

Case study:

Alimak elevator eliminates need for internal shaft



Urea granulation plant, Brisbane, Australia

ALIMAK

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An ALIMAK SE-12 industrial rack and pinion elevator installed to provide safe vertical access on the Incitec Fertilizers urea granulation plant in Brisbane, Australia eliminates the need for a conventional elevator shaft.

Originally producing prilled urea, the facility was upgraded in 1999 and now produces 750 tons per day of the large-size granular variety that farmers prefer.

Since the facility lies close to residential areas, control of dust and emissions is very important. The plant's floors are washed down regularly to eliminate dust, creating a flow of waste water that could easily enter an internal elevator shaft. An external elevator was therefore the preferred alternative, and the Alimak elevator supplied by Alimak in Australia provided the ideal solution. Not only is the Alimak elevator less expensive to install than an internal elevator and shaft, it doesn't take up valuable internal space.

The granulation building includes six externally accessed levels, with up to four internal podium levels. The plant is operational 24 hours a day, seven days a week, and the ALIMAK SE-12 rack and pinion elevator is used as many as 20 times a day by engineering and maintenance staff.

The plant's ALIMAK SE-elevator travels a total height of 29 metres and has a payload capacity of 1200 kg. The mast is tied to structural steel behind the building's cladding. Electrically and mechanically interlocked landing doors are built into the walls for safe access to the building's different levels.

The ALIMAK SE elevator range is ideally suited for industrial environments. It is ruggedly constructed, with extruded aluminium car wall panels, hot-dipped galvanized steel car support frame and mast sections, and stainless steel electric cabinets and landing control boxes. Its design and modular construction permit up to 30 different car sizes to be configured to meet a wide range of application requirements. Featuring a direct-on-line motor controller or an optional closed-loop variable frequency control for smooth starting and stopping, the ALIMAK SE range offers lifting heights in excess of 250 metres and speeds of 0.4 metres to 1.0 meters per second.



DETAILS

Location:	Incitec Fertilisers urea granulation plant, Brisbane, Australia
Application:	Granulation building
Elevator type:	Rack and pinion
Elevator model:	ALIMAK SE-12
Capacity:	1200 kg
Elevator car size:	1.30 m x 2.08 m x 2.17 m (W x L x H)
Lifting height:	29 m