# 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 Compenstation 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 whilealarms 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 MIM-IC i-studio
- Controlled ballast pump start/ stop sequences as well as pump pressure control (suction, dis-charge, 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

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