



Atlantic Industries Limited

PROJECT PROFILE



Five Super-Cor tunnels help reposition world's largest copper mine

Minera Escondida is located 3200 m above the Pacific Ocean in northern Chile's remote Atacama Desert, the driest desert in the world.

The Escondida Ore Access Project involved moving the mine's entire crushing operation to a new location, with a new twin conveyor system and the re-alignment of heavy haul roads across the mine. As part of this effort, AIL Mining was contracted to design and supply five large conveyor underpasses for the heavy haul roads. The project was the largest and most challenging of our South American mining projects to date, with several contributing factors:

Structures needed to curve with conveyor

- We designed and fabricated Vertical Deflection Elbows to accommodate the curves.

Project at a glance:

Name: The Escondida Ore Access Project

Owner: Minera Escondida Limitada (Controlled by BHP Billiton)

EPCM: Fluor Chile Ltda.

Contractors: Sigdo Koppers Ingenieria y Construccion; El Sauce Constructora

Product: Five Super-Cor Arches

Span: 9.262 m, Rise: 5.193 m

Lengths: 58 m (2), 105 m (2), 83 m (1)

Cover Heights: From 3 m to 13 m



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Site constraints required assembly over live conveyors

- Several of the structures were pre-assembled and placed in sections over live conveyors.

Earthquake engineering for High Seismic Zone

- Required a Peak Ground Acceleration of 0.30g to be included in the design.

Aggressive soils

- Secondary Barrier Protection coating was added after assembly for extra protection.

Extreme loading requirements

- Special Loads included the CAT 797B Haul Trucks with a 10% overload, the P&H BOSS 4100 Shovel (1500 Tonnes), special transport trailers for heavy equipment to relocate the crushing equipment.

As usual, the AIL Mining Team provided on-site technical assistance throughout all construction phases on the five tunnels.

[See all Project Profiles on ail.ca](http://ail.ca)



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