HiLoad® Qualification Program

The HiLoad Technology has undergone an extensive qualification program. The most important activities are enumerated below:

- Feasibility study and risk assessment
- Docking model tests at Marintek, Norway
- Basic design and approval of concept by both DNV and ABS
- DP position keeping and Hurricane Katrina survival tests
- DP position keeping and hurricane survival
- Field trials
- Docking model tests at DHI, Denmark
- Field trips to various locations: attachment system
- Operational HARDSHELL
- Detailed design, engineering, vessel construction and then approval by DNV
- Vessel commissioning and offshore sea trials
- Special fabrication and launching at Haugesund, Norway
- Field Implementation Program in Brazil consisting of 8 crude oil operations

The HiLoad Technology is not a mature solution, and has been technically approved by several major oil companies.

HiLoad® Attachment System

Each HiLoad is equipped with the patented HiLoad Attachment System arranged in cells surrounded by a gasket system. The gasket is of compression type, with a long track record from use in offshore tunnels.

As the HiLoad is deactivated into contact with a hull bottom, the gasket will create a number of cofferdams between the HiLoad and the vessel. The hydrostatic pressure acting underneath the HiLoad will then be transferred as a distributed load across the entire contact area. Despite a contact force of several thousand tonnes, the effect on the vessel is minimal. The contact force will basically be the same as the hydrostatic load prior to connection. The HiLoad Attachment System has been tested in full scale with excellent results, and have been real-life tested on a 10-weeks journey where the HiLoad was attached to the tanker during transportation from Norway to Brazil.
The HiLoad Technology was originally developed as an offshore loading system for crude oil. The core technology is built up around the patented Attachment System. Similar to the Remora fish, all HiLoad units are equipped with a ‘suction cup’ based attachment system, capable of handling various throughputs between the HiLoad and the connected object. A number of other applications have been identified, and Remora is currently offering a wide portfolio of solutions with respect to:

- Import Terminals for Crude Oil and other Petroleum Products
- Turret Mooring Systems for FPSOs, FSOs, Drillships and mooring for Afloat
- ABL on production units and DP for wax, marginal and ship shape fields
- Remora HiLoad® MVD

HiLoad® DP (Dynamic Positioning)

HiLoad DP is a cost effective and safe solution for offshore loading to terminals of commerce. The HiLoad DP unit can connect to any type of tanker, and be kept at a safe distance from the production and during the loading operation. The HiLoad DP system will be equipped with DP system, and can be relocated. The HiLoad DP unit will enable urban operations in most offshore markets including harsh environments. The HiLoad DP unit will have unlimited use of convenience. The HiLoad DP unit will have full DP system can be implemented. The solution offers huge flexibility for relocations and can easily be transferred to other vessels. The HiLoad DP unit will enable urban operations in most offshore markets including harsh environments.

HiLoad® APU (Attachable Propulsion Unit)

This ‘mini-version’ of the HiLoad makes it possible to quickly add propulsion to any type of floating unit. By connecting two or more units, a DP system can be implemented. The solution offers huge flexibility for relocations and can easily be transferred to other vessels. HiLoad® APU offers a flexible turret mooring system, adaptable to typical DP1 type offshore installations.

HiLoad® MV (Moored Version)

HiLoad MV offers a flexible turret mooring system, adaptable to typical DP1 type offshore installations. The solution offers huge flexibility for relocations and can easily be transferred to other vessels. HiLoad® MV offers a flexible turret mooring system, adaptable to typical DP1 type offshore installations.

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