

An aerial photograph of a large floating crane ship, likely a heavy-lift vessel, positioned in a harbor. The ship is white with green and yellow accents. It has several large yellow cylindrical tanks on its deck. A large red and white crane is mounted on the ship. In the background, there are industrial buildings and a helipad on a nearby pier.

FLOATING CONDITION CONTROL

Ensures Safe Auto Adjustment of Floating Position and Compensation of Load Transfer Operations

This flow-controlled anti-heeling and ballast system is integrated into a central control system with PLCs. A key advantage of this setup is that all required operations are fully automated, while remaining under continuous system monitoring. The control system also includes a loading computer to simulate and optimize the ballasting process, a SCADA system, and a logging function.

CONTROL SYSTEMS

Auto Adjustment Of Floating Positions

SIMPLY KEEP YOUR DESIRED CONDITION - FULL FOCUS ON CARGO OPERATION

The key feature of this system is to adjust the floating condition in the three degrees of freedom heel, trim and Draught automatically over a predefined path.

The system allows a flexible selection of parameters as limitations for the operation, such as bending moment limitations, tank usage, min required GMs or others.

For semi-submersible ships and floating docks this system will fully support the operators to undertake automatic docking operations safely.

Auto Compensation Of Load Transfers

FASTER AND SAFER LOADING OPERATIONS

In combination with a main crane, upending gripper, lifting arms, jacking legs or any other relative load & position tracking (Load Moments), the FCC System ensures a constant floating position during any transfer of load.

The load can be transferred along the vessel or from an external position. The application can be a ballast supported jacking operation, an offshore installation job, a load skidding transfer in harbour or other similar tasks you can imagine. Also tidal influence are taken into account at the same time.

KEY FEATURES

- Unique integration of Valve Remote Control, Tank Gauging, Anti Heeling and Deflection Measurement systems, combined with the SECURELOAD Loading Computer for fully automated Ballast control
- SECURELOAD loading computer calculates ballast water distribution to compensate any kind of transferred loads, ensuring intact stability and longitudinal strength.
- Integrates all load moments that changes vessel's Floating Condition, such as crane Lift Off operations, considering hook load, boom, and slew angle.

CONTROL MODE REMOTE MANUAL

Operator has full manual control via PC interface, directly managing valves, pumps, and transfer units while alarms remain active.

KEY FEATURES

- Full operator control via software MIMIC i-Studio
- Direct valve & pump control (no FCCS intervention)

CONTROL MODE SEMI AUTOMATIC

Reduces manual effort through predefined functions such as tank grouping, automatic valve operation,

KEY FEATURES

- Tank grouping for easier control
- Target volume indication on MIMIC i-studio
- Controlled ballast pump start/stop sequences as well as pump pressure control (suction, discharge, differential)

CONTROL MODE FULLY AUTOMATIC

FCCS executes the entire operation automatically, with the operator only supervising and monitoring alarms.

KEY FEATURES

- Operator guided by safe pre-defined procedures
- Checklist confirmation before each operation
- FCCS executes ballast operations fully automatic
- Operator only monitors alarms and supervises
- On completion: valves return to safe position pumps idle then shut down automatically

OUR PRODUCT RANGE

CONTROL SYSTEM

- Valve Remote Control
- Anti-Heeling
- FLUME Box Tank — Roll Damping
- INTERING U-Tank — Roll Damping
- Dock Control
- Floating Condition Control

MEASURING SOLUTIONS

- Tank Content Measurement
- Bunker Management
- Draught Measurement
- Dynamic Draught and Floating Monitoring
- Maihak Shaft Power Meter
- Maihak SHaPoLi
- Fuel Consumption Measurement
- Energy Measurement
- Electronic Inclinometer

INFORMATION SERVICES

- Performance Monitoring
- Crew Connect
- Fleet Connect

FLEET SERVICES

- Technical Support
- Spare Parts
- Service On Board
- Retrofit
- System Health

