Wärtsilä Liquid Cargo Handling Simulators

Models

Liquid Cargo Handling Simulators (LCHS) are designed to train and certify crew members of liquid cargo tankers, gas carriers and terminals, as well as other staff responsible for the safe handling of cargo and the operation of auxiliary equipment.
Wärtsilä Liquid Cargo Handling Simulators includes the following models

**Crude Oil Carriers**

**LCC Tanker**
Aframax sized Large Crude Oil Carrier 116,000 DWT, 12 Cargo Tanks and 2 Slop Tanks, total capacity at 98%—127,511.91 m³.

- Length, overall: 248.92 m
- Breadth, molded: 43.80 m
- Depth, molded: 14.925 m
- Design draught, molded: 61,342 tons
- Cargo + slop tanks capacity at 98%: 127,511.91 m³
- Ballast tanks capacity at 100%: 39,949.6 m³
- Cargo pumps (steam driven): 3 pumps
- Ballast pumps (electric/steam driven): 2 pumps

**VLCC Tanker**
Very Large Crude Oil Carrier 276,000 DWT, 15 Cargo Tanks and 2 Slop Tanks, total capacity at 98%—346,261 m³.

- Length, overall: 334.071 m
- Breadth, molded: 58.00 m
- Depth, molded: 31.25 m
- Design draught: 22.3 m
- Cargo + slop tanks capacity at 98%: 346,261 m³
- Ballast tanks capacity at 100%: 104,040 m³
- Cargo pumps (steam driven): 3 pumps
- Tank cleaning pump (steam driven): 1 pump
- Ballast pumps (electric driven): 2 pumps

**Chemical Tanker**
Chemical/product tanker, ship type 1, for carriage of liquid noxious cargoes. Parcel type cargo system with 28 Cargo Tanks including two Slop tanks and with Cargo Drain Tank, total capacity 23,731 m³ with Submerged hydraulic driven pumps in every tank.

- Length, overall: 161.12 m
- Breadth, molded: 23.0 m
- Draught as Oil Tanker: 9.80 m
- Draught as Chemical Tanker: 9.95 m
- Displacement (9.80): 28,921 tons
- DWT (9.80): 21,570 tons
- DWT (9.95): 22,150 tons
- Cargo tanks capacity: 23,731 m³
- Ballast tanks capacity: 9,604 m³
- Cargo pumps (hydraulic driven): 28 pumps

**Product Tanker**
Product/Oil Carrier designed to transport 5 types of cargoes simultaneously, including crude oil and oil products, vegetable oils and IMO type 3 chemicals. 10 Cargo Tanks and 2 Slop Tanks, total capacity 54,298 m³. Submerged hydraulic driven cargo pumps in every tank.

- Length, overall: 182.50 m
- Breadth, molded: 23.0 m
- Depth, molded: 17.50 m
- DWT (12.2): 47,400 tons
- Cargo + slop tanks capacity: 54,298 m³
- Ballast tanks capacity: 21,726 m³
- Cargo pumps (hydraulic driven): 12 pumps
- Ballast pumps (hydraulic driven): 2 pumps
- Heating system: Steam 80 °C
Liquefied Gas Carriers

LPG Tanker
Ethylene/LPG Carrier. Two Type C cargo tanks, total capacity 8,476 m³. Semi-refrigerated liquefied gas carrier, (−104 °C, 6 bar gauge, 0.97 t/m³), type 2G.

- Length, BP: 108.1 m
- Breadth, molded: 18.6 m
- Design draft: 7.4 m
- DWT: 6,300 tons
- Cargo pumps: 2 units
- Ballast pumps: 2 units
- Cargo Tank capacity: 8,000 m³
- Ballast Tank capacity: 1,988.8 m³

LNG Tanker Membrane
Liquefied Natural Gas Carrier with 5 membrane type cargo tanks. Ship type 2G (membrane tank, −163 °C, 70 kPa, 500 kg/m³).

- Length, overall: 302.00 m
- Breadth, molded: 50.00 m
- Design draft, molded: 12.00 m
- Cargo Tank capacity: 217,459 m³
- Ballast Tank capacity: 72,676.8 m³
- Cargo pumps (electrical driven): 20 pumps
- Ballast pumps (electrical driven): 4 pumps

LNG Tanker Spherical
Liquefied Natural Gas Carrier with 5 spherical (Moss type) cargo tanks. Ship type 2G (−163 °C, 0.25 bar, 500 kg/m³).

- Length, overall: 293.0 m
- Breadth, molded: 45.75 m
- Displacement: 104,999 tons
- Deadweight: 71,753 tons
- Depth, molded: 25.5 m
- Design draught: 10.95 m
- Cargo tanks capacity at 98.5 %: 135,477 m³
- Ballast tanks capacity at 100 %: 62,617 m³

LNG Regasification Terminal
Terminal for the reception and storage of liquefied natural gas from ships. Stored LNG can be pumped out from storage tanks, vaporized and sent to the natural gas transmission system at required conditions of pressure and temperature.

- Annual Average Output: 5bn Nm³/yr
- Ship Unloading Rate: 12,000 m³/hr
- Minimum Output Rate: 75,000 Nm³/hr
- Maximum Output Rate: 656,000 Nm³/hr
- Storage tanks capacity: 2 × 160,000