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WORLD CLASS – through people, technology and dedication




Software support effort

Upgrade to Windows includes:

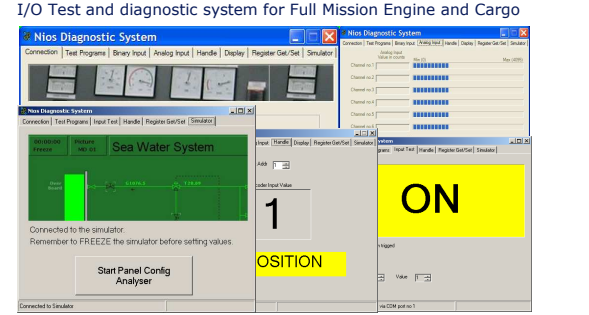
- Replacement of Unix computers
- Licences for Windows server and clients
- Replacement of current network
- Latest SW functionality:
 - Enhanced Instructor Functionality and Client connection
- Licences for latest HMI Application software
- TEC panels interfaced to windows applications
- Improved Sound system
- New Administrator login system
- Remote Access Support from KMSS

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Product enhancements

I/O Test and diagnostic system for Full Mission Engine and Cargo

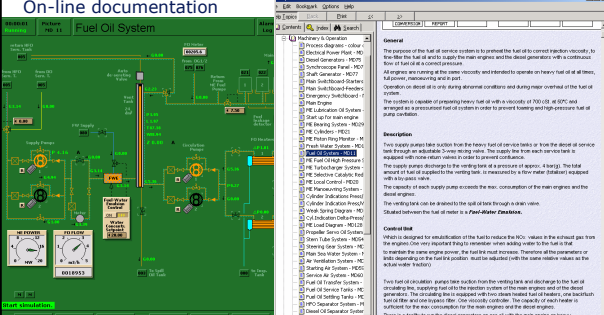


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Product enhancements

On-line documentation




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Product enhancements


HMI Access Control:



Instructor station




Remote control of ME



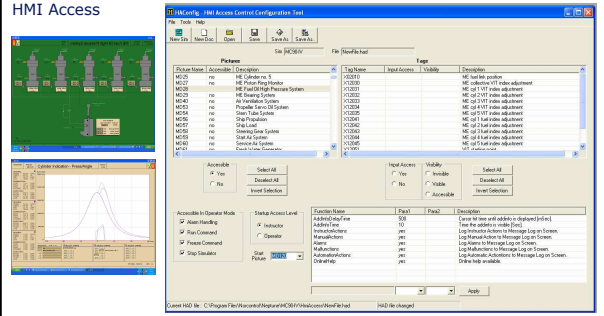
VIT and Fuel Oil injection pumps

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Product enhancements

HMI Access



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Product enhancements

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New Configurable Variable Pages

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Product enhancements

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Message Log

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Product enhancements

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.....The new ship simulator!!

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Product enhancements

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Functionality:

- Power Management for Thrusters, Winches and Anchor
- Blackout; anchors, radars, winches and panels disabled
- Readings of Ambient Air and SW Temperature
- Synchronisation of simulated time
- Recording and playback.
- Circuit breaker for Nav.lights and misc. consumers.
- Torque from Bridge hydrodynamic model
- Transfer of Responsibility
- Throttle Command (from Bridge)
- Emergency Telegraph
- Propeller RPM and Pitch (from Engine)
- Main Engine data available at Bridge
- Pitch RPM and Torque for Thrusters

- Watch Transfer
- Wind and Waves
- Draught
- Hull/drag Force
- General & Eng. alarms
- Thermal Limit Override
- Overload
- Steering Gear & Rudder
- Ship speed/Turning rate
- Slow down/Shutdown
- Emergency Run/Stop
- Starting Air Pressure
- Fuel Consumption
- ME rpm

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Product enhancements

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Extended functionality:

- Power Management for Thrusters, Winches and Anchor
- Blackout; anchors, radars, winches and panels disabled
- Readings of Ambient Air and SW Temperature
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Cargo Handling Simulators - Certificates and Approvals


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Our products are certified and approved by major maritime authorities.

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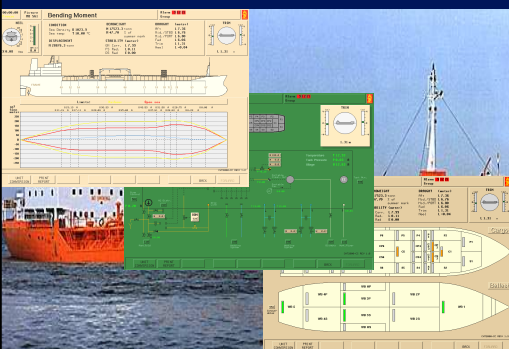
Cargo Handling Simulators, Overall statistics



	VLCC	PrC	CC	LNG	LPG
Continuous process variables present in mimics	1 767	2408	4556	1878	1686
Discrete process variables present in mimics	578	892	2017	838	689
Continuous malfunctions (0-100%)	3	71	1800	227	724
Discrete malfunctions (on-off)	146	89	133	39	364
Alarm point	288	398	484	393	269
Total number of continuous variables in model	17 807	26988	433400	61797	110000
Total number of discrete variables in model	15 255	19718	100012	13886	20012

