

Case study:

First Alimak elevator on offshore support vessel with motion compensated gangway



Offshore support vessel



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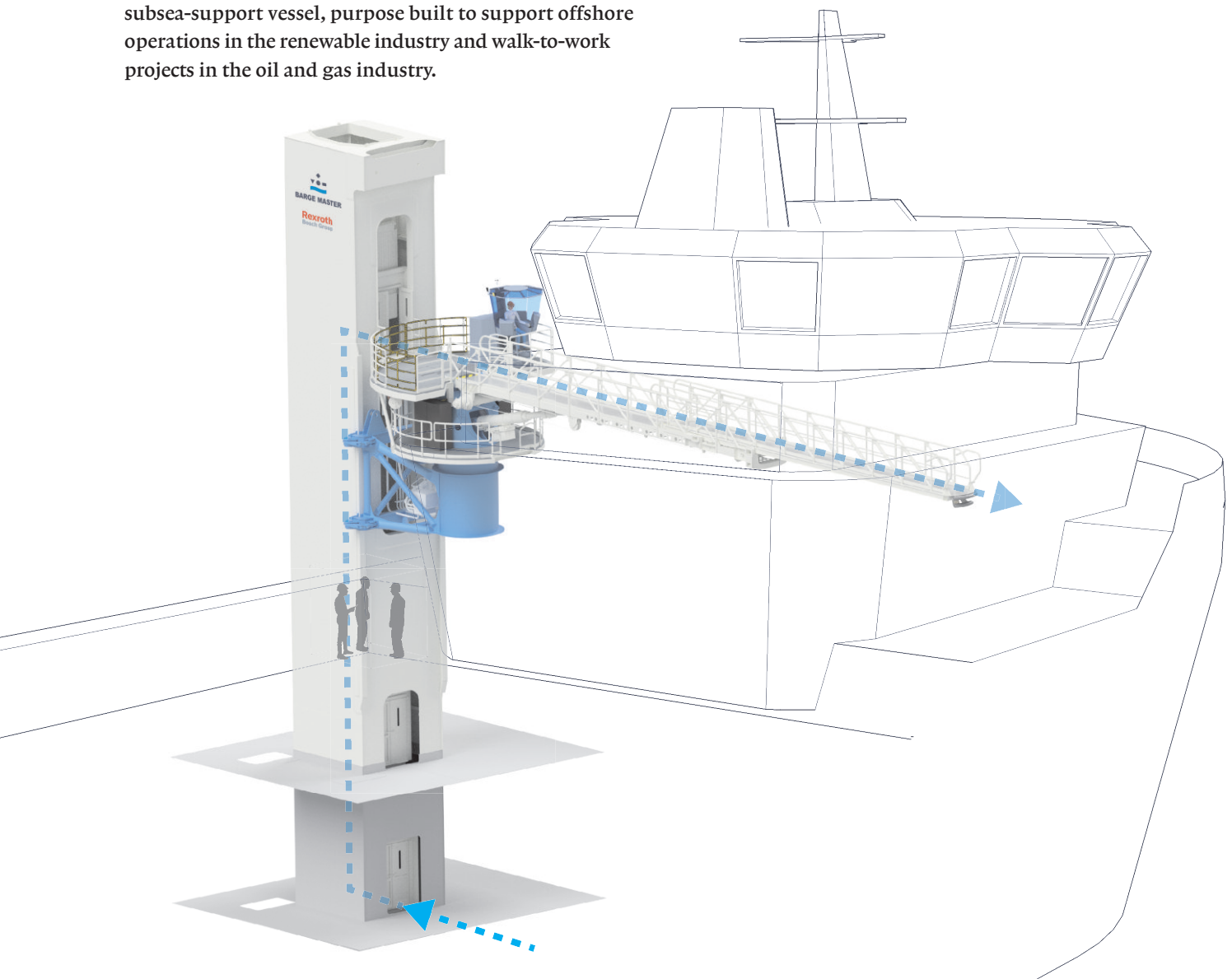
Alimak Hek has supplied an elevator for the pedestal of a new motion compensated walk-to-work system on a new offshore support vessel named Vos Start. The Alimak elevator guarantees reliable transfer for the teams and their material between the vessel and wind turbines.

The Alimak rack and pinion elevator is used to provide easy and fast access for workers and goods from the new offshore support vessel's main deck, warehouse deck and a motion compensated gangway. The gangway leads workers between the vessel and wind turbines or offshore platforms for service and maintenance work.

The new vessel Vos Start has recently been mobilised with the latest motion compensated walk-to-work technology in Amsterdam's shiprepair Damen. It is a subsea-support vessel, purpose built to support offshore operations in the renewable industry and walk-to-work projects in the oil and gas industry.

The gangway system incorporates an access tower in which the Alimak elevator is installed, providing step less access. The adjustable pedestal provides full flexibility in landing heights.

The gangway system including the Alimak elevator has been provided by Barge Master and Bosch Rexroth – a unique system that enables reliable and efficient transfer of personnel and cargo no matter how tough weather conditions are.



Case study:

No matter how tough weather conditions are, the Alimak elevator ensures reliable transportation of personnel and materials, between the vessel and wind turbines.

Project challenges

Given the normal requirements of an offshore vessel such as the high roll and pitch motions and offshore demands, Alimak Hek had three major project challenges: first, the elevator's top landing needed to be variable; second, the amount of space available in the shaft was limited; and third, the timeline to complete the installation, testing and commissioning on the vessel itself was tight. Alimak Hek strategically came up with the technical solutions to handle all challenging requirements with ease.

The elevator top landing is variable depending on the height of the windmill or offshore platform that is being serviced, thus stopping the elevator car at the exact same level as the motion compensated gangway.

The vessel was handed over to the end user in August, 2017 for its first job with offshore logistics support, accommodation and walk-to-work services provided during construction of an offshore wind farm in the Irish Sea.

The operation of an Alimak rack and pinion elevator is not affected by rolls, pitches or heaves and the design is well suited for marine environments. These benefits and the narrow installation profile makes the Alimak marine elevator suitable for these conditions. Designed for the toughest environments on the planet, Alimak marine elevators have an expected life of 30 years at minimum with regular maintenance.



The Alimak elevator on the VOS Start vessel has a variable top landing to provide stepless access during offshore service projects.

ELEVATOR DETAILS

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|----------------------------|----------------------------|
| Location: | Offshore support vessel |
| Application: | Motion compensated gangway |
| Elevator type: | ALIMAK SE 2000 FC |
| Capacity: | 2,000 kg |
| Elevator size (W x L x H): | 1.3 m 2.2 m 2.1 m |
| Speed: | 0.6 m/s |
| Lifting height: | ~ 20 m (variable) |

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