APPLICATION OF VIRTUAL REALITY TECHNIQUES IN MARINE TRAINING AND ENGINE ROOM SIMULATORS

Functionality of our simulators provides effective training and competence assessment for seafarers.
TRAINING FOR ENGINE DEPARTMENT PERSONNEL

- Engineer officers in charge of watch,
- Ratings forming part of engineering watch,
- Senior engineering staff,
- Navigating/ marine engineering officers and technicians

The simulators enable various levels of training, from familiarisation, standard operation and watch-keeping, to advanced operation, troubleshooting and vessel resource management.

All touchscreens and speakers responsible for the 3D visualization are built in hardware consoles.

Custom Engine Room design for various types of vessels, list of simulators and training software:

1. LOW SPEED Engine Room Simulator X-35 WARTSILA CPP – TS, with Modern Electronically Controlled Main Engine.

2. MEDIUM SPEED Engine Room Simulator (Platform Supply Vessel), based on four main engines (BERGEN DIESEL type), two reduction gears, shaft generators and two CPP.

3. MEDIUM SPEED Engine Room Simulator (Diesel Electric – High voltage, Platform Supply Vessel) based on four Diesel Generators, two azimuth thrusters, on retractable “drop down” thruster and one bow thruster.

4. MEDIUM SPEED Engine Room Simulator, based on one main engine (MAK type), one reduction gear and CPP.

5. MEDIUM SPEED Engine Room Simulator, based on two main engines (BERGEN type), one reduction gear and CPP.

6. LOW SPEED Engine Room Simulator WARTSILLA, with Modern Electronically Controlled Main Engine – fixed propeller.

7. LOW SPEED Engine Room Simulator, based on MAN DIESEL (B&W).

8. CBT – computer based training modules for main Engine Room installations.

3D VIRTUAL REALITY, 3D visualisation of various ship compartments, controls, access to local operation posts and adjustment from 3D visualisation.
INTERACTIVE SYSTEMS DIAGRAMS

Exact copy of the real vessel schematic drawings. Zoom function for the extensive diagrams.

- Fuel System
- Cooling & Fire System
- Lubricating System
- Compressed Air System
- Power Plant
- Emergency Generator
- Sanitary Water System
- Bilge System
- Steering Gear
- Sewage Treatment Plant
- Fresh Water Generator
- Air Conditioning Plant
- Water Mist System
- CO2 System
- Reverse osmosis system
- Water boiler
- Refrigerating Plant ... and more.

TRAINEE WORKSTATION

- Remote control and monitoring of Propulsion Plant from the Navigational Bridge,
- Remote control and monitoring from the Machinery Control Room,
- Local control and monitoring from Engine Room Compartment,
- Control, Monitoring and Alarm PC-based system,
- CBT for self-study with instructions and assessment,

STAND ALONE, SINGLE PC

- Self-education
- Equipment familiarisation
- Refresher training

FULL MISSION

Replica of Engine Control Room, Main Switchboard and Machinery Compartments

- Advanced operation and troubleshooting
- Resource Management training
- Emergency operating procedures
- Machinery disaster management
- Final training and certification
- Assessment and examination