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Cargo Handling Simulators

Chemical Carrier

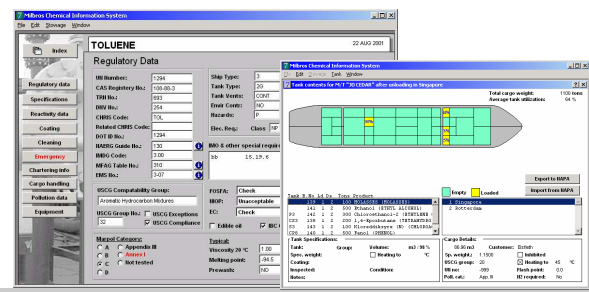
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Cargo Handling Simulators




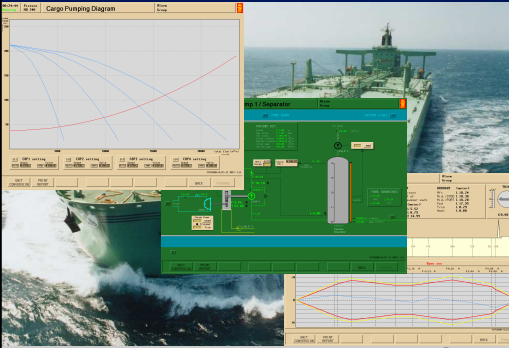
Milbros Chemical Information System

"...Can We Take This Cargo?"



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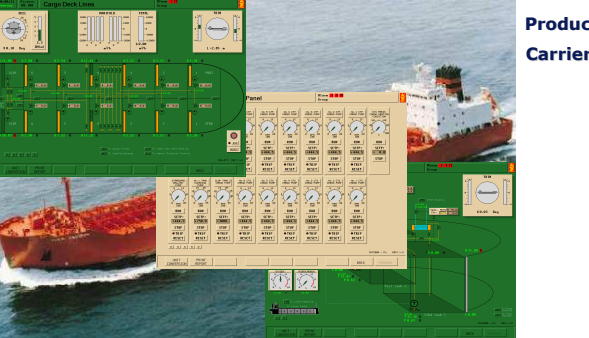
Cargo Handling Simulators

Very Large Crude Carrier

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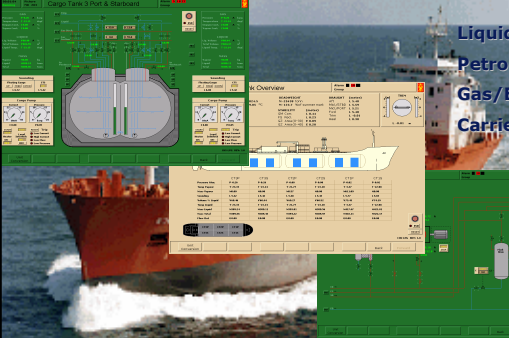
Cargo Handling Simulators

Product Carrier

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Cargo Handling Simulators

Liquid Petroleum Gas/Ethylene Carrier

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LNG – Cargo Handling Simulator

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Liquid Natural Gas Carrier

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LNG – Cargo Handling Simulator

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Mollier diagram

The LNG has built in the complexity of the gas laws.

This applies to both the line system and the tank system.

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LNG Tank monitoring Panel

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Relation between level and temperature.

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LNG – Cargo Tank Overview

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CONDITION	SEA DENSITY	DISPLACEMENT
SEA DENSITY	0.8283	M 12499 ton
SEA TEMP	1.0040 °C	M 16.86 ton summer mark
DISPLACEMENT	M 14514.8 ton	CG Area(0-30) E 3.34

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LNG – Ballast Tank overview

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CONDITION	SEA DENSITY	DISPLACEMENT
SEA DENSITY	0.8283	M 12499 ton
SEA TEMP	1.0040 °C	M 16.86 ton summer mark
DISPLACEMENT	M 14514.8 ton	CG Area(0-30) E 3.34

