

*Case study:*

## **Alimak lift improves access at the lime shaft kiln**



*Röyttä Lime Plant, Tornio, Finland*

## Case study:

**One permanent Alimak rack and pinion lift improves access in the tough environment at the Røyttä Lime plant in northern Finland. The lift was also used during the construction phase of the plant as a construction hoist.**

In 2002, The SMA Mineral Group, Sweden, started up a new lime plant for production of burnt lime in Røyttä near Tornio in northern Finland. The lime shaft kiln has a capacity of 400–550 t/d depending on stone size.

An Alimak rack and pinion lift was installed on the vertical lime shaft kiln to get access to six different levels. The Alimak lift is used for transporting men and material during service and inspection work up to a total height of 38 metres. It has a payload capacity of 1,600 kg and frequency controlled motors for smooth operation.

The lift is equipped with a modern microprocessor based control system, emergency telephone and overload sensing device. Due to the cold climate, it has also been equipped with electrical heaters in the electrical cabinet and motor. Ice scrapers on the car roof make sure that the rack and mast tower is free from ice.

During the construction of the plant, the lift was first used in “construction mode” and after completion restored to a system for permanent access.

### Lift design

Alimak lifts are designed to operate in demanding industrial environments, outdoors and indoors and require no expensive liftshafts. The Alimak rack and pinion drive system offers advantages over wire rope and hydraulic lifts. They do not require an expensive machine room as the lift carries its own machinery and no load bearing lift shaft is required. The rack and pinion lift also has safety advantages over traction elevators.

Alimak lifts are designed to withstand tough environments, such as high levels of dust in combination with high temperatures.



### DETAILS

Location:	Røyttä Lime Plant, Tornio, Finland
Installation year:	2002
Application:	Vertical lime shaft kiln
lift type:	ALIMAK SE 1600 FC
Capacity:	1,600 kg
lift car size:	1.3 x 2.73 x 2.2 m (W x L x H)
Speed:	0–0.7 m/s
Lifting height:	38 m
No. of landings:	7

[www.alimakhek.com](http://www.alimakhek.com)

Alimak Hek AB is ISO 9001 and 14001 certified.

