

Case study:

Alimak Hek meet hazardous zone requirements with an explosion-proof lift



*North Rankin A Platform,
North West Shelf, Indian Ocean, Australia*

Case study:

Alimak Hek configure the Alimak SE 1200 industrial lift with an explosion-proof rating to meet the hazardous zone requirements of the North Rankin A gas platform. With external call stations for non-man riding, the luggage lift may be called, loaded, and directed to the required level.

Platform expansion

Redevelopment and expansion of the North Rankin A platform by the Woodside-operated North West Shelf Project includes the installation of a new North Rankin B Platform, connected by two 100 m bridges to the existing North Rankin A Platform.

Located 135km north-west of Karratha, the NRA platform is one of the largest capacity gas production platforms in the world, producing more than 51,000 tonnes of gas and gas condensate daily.

Rack and pinion luggage lift

In March 2012, Woodside installed an Alimak SE 1200 industrial lift, with explosion-proof rating, on the North Rankin A platform. Available for use 24-hours a day, the luggage lift services the accommodation facilities on board the platform, transporting workers' luggage from the top of the accommodation module to the South Bridge Pedestrian Landing.

Alimak Hek's challenge

Given the hazardous zone requirements of the gas production platform, Alimak Hek had three project challenges: first, that the lift be configured to an Ex (Explosion Proof) rating; second, the lift be fitted for non-man riding with external controls; and third, the lift undergo both an onshore and offshore installation in order to reduce the time required to complete the installation, testing and commissioning on the platform itself.

An explosion-proof lift

Given the lift's location on an offshore gas platform, hazardous zone requirements dictated the lift be configured with an Ex-rating. Alimak Hek worked closely with the client to ensure the lift met both the client specifications and zone requirements.

To achieve an Ex rating, the lift was designed and manufactured in compliance with the designated hazardous area requirements, classified under Zone 2, Gas Group IIA and Temperature Class T3.

In accordance with the Ex-rating of the lift, Alimak Hek provided complete Ex documentation and



commissioning work packs for both the onshore and offshore installation phases.

External controls

As the lift was required to provide a safe, all-weather means of transporting luggage on board the platform, it was necessary that the lift be fitted with external call stations for non-man riding. In accordance with client specifications, Alimak Hek modified the electrical control circuit to allow for use of the 'call and send' feature.

Given the luggage lift was for transporting of materials only, these external controls allowed personnel to operate the lift without the need to travel inside it. In this way, operators could 'call' the lift using external call switches located on both the Passenger Living Quarters Roof and the South Bridge Pedestrian Landing, and then 'send' the lift to the required level.

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Alimak Hek AB is ISO 9001 and 14001 certified



Case study:

Alimak Hek completed both onshore and offshore installation, testing and commissioning of the lift in order to keep installation and training time on board the platform to a minimum.

Onshore/Offshore installation

In order to keep installation and training time on board the offshore platform to a minimum, Alimak Hek completed both onshore and offshore commissioning, and maintenance and operation training for the lift.

Onshore installation took place in the AOG shipyard in Kwinana, Western Australia. The lift shaft was constructed and erected at the onshore facility, allowing the lift to undergo full installation, testing and commissioning within the constructed lift shaft. Following onshore installation, the lift car was braced within the lift shaft, turned on its side and transported to the offshore platform for the final phase of commissioning.

Once erected on the offshore platform, the lift and lift shaft underwent the final stage of testing and commissioning, with personnel training conducted by Alimak Hek certified technicians.

The Alimak SE-Ex 1200 lift has been in operation on the North Rankin A platform since March 2012. Designed for intermittent service, the luggage goods lift has an expected life of 30 years minimum with regular maintenance.



DETAILS

Location:	North Rankin A Platform, Indian Ocean, Australia
Product Model:	ALIMAK SE-Ex 1200
Application:	Gas production platform, luggage lift
No. of Landings:	2
Capacity:	1200 kg
Car size:	1.6 m x 1.7 m
Speed:	0.6 m /sec
Lifting Height:	11 m

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