K-Sim® Engine

KONGSBERG

KONGSBERG Engine Room Simulators

K-Sim Engine Landing Helicopter Dock - DE32 LHD

The K-Sim Engine DE32 LHD model is based on a Landing Helicopter Dock with a CODAG-E Engine configuration from a modern Navy LHD Ship. CODAG-E is a combination of two types of engines connected to generators. The propulsion is driven electrically as in a diesel-electric configuration with two 6.6 kV Diesel Generators each rated 7,2 MW and one Turbine Generator rated 17,4 MW presenting the electric power generation.

The model has 2 × 11 MW Azipods as propulsion motors & 2 × 1500 kW Bow thrusters. The control and automation systems include sophisticated power management, pump control and propulsion control.

Training objectives

The K-Sim Engine DE32 LHD model is designed to be a valuable tool in the basic and advanced training of marine engineers. The main object of the simulator is to cover the operation and system understanding of combining diesel generators and turbine generators in a diesel-electric propulsion system with azipods as propulsion motors. Control room operator panels, as well as bridge and steering panels, are included. The training objectives include emergency operations and troubleshooting, optimal operation, fuel economy and energy conservation. This is achieved by controlled training, leading to a better understanding of the total plant operation as a result of a realistic simulation of a real engine room.

Compliant with industry requirements

KONGSBERG's simulator models exceed requirements in the STCW convention, Regulation 1/12 and fulfill DNV's standard DNV-ST-0033 for Maritime Simulator Systems.

KONGSBERG ENGINE ROOM SIMULATORS

Our range of K-SIM Engine Room Simulators provide realistic, handson experience in a ship-like environment. Systems include vital components, such as main engine remote control, engine-room local panels, controllers, engine telegraph, alarm systems, power supply switchboards, engine sounds etc.

We have an extensive model library of different propulsion plants and engines types.

Our library includes models of diesel engines such as MAN B&W, Wärtsilä, Sulzer, Pielstick, MaK and MTU. We have Dual Fuel LNG engines & Methanol engine as well as gas turbine, diesel-electric, water jet and steam propulsion plants.

Our systems can be easily networked with our full ship's bridge simulator for total ship training.

Model Features and Details

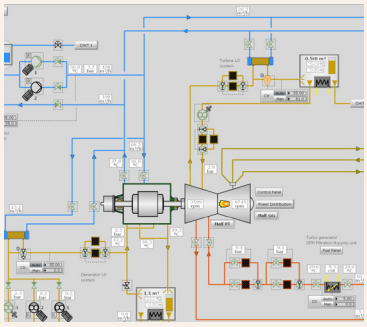
Diesel Generators	2 × 6,6kV / 7,2MW
Diesel Generator Speed	720 RPM
Turbine Generator	1 × 17,4MW GE LM 2500 Gas Turbine
Propulsion Type	2 x Azimutal Propulsive units type POD / 11 MW
Propeller Speed	176 RPM
Thrusters	2 x Bowthrusters / 1500 kW
Emergency Generator	1 × 440V / 1540 kW
Vessel length overall	230,8 m
Breadth moulded	32,0 m
Draught	7,18 m
Displacement	27.851 tonnes
Cruising Speed	19,7 knots
Range	8,000 nautical miles at 15 knots 9,250 nautical miles at 12 knots

Model Main Specifications

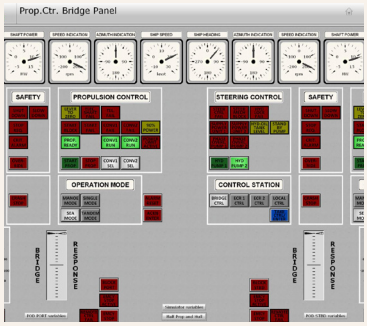
High fidelity engine room systems include:

- Integrated automation system
- Power distribution system
- Propulsion control system
- Electronic propulsion system
- Bow thrusters
- Fin stabilizing system
- Diesel generator sets and support system
- Emergency generator and gas turbine
- Power distribution system
- HVAC system
- Damage control and fire fighting system
- Seawater system
- Freshwater system
- Freshwater auxiliary cooling system
- Freshwater production system
- Potable water system
- Hot water system
- Oily water system and separators
- Lubrication oil filling, transfer and purification
- Drainage and ballasting system
- Fuel oil system
- Fuel oil separators
- Aviation fuel system
- Compressed gas system
- Compressed air system
- Refrigeration system
- Sewage System

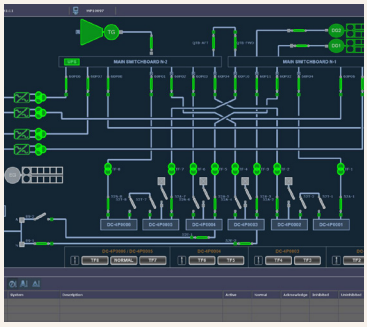
Note: Specifications subject to change without notice



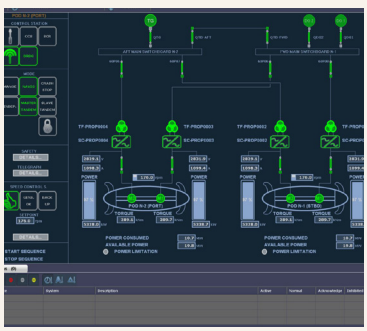
Turbo Generator



IAS Bridge Propulsion Control



IAS Main Network



IAS Propulsion Control

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