



MT ISA MINES, QLD, AUSTRALIA

CASE STUDY

Alimak industrial elevator provides access to 270m lead smelter chimney stack at Mt Isa Mines

Access anytime, anywhere

ALIMAK

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Alimak works closely with Downer EDI to complete the dismantle of a 34-year old elevator, and the installation of a new Alimak elevator at Mt Isa Mines. With a lifting height of 252m, the Alimak industrial elevator provides critical maintenance access to the lead smelter chimney stack.

ACCESSING THE CHIMNEY STACK

Glencore Xstrata's Mt Isa Mines is one of the largest mining operations in Australia, with a silver-lead-zinc stream producing more than 30,000 tonnes of zinc concentrate, 170,000 tonnes of crude lead and 230 tonnes of silver lead in bullion each year.

Built in 1978, the mine's lead smelter chimney stack stands at 270m tall, making it Australia's largest self-supported structure. An Electruck Easiriser elevator was originally installed within the chimney shaft, providing access to the six levels of the chimney stack for inspection and maintenance of the structure's aircraft beacons. After 34 years of use, the Electruck elevator was decommissioned in 2012 and replaced with a new Alimak SE 700 industrial elevator.

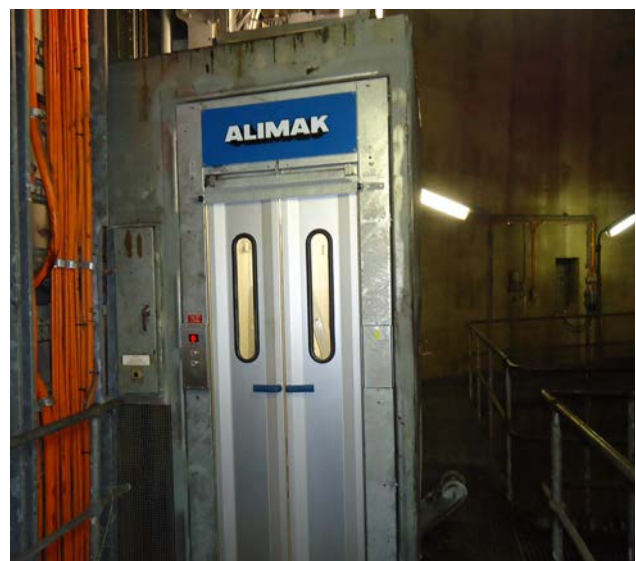
DISMANTLE, REMOVAL AND INSTALLATION

Completion of the project occurred in two stages: the first being the removal of the original Electruck elevator and the second involving the installation and commissioning of the new Alimak SE 700.

At the customer's recommendation, Downer completed the dismantling and removal of the Electruck elevator. During dismantle, the elevator car was used as a work platform, allowing the Downer crew to drive the elevator car to the required height, dismantle 6m sections of the mast and then lower these through the elevator car to the ground below using a floor-mounted winch system.

Once removal of the Electruck was complete, Alimak technicians began installation of the new Alimak SE 700 industrial elevator. Installation occurred in much the same way as the Electruck dismantle, with 9m lengths of the new mast winched up through the new Alimak SE elevator car. Alimak technicians used the roof of the new elevator car as a work platform from which to fix each of the new mast sections to the chimney's existing tie supports.

Given the limited space within the chimney stack, the Alimak elevator was the ideal solution, as it could be configured to fit the existing space with only minor modifications. With a lifting height of 252m, accessing 5 landing levels, the new Alimak SE was a faster and more reliable alternative to the aging Electruck elevator. Travelling at a speed of 1.0m/s, the Alimak elevator will make the 252m journey to the top of the chimney stack in under 4.5 minutes, while the original Electruck elevator required almost 7 minutes.



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ACCESS FOR CRITICAL MAINTENANCE AND INSPECTIONS

Due to the height of the chimney stack, the structure is fitted with essential air-craft warning lights that require weekly inspections and periodic changes. With the majority of the beacons located on the roof of the chimney stack, technicians are able to travel 252m to the top landing in the Alimak elevator. From there, an external ladder provides access to the roof lighting systems. Without the Alimak elevator, personnel would be required to climb an internal ladder system, which would be both time consuming and dangerous.

ALIMAK ON CHIMNEY STACKS

Alimak have completed numerous installations on chimney stacks around Australia, including Callide Power Station (220m), Kogan Creek Power Station (160m), Tarong Power Station (210m) and Loy Yang Power Station (260m). Alimak's rack and pinion industrial elevators are the ideal access solution for power plant structures, reducing the risk of falls from height, eliminating exertion from climbing and providing easy access for inspections, emission monitoring and maintenance.

ELEVATOR DETAILS

Location:	Mt Isa Mines, QLD, Australia
Application:	Chimney stack
Elevator type:	Rack and Pinion
Elevator model:	Alimak SE 700
Capacity:	700 kg
Lifting height:	252 m



Mt Isa Mines, QLD, Australia

Alimak is a global market leader and pioneer in the design and manufacture of vertical access solutions for industrial and construction industries. The company provides high quality rack and pinion and traction elevators, construction hoists and work platforms. Alimak has a well-established global sales, service and distribution platform across more than 90 countries with strong market presence. The company has a large global installed base of over 23,000 units which provides unique know-how of all industrial application areas. Alimak was founded in 1948 and employs over 1,200 people across the world. Alimak is part of Alimak Group which is headquartered in Stockholm, Sweden.

www.alimak.com



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