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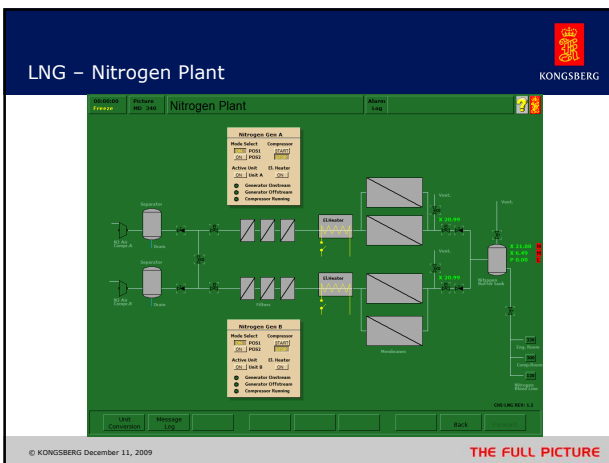
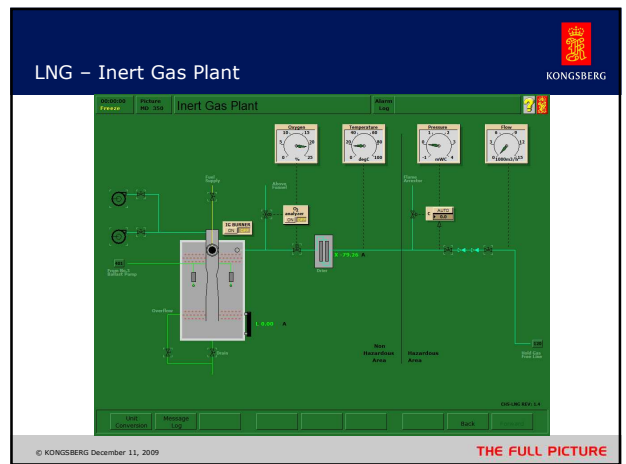
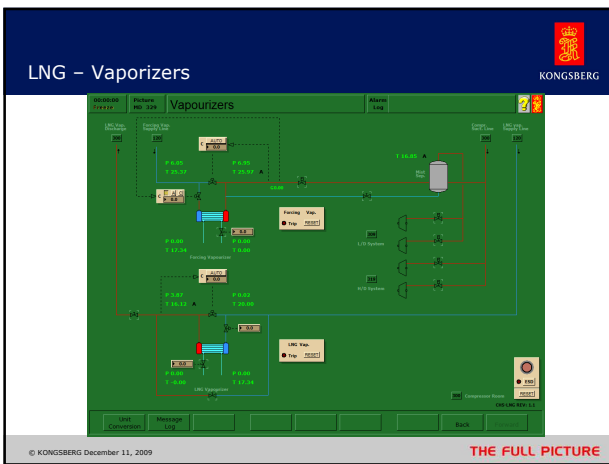
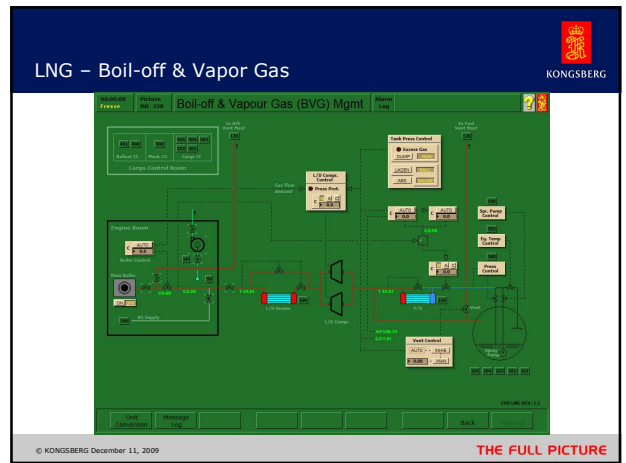
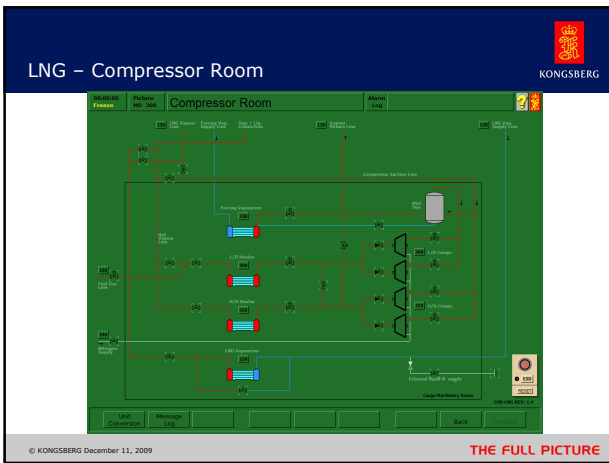
LNG – Cargo Tanks

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Cargo Tank 1

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Special Task simulators

Pen Recorder

Start Plotting

Channel	Tagname	Value	Unit	Description	Low	High
Channel 1	SW00214	20.000	degC	SW temp contr. set point	20.000	20.000
Channel 2	SW00215	20.000	degC	SW temp contr. master signal	20.000	20.000
Channel 3	SW00216	20.000	%	SW temp contr. output signal	0.000	100.000
Channel 4	SW00217	20.000	%	SW temp contr. output signal	0.000	100.000
Channel 5	SW00218	20.000	degC	SW temp contr. set point	20.000	20.000
Channel 6	SW00219	20.000	degC	SW temp contr. input signal	20.000	20.000

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New Instructor and assessment system

Will be capable to:

- Create and deploy exercises (scenarios, evaluations and configurations)
- Monitor and control simulations
- Monitor and control students
- E-Coach
- Online help, tutorials and a library of examples

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VLCC-DH

Ballast Line

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Web-enabled simulation/ Content

Electrical Plant

Steam Plant

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Virtual Engine Room Simulator

Institute Willem Barentsz, Netherland

© KONGSBERG December 11, 2009

Institute Willem Barentsz, Netherland

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