

The Pinnacle of Latin America

Hytera DMR Radio Facilitates Construction of the Costanera Center

User
Salfa Corp, Chile

Market segment
Construction

Project time
2011

Products
PD78X Portable Radio
MD78X Mobile Radio
RD98X Repeater

Solution features

- Analog-digital interoperability
- The digital equipment ensures no lapse in communications
- Using repeaters to improve signal coverage and eliminate interference

Benefits
Rapid, efficient, reliable communication between cranes and their load operators in complex situations involving interference.



Background >>

Salfa Corp is currently one of Chile's main corporate groups acting at an international level in the engineering, construction and property sector, and leading the Industrial Assembly and Civil Engineering markets.

The company was awarded the contract for the Costanera Center property project currently under construction in the municipality of Providencia in Santiago, Chile. It consists of a complex of four buildings situated at the intersection of Avenida Andrés Bello and Nueva Tajamar, a few meters from the Tobalaba metro station. Its main building, the Torre Gran Costanera, will have a total area of 128,000 m² and will be 300 meters high including the spiral on top (265 m up to the highest of its 70 floors) and will be fitted with 48 high-speed elevators which will move at a rate of 6.6 meters per second. These features mean the Costanera Center will be the tallest skyscraper in Chile and Latin America, and the second in the Southern Hemisphere (after the Q1 Tower in Australia. Towers 1, 3 and 4 will have heights of 170, 170 and 109 meters respectively).

Customer Demands >>

Rapid, efficient, reliable communication between the cranes and their load operators was very important for the whole construction. Hytera agent Acmetel offered initially an analog solution with Hytera conventional UHF radio TC-700 for the load operators and TM-610 for the crane operators. Given the rate of construction and the changes this building was generating in the area of communications because of its height and structure, it was decided to migrate to a digital solution, ensuring no lapse in communications.





What was the Solution Finally Offered?

The equipment used during construction includes cranes mounted on these very buildings to transport heavy loads. Each crane works with operators on the ground (riggers) who provide load transportation instructions, as the crane driver is virtually unable to see the load and has to trust his operators on the ground. Given the height and structure of the towers, communication is difficult as the walls between impose daunting barriers to signal transmission. 100% reliable communication is imperative for there is a risk of material damage and even death if the crane driver does not receive the instructions from one of his/her riggers.

A solution using analog equipment was initially employed, which worked quite well until the buildings began to grow taller and take more shape, creating more silence zones and interference for the radios situated at the top of the towers. The Hytera DMR radios were then selected to be the perfect solution together with the use of repeaters, which increase the riggers' coverage and eliminate the possibility of interference.



Hytera Communications Corporation Limited

Stock Code: 002583.SZ

Address: Hytera Tower, Shenzhen Hi-Tech Industrial Park North,
Beihuan RD.9108#, Nanshan District, Shenzhen, P.R.C.

Tel: +86-755-2697 2999 Fax: +86-755-8613 7139 Post: 518057

Http: //www.hytera.com marketing@hytera.com

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ACMETEL SERVICIOS TECNOLOGICOS LIMITADA

Malaquias Concha 034-A, Providencia.

Telephone: 665 6127 – Fax: 634 6312

info@acmetel.cl

www.acmetel.cl