

# Liquid Cargo Handling Simulator

LCCHS 5000 TechSim:  
LPG Tanker



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## LCHS 5000 TechSim: LPG Tanker

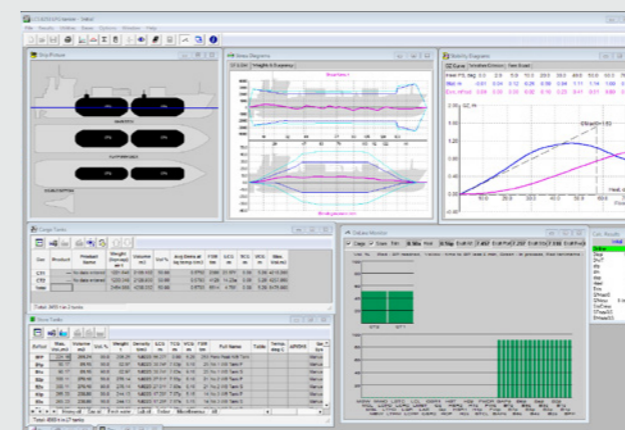
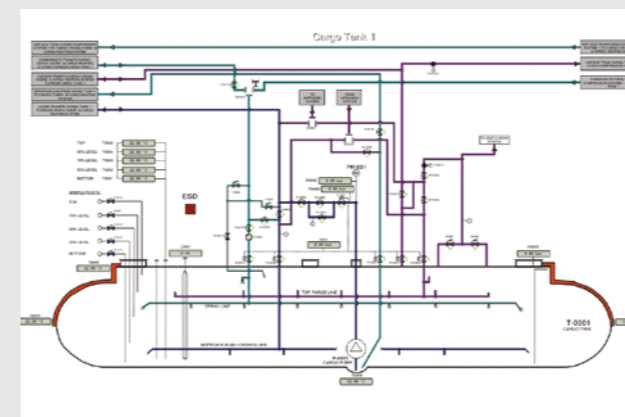
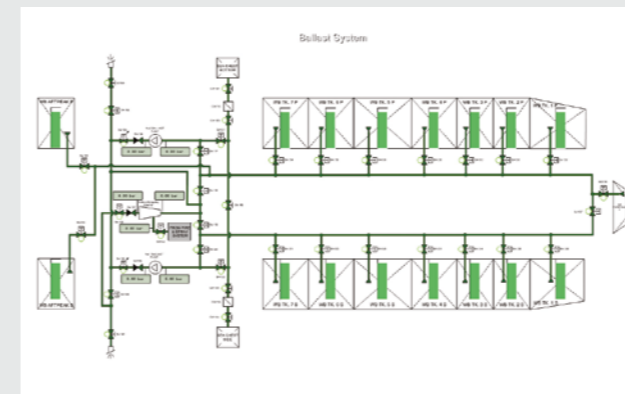
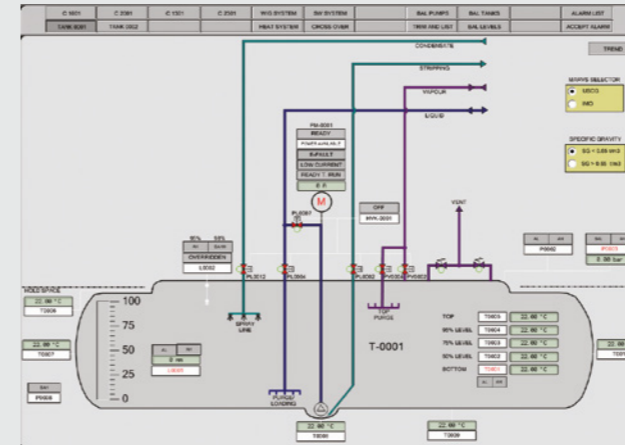
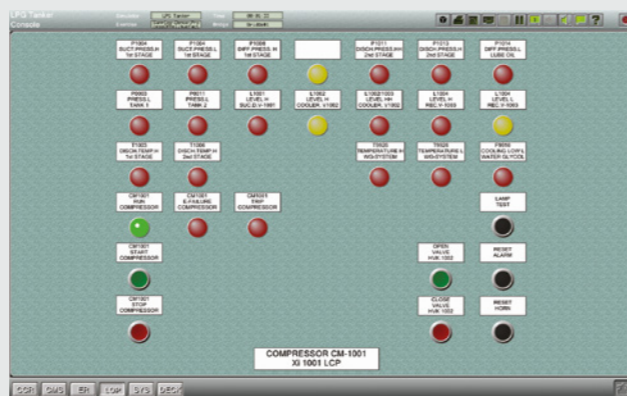
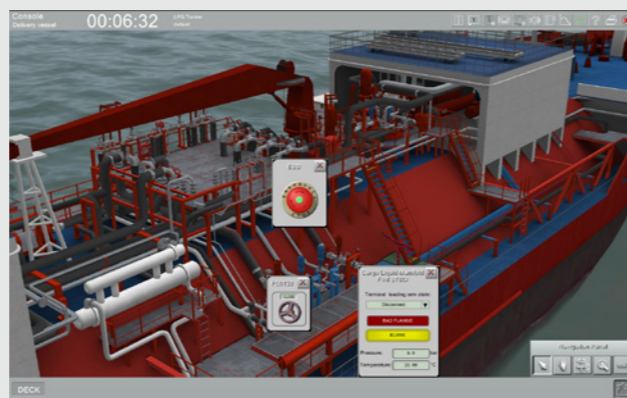
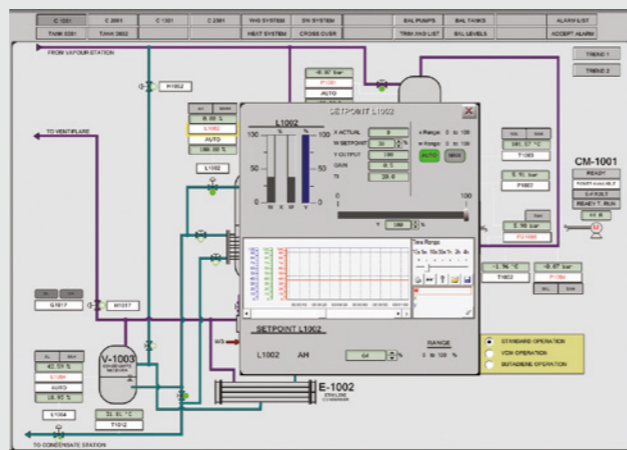
The LCHS 5000 TechSim Tanker for Liquefied Petroleum Gas (LPG) simulator is intended for training of tanker personnel in the handling of LPG cargoes and operating the cargo-handling auxiliary equipment in accordance with the requirements of STCW 2010 and other International Regulations and Conventions including the latest edition DNV GL-ST-0033 and MARPOL 73/78.

