Monitoring and control system for offshore cranes

Knuckle boom cranes – Lattice boom cranes

**AHC** – Active Heave Compensation
Increase crane operation time by active control to compensate for vessel movement. Uses Motion Reference Unit (MRU) mounted in crane pedestal.

**ACT** – Active Tension Control
For safe deployment through the splash zone and landing on the seabed.

**CT** – Constant Tension Control
Control of winch pull for safe load handling on supply vessels and liftoff from the seabed

**AOPS** – Automatic Overload Protection
Controls maximum winch pull to avoid damage to the crane in severe overload situations.

**Sector Control**
Limitation of crane operations in certain sectors, depending on boom radius

**Crane Controls**
Safe and efficient control of slew, boom and hook motions.

**User Friendly**
Graphics and operations are developed together with experienced crane operators.

**Data Logger**
Simple access to historical data to let you monitor how a situation develops, or analyse previous recordings.

**Hazardous Area**
Sensors and activators available for Zone1 and Zone2 operation
### Dynamic Load Controls

| **AHC - Active Heave Compensation** | ![Graph](image)
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<td>AHC filters out vessel movement and makes it possible to increase the operation time of the crane in bad weather conditions. AHC can be active when heaving and lowering the load, and when keeping it in a fixed position. The graph shows the winch movement when lowering a load to the seabed at 155 meter depth.</td>
<td>50% of the AHC capacity is used to compensate for current vessel movement.</td>
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| **AHC – Operator Display** | ![Graph](image)
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<td>iSYM AHC is based on a dynamic real-time model of the crane that is constantly updated with load data and sea conditions. The system calculates the percentage of the crane’s capacity that is required to compensate for the current vessel movement. The crane driver can use this number to monitor AHC performance or to predict AHC performance before starting the lift. The picture to the right shows that 50% of the AHC capacity is used to compensate for current vessel movement.</td>
<td>50%</td>
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| **ATC - Active Tension Control** | ![Graph](image)
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<td>New improved control function for safe landing of loads on the seabed, and for deploying loads through the splash zone.</td>
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| **CT - Constant Tension** | ![Graph](image)
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<td>Control of winch pull to pickup loads from supply vessels and lifting loads off the seabed</td>
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