



NORTH RANKIN A, INDIAN OCEAN, AUSTRALIA

CASE STUDY

Alimak meet hazardous zone requirements with an explosion-proof offshore elevator

Access anytime, anywhere

ALIMAK

NORTH RANKIN A, INDIAN OCEAN, AUSTRALIA

Alimak meet hazardous zone requirements with an explosion-proof offshore elevator

Alimak configure the Alimak SE 1200 industrial elevator 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 elevator 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 ELEVATOR

In March 2012, Woodside installed an Alimak SE 1200 industrial elevator, with explosion-proof rating, on the North Rankin A platform. Available for use 24-hours a day, the luggage elevator 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'S CHALLENGE

Given the hazardous zone requirements of the gas production platform, Alimak had three project challenges: first, that the elevator be configured to an Ex (Explosion Proof) rating; second, the elevator be fitted for non-man riding with external controls; and third, the elevator 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 ELEVATOR

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

To achieve an Ex rating, the elevator was designed and manufactured in compliance with the designated hazardous area requirements, classified under Zone 2, Gas Group IIA and Temperature ClassT3.

In accordance with the Ex-rating of the elevator, Alimak provided complete Ex documentation and commissioning work packs for both the onshore and offshore installation phases.



NORTH RANKIN A, INDIAN OCEAN, AUSTRALIA

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

EXTERNAL CONTROLS

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

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

ONSHORE/OFFSHORE INSTALLATION

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

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

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

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



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

ELEVATOR DETAILS

| | |
|--------------------|--|
| Location: | North Rankin A Platform, Indian Ocean, Australia |
| Product model: | Alimak SE-Ex 1200 |
| Application: | Gas production platform, luggage elevator |
| No of landings: | 2 |
| Capacity: | 1,200 kg |
| Elevator car size: | 1.6m x 1.7 m |
| Speed: | 0.6 m/s |
| Lifting height: | 11 m |



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

www.alimak.com



Pictures are illustrative only and do not necessarily show the configuration of products on the market at a given point in time. Products must be used in conformity with safe practice and applicable statutes, regulations, codes and ordinances. Specifications of products and equipment shown herein are subject to change without notice. Copyright © 2020 Alimak Group AB. All rights reserved. Alimak and Scando are registered trademarks of Alimak Group AB.