K-Sim Engine
MaK 8M453C NAVY M11

The K-Sim Engine MaK 8M453C Navy M11 simulates a logistic support vessel with a single installation Krupp MaK M453C medium speed (four stroke) diesel engine connected to CP propeller. The main engine model responds dynamically to variations in operation and conditions of the ship model and the ship model have mutual responses to the main engine model.

The electrical power plant includes two diesel generators, one shaft generator and one emergency generator. The steam plant includes oil fired boiler and auxiliary boiler. Control room operator station and panels as well as bridge and steering panels are included.

Training objectives
The K-Sim Engine MaK 8M453 Navy M11 model is designed to be a valuable tool in the basic and advanced training of marine engineers. The training objectives are to train junior engineers in basic engine room operations, senior engineers in emergency operations and trouble shooting, and to train senior and chief engineers in optimal operation, fuel economy and energy conservation. This is achieved by controlled training, leading to better understanding of the total plant operation, as a result of realistic simulation of a real engine room.

Compliant with industry requirements
Kongsberg Digital simulator models exceed requirements in the STCW convention, Regulation 1/12 and fulfill DNV GL's standard DNVGL-ST-0033 for Maritime Simulator Systems.
MODEL MAIN SPECIFICATIONS

High fidelity engine room systems include:
• Fuel oil system, incl. bunker, settling, service tanks and purifiers
• Fuel oil high pressure system, incl. viscosity control
• Main engine lubrication oil system incl. purifier
• Main sea water system, incl. ballast tanks
• Main engine fresh water system, incl. fresh water generator
• Main engine turbocharger system
• Main engine sea water system
• Propeller gear oil system incl. shaft generator
• Propeller servo LO system
• Stern tube system
• Compressed air system, incl. 2 start air and one service air compressor
• Bilge wells and bilge water separator
• Refrigeration system
• Electric power plant, incl. two diesel generators, one shaft generator and power management
• Steam system incl. exhaust and oil fired boiler
• Remote control panels incl. panels for bridge, ECR and at engine side.

Note: Specifications subject to change without any further notice.

MODEL FEATURES & DETAILS

Type: Krupp MaK 8M453C
Cylinder bore: 320 mm
Piston stroke: 420 mm
No of cylinders: 8
No of air coolers: 1
No of turbochargers: 1
Continuous service rating: 2650 kW
Corresponding engine speed: 600 kW
Mean effective pressure: 19.7 bar
Spec. fuel oil consumption: 178 g/kWh
Reduction gear: 0.24:4
Propeller diameter: 2.6 m
Propeller speed: 150 RPM
Length overall: 92 m
Length between p.: 84 m
Dead-weight: 940 tons
Speed: 26 knots

Datasheet version:
K-Sim Engine -MaK 8M453C Navy M11
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