



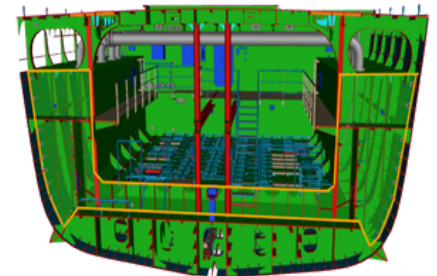
## INTERING ANTI-ROLLING

Passive U-tank roll damping system for improved vessel stability and comfort

INTERING Anti Rolling reduces vessel roll motions through controlled water mass oscillation inside a passive U-shaped tank system. Independent of vessel speed and requiring no active roll stabilization equipment, the system improves comfort, safety and operational performance while maintaining a simple and reliable design.

### Why Intering Anti-Rolling

- Improved passenger and crew comfort
- Reduced vessel motions and accelerations
- Increased operational safety
- No influence on vessel roll period
- Reduced maintenance requirements
- Effective under varying operating conditions
- Suitable for research vessels, offshore vessels and special-purpose ships
- Optional combination with Anti-Heeling systems using the same tanks



### System Design

- U-shaped tank integrated into the vessel structure
- Wing tanks connected by a lower water duct
- Air duct system with control and bypass valves
- Pressure sensors and level switches for monitoring
- MRU HOSIM2 control system
- Standard, Tuning and Sloshing operating modes
- Sensors installed at tank deck level for continuous monitoring

## Working Principle

- Vessel roll induces controlled oscillation of the tank water
- Water movement absorbs roll energy and reduces vessel motion
- Optimal phase shift of approximately 90° between ship movement and water motion
- Damping performance depends on tank geometry and positioning
- Highest efficiency achieved when the tank is located above the vessel's center of rotation

## Combined with Anti-Heeling

- Shared tank arrangement for roll reduction and heel compensation
- Anti-heeling operation during loading procedures
- Passive roll reduction during voyage and offshore operations
- Increased utilization of onboard tank systems

## OUR PRODUCT RANGE

### Fluid & Floating

- Valve Remote Control
- Anti-Heeling
- Tank Gauging
- Flume Anti-Rolling
- Interling Anti-Rolling
- Distance Measuring
- Draught Measurement
- Electronic Inclinator
- Dynamic Draught and Floating Monitoring
- Floating Condition Control

### Performance & Energy

- Emission Monitoring
- Energy Measurement
- Shaft Power Meter
- Fuel Measurement
- Energy Saving Solutions
- Crew Connect
- Performance Monitoring
- Data Collection and Acquisition

### Fleet Services

- Spare Parts
- Technical Service
- Retrofit- And Upgrades
- MIoT Digitalization Upgrade

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