

*Case study:*

## **Three Alimak hoists provided efficient vertical access at the world's largest solar power facility**



*Ivanpah Solar Power Facility, Mohave Desert, USA*

## Case study:

**Three Alimak construction hoists were utilized in the construction of three 140 m (450') solar receivers/boiler towers at the Ivanpah Solar Generating Facility in the Mohave Desert. Ivanpah is the world's largest solar thermal power plant currently in operation. The Alimak machines provided efficient vertical access for both men and materials on that site.**

Three Alimak Scando 650 passenger & material hoists with dual hoist cars were used during construction of three 140 meter (450') solar receivers / boiler towers at the Ivanpah Solar Generating Facility in the Mohave Desert. With a payload of 3,200 kg (7,100 lbs) and a lifting height of 140 meter (450'), the Alimak hoists provided efficient vertical access for both men and materials during the construction of the solar receivers / boiler towers.

Alimak Hek working with Bechtel Power & Bechtel Equipment performed an engineering evaluation and specified the Alimak Scando 650 FC 32/32 II system for this project. Traveling at 54 m/min (177 fpm), the hoists have a 1.5 m wide x 3.2 m long x 2.3 m high (4'-11" x 10'-6" x 7'-6") car size and a 3,200 kg (7,100 lbs) capacity which was more than sufficient to transport site workers and bulky palletized materials to working height.

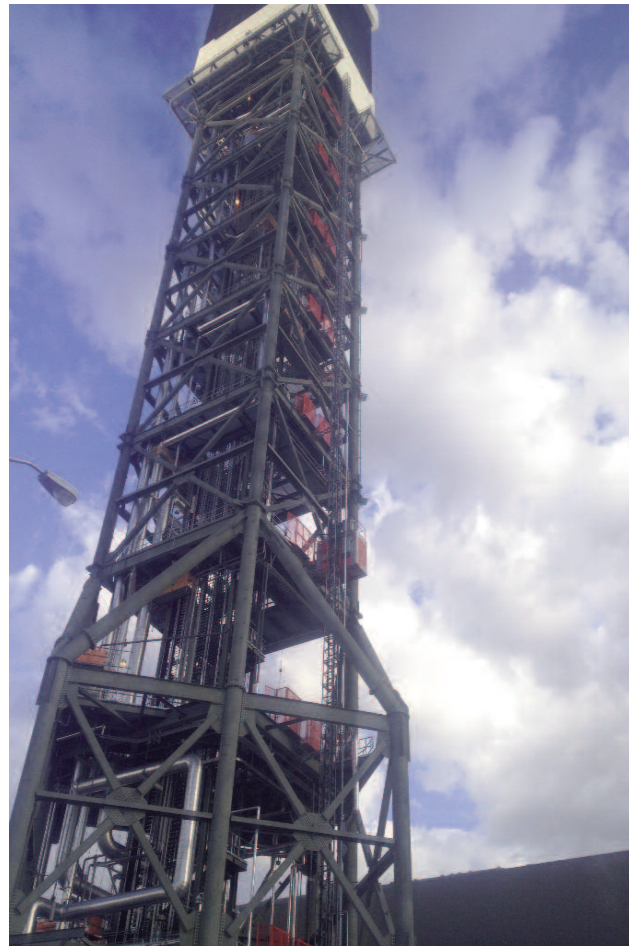
The Alimak machines were anchored to structural steel at approximately 12 meter (40') intervals and the mast was allowed to extend above the deck 12 meter (40') to allow for access when the modular components were hoisted. The strength of the Alimak mast made this possible.

The Alimak hoists were chosen to support the project because of their proven reliability to operate in harsh environments, removing some of the risk that Bechtel had to manage to install and start up this new technology.

### World's largest solar power facility

Ivanpah Solar Power Facility is the world's largest solar thermal power plant currently in operation.

The project is located in Ivanpah Dry Lake, California on more than 1,600 hectare (4,000 acres) the station will produce 390 megawatts of electricity for more than 140,000 customers of Pacific Gas & Electric Company and Southern California Edison by using over 173,500 software controlled heliostats (mirrors) that will track the sun in two dimensions and reflect sunlight to the three boilers that sit atop the almost 140 m (450') tall towers. The high temperature steam will then be piped from the boilers to a turbine where electricity is generated.



One of the Alimak hoists on a solar tower

### DETAILS

Location:	Ivanpah Solar Power Facility, Mohave Desert, USA
Application:	Solar receivers / boiler towers
Hoist type:	ALIMAK SCANDO 650 FC 32/32 II
No. of hoist cars:	6
Capacity:	3,200 kg (7,100 lbs)
Hoist car size (W x L x H):	1.5 m x 3.2 m x 2.3 m (4'-11" x 10'-6" x 7'-6")
Speed:	54 m/min (177 fpm)
Lifting height:	140 m (450')

Front page photo:

Work to jump the hoists in progress. The unique design of the mast made it possible to meet the challenging conditions of the unique job site.

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