K-Sim® Cargo
Product carrier

Our Product Carrier model is based on a real double hull vessel. The model includes seven tank pairs, where one pair is SLOPs. Each tank pair has its own independent lines for loading/discharging as well as for Vapour Emission Control (VEC) and Inerting. Submerged hydraulically driven cargo pumps are fitted in each tank.

Model description
For cleaning purposes clean-guns are fitted in each tank driven by two separate cleaning pumps able to clean with fresh water, salt water or cargo. Two separate ballast pumps and ejectors are fitted. Inert gas is made from flue gas or by the use of an inert gas generator, and run through a scrubber and onto the deck. The cargo temperature and density can be set individually. Water and sediments will fall out over time. Tank atmosphere data is calculated continuously. Tank atmosphere is shown graphically on a combustion diagram.

STCW requirements
The product carrier model meets the requirements of STCW section A-II/1, A-II/2, A-II/3, A-III/1, A-III/2, and A-V/1. These sections cover
• planning and ensuring safe loading
• care during the voyage and unloading of cargoes
• trim, stability, and stress to maintain seaworthiness of the ship

DNV GL certification
This model is certified and approved according to DNV GL’s Standard for Certification of Maritime Simulator Systems ST-033 March 2017.
MODEL FEATURES AND DETAILS

Vessel's main particulars

Dead-weight 83890 GRT
Length overall 228.60 m
Length bpp 218.70 m
Breadth moulded 32.24 m
Draught moulded 21.60 m
Summer draught 16.06 m

Vessel details

Cargo tanks 14 – 2 are SLOPs
Discharge capacity 860 m³/h
Ballast pump 1100 m³/h
Vapour emission control Yes
Number of cargo manifolds 7
Number of VEC manifolds 7

Note: Specifications subject to change without notice

TRAINING LEVELS AND OBJECTIVES

Training levels

The simulator is suited for the following training:

• Junior officers in basic cargo operations
• Senior officers in full-scale cargo operations
  (loading/discharging/ tank cleaning /venting)
• Senior officers and captains in advanced cargo-handling operations

Training objectives

The training objective of this model is to understand the total cargo-handling operation. Specific training objectives include the following:

• Familiarization with all parts of the cargo system
• Planning a cargo-loading or discharge operation using the Load Master load computer
• Lining up for loading and ballast handling simultaneously (check atmosphere)
• Simultaneous use of vapor emission control (VEC)
• Controlling the flow into each tank and the trim/list of the ship
• Topping up and finalizing loading
• Preparing and lining up for discharge including inert gas plant
• Starting up discharge from one or more tanks with one or more cargo types
• Tank washing (setting correct pressure and washing angles)
• Emptying and draining final tanks
• Finalizing departure ballast
• Heating cargo during laden voyage
• Venting tanks for inspection/docking using an explosion diagram for each tank (included in the model)