

Case study:

Alimak elevators provide access on spray dryers for lignin



Biorefinery Domsjö Fabriker, Örnsköldsvik, Sweden

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In May 2011, an Alimak elevator was installed at the new spray dryer for lignin at the biorefinery Domsjö Fabriker in Örnsköldsvik, Sweden. The elevator improves the access to measuring equipment on the top of the spray dryer for daily inspection.

The first spray dryer for lignin was installed at the biorefinery Domsjö Fabriker in 2009. Today an additional spray dryer is being built and is expected to be put into operation by the end of 2011. When the new spray dryer is fully operational, the yearly production of dried lignin will increase from 60,000 tonnes to 120,000 tonnes. Domsjö Fabriker will then be one of the world's largest manufacturers of lignin.

Lignin is an interesting additive in concrete when the wetting properties reduce the need of water and cement. The process decreases the costs and has very little impact on the environment, because cement production is often very energy consuming.

Alimak elevator at the spray dryer for Lignin

A permanent Alimak elevator has been operational on the first spray dryer since 2009. The elevator in service around the clock with 5–10 trips a day by service and maintenance personnel. The elevator is used to reach the “heart” of the lignin production process at 20 meters height, where the facilities main component is placed.

While designing the new lignin spray dryer, a second industrial elevator from Alimak Hek was chosen for access to the top of the second dryer. The two elevators have four landings, including a base landing, with payload capacities of 300 kg, or roughly the weight of four people. The elevators are also equipped with ice scrapers on the car roof, an overload sensing device, a heater in the motor and electrical cabinet as well as an emergency phone in the car.

About Domsjö Fabriker

The Bio refinery Domsjö Fabriker is located in Örnsköldsvik in Northern Sweden. Pulp has been produced here since 1903. In recent years the business has evolved from traditional forestry with pulp as the main product, to an advanced bio refinery with the manufacture of specialty cellulose, ethanol and lignin.



The Alimak elevator is being used frequently at Domsjö Fabriker.

ELEVATOR DETAILS

Location:	Biorefinery Domsjö Fabriker, Örnsköldsvik, Sweden
Installation year:	2009 and 2011
Application:	Spray dryer for lignin
Elevator type:	Rack & Pinion
No. of elevators:	2
Elevator model:	ALIMAK SE 300
Capacity:	300 kg
Elevator car size:	0.78 m 1.04 m 2.17 m (W x L x H)
Speed:	0.6 m/s
Lifting height:	20 m
No. of landings:	4

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Alimak Hek AB is ISO 9001 and 14001 certified.