### Complex Calculations Ensure Realistic Behaviour

Complicated ship equipment and automation specific to LPG/Ethylene carriers (re-liquefaction and refrigeration plants etc.) is modelled in high detail. Some of the highlights include:

- Remote control and adjustment of set-points and alarm limits from the screens of Control and Monitoring System (CMS) screens;
- Local operation and control of equipment in deck shelters from the local operation posts (LOP);
- Operating valves, manifolds, spectacle flanges and other equipment via interactive system diagrams (SYS) and from the 3D view (DECK).

The physical behaviour of the model and equipment has been verified and tuned with expert input from LPG ship operators, our long term partners.



### Prototype Details

The simulated Ethylene/LPG carrier is a liquefied gas tanker designed to transport specific cargoes: ethylene, ethane, propylene, propane, butadiene, butane, and ammonia.

### Tonnage and Dimensions

Length overall	125 m
Breadth moulded	20 m
Deadweight	9352 t

### Cargo Handling

Cargo tanks capacity	8476 m <sup>3</sup>
Ballast tanks	4961 m <sup>3</sup>
Cargo deep well pumps	2 pumps
Ballast pumps	2 pumps

### Simulated Systems

- Cargo handling system
- Ballast system
- Cargo monitoring system
- Cargo heating system
- Nitrogen production system
- Re-liquefaction system
- Emergency shutdown system
- Fire and spray system
- Loading control system
- Refrigerant System
- Water Glycol System
- Sea Water System



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