PITCH PROPELLER

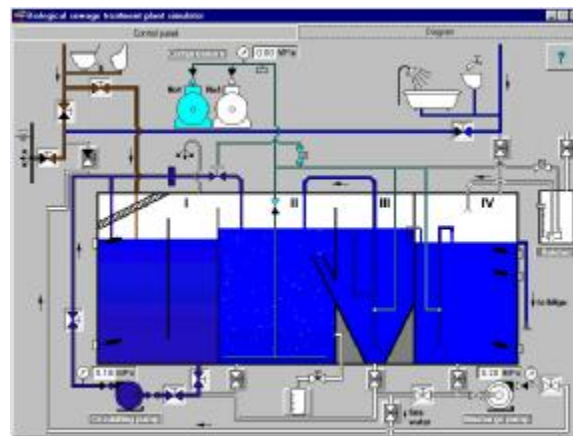




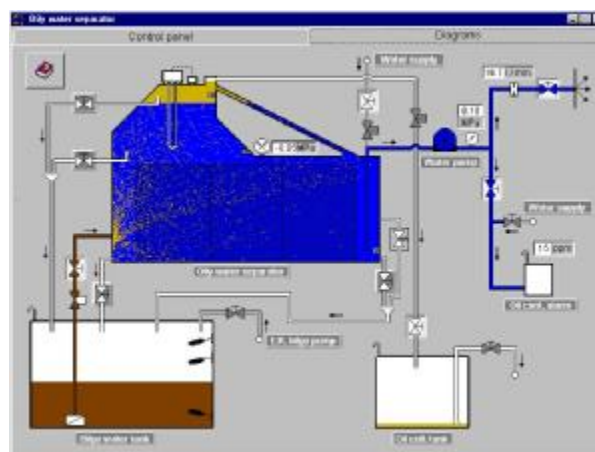
## MARINE HEAT EXCHANGERS



## BIOLOGICAL SEWAGE TREATMENT PLANT



## OILY WATER SEPARATOR



Please contact us if you would like further details about Engine Room CBT.