

Hytera S1 Radios Solve Coverage and Interference Issues at South African Steel Service Centre



Introduction

Specialist steel products manufacturer Macsteel VRN wanted to improve communications at its 70,000m² service centre and warehousing complex in Germiston, South Africa. The size of the complex made finding a cost-effective coverage solution challenging, while other radios systems in neighbouring factories caused interference. Hytera supplied its S1 licence-free analog radios, which not only delivered the required indoor coverage, but also eliminated the interference problems. The radios are helping to increase operational effectiveness and meet customer expectations.

The Background: Implementing site-wide, interference-free coverage

Macsteel VRN is one of the leading suppliers and processors of speciality carbon steel plate, stainless steel and a variety of aluminium grades, including wear and impact-resistant, high-strength, pressure vessel and marine grades of steel in South Africa.

Project Name

Macsteel VRN Radio Project

Client Name

Macsteel VRN Gauteng, South Africa

Project Start/End Dates

July 2024 to October 2024

Project Location

Germiston, South Africa

Industry

Steel Distribution and Manufacturing

Products/Solutions

- Hytera S1 Series LF Radios

The company's products and services are used in many large capital projects undertaken throughout Africa, with optimal steel selection being initialised during the conceptual stages of a project. The Macsteel VRN Gauteng Service Centre and warehousing complex in Germiston, a city in the East Rand region of Gauteng, consist of over 70,000 square metres under roof with a total of 198 employees.



The Challenge

The steel industry is highly competitive, so it is essential that the manufacturing process is designed and carried out efficiently to the required quality, and that finished products are delivered to customers on time. To do this effectively, there is a requirement for clear, quick and effective communication with immediate feedback across the entire 70,000m² warehousing and processing facilities.

Mobile phones were ruled out as a communication solution as they are not effective due to poor signal reception and cost implications. Total coverage across the Service Centre was required, but the neighbouring area contains multiple factories around the warehouses, all using their own radio systems and this caused interference with other frequencies. This meant the chosen radio communications supplier had to come up with a suitable radio product and an effective radio frequency (RF) design that provided full coverage, but which also avoided any interference from other nearby radio networks.

The Solution

Previously, Macsteel VRN had tried other competitor models and products, but decided not to use any of them as they were not able to cope with the interference issues or reliably deliver the coverage required.

Hytera's local partner Africa Critical Comms conducted extensive sample tests to come up with a full RF coverage design across the whole site. It also carried out interference tests with different product models to see which would be most suitable.

After testing, it was confirmed that the most effective and efficient solution would be the Hytera S1 radio series, as this would address all coverage and interference concerns, while also providing cost effective communications for the Macsteel VRN operation. The S1 LF (Licence Free) analog PMR446 radio series chosen by Macsteel VRN is specifically designed to meet the unique demands of any business environment.



The Benefits

Reliable Coverage

The S1 enhances communication efficiency thanks to its extensive range, which is able to cover the entire factory area, while also avoiding any interference from other radio systems.

Efficient Communications

The S1's dual PTT buttons enable Macsteel staff to talk with either of two standby groups using manual selection, seamlessly connecting different teams and departments. The S1 enables staff to make quick responses to questions and instructions within the factory.

Long Battery Life

The S1 has a long battery life of up to 27 hours (0.5 W) or 15 hours (3 W) of working time and 360 hours of standby time, so it will easily continue to operate for the length of a shift.

Products

• Hytera S1 Series LF Radios



Lightweight, Ergonomic Design

The radios are stylish, light (just 135g), highly portable and designed to enable one-hand operation on the go. Users can quickly copy channel information to the S1 from any radio with the same frequency regardless of brands and models and configuration data can be cloned from one S1 to many others in just a flash.

Summary

