



Wyssen Reference Projects  
**Open Pit Protection in Codelco Andina Mine**

**Safety** through **innovation**

**WYSSSEN**  
switzerland+ *avalanche  
control*





## Open Pit Protection in Codelco Andina Mine

|                    |  |
|--------------------|--|
| Project:           | Open Pit Protection in Codelco Andina Mine             |
| Place:             | Los Andes, Valparaíso                                  |
| Country:           | Chile  |
| Year:              | Installation 2017 - 2018                               |
| Customer:          | Codelco VP   |
| Protected Object:  | Copper Open Pit Mine                                   |
| Installed Systems: | 8x Wyssen Avalanche Towers with SARA®<br>Doppler Radar |

### Initial Situation

Codelco Andina is a national company and one of the oldest and most important Copper mines in Chile. Andina operations are located above 3,500 m.a.s.l. (11,483 ft above sea level) and surrounded by many 4,000+ m (13,124 ft) peaks. Accordingly, many of the important operations like raw material transportation and land crushing are highly exposed to avalanche danger. Several buildings are also exposed to huge avalanche paths well as their access. The Industrial road from Saladillo is the only road available to access the mine, is surrounded by many big avalanche paths and is closed several times during the winter due to avalanche danger.







## Our solution

Eight Avalanche Towers were installed in different places inside the Mine. Four of them are right above the open pit in Cerro Negro playing an important role for daily mining operations in the winter. Every tower is equipped with SARA® (Short Range Avalanche Radar) to detect avalanches in real time.

This big project has been realized in collaboration with Heliswiss International.

## Highest Wyssen tower ever installed

With this project Wyssen Avalanche Control had to face a major challenge. Never before had a Wyssen Tower been installed at such a high altitude. Despite difficult and challenging weather conditions and limited access to the tower locations, the highest Wyssen towers ever have been installed at 4,360 m a.s.l. (14,305 ft above sea level) and were successful for the 2018 winter season in Chile.

### Video

An impressive Video about the installation on our Youtube Channel:

Wyssen Avalanche Control/ Highest Wyssen tower ever installed at 4360 m a.s.l.

Videolink: <https://www.youtube.com/watch?v=3IBDwafxZeg>



## Future

Codelco Andina is planning on further investments in innovative solutions for snow related risks. Due to the success of their first project, Wyssen Avalanche Control has a high chance of achieving more contracts to protect roads, railways, buildings and other important locations.

**Safety** through **innovation**

**WYSSSEN** switzerland **avalanche control**





## A Project of:

### **Wyssen Chile SpA**

Av. Borgoño 14439, Oficina 308

Reñaca, Viña del Mar

Chile

Tel.: +569 9874 4414

chile@wyssen.com

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

### **Paulo Asalgado**

Tel.: +569 9874 4414

paulo@wyssen.com



**Safety** through **innovation**

**WYSSSEN** switzerland **avalanche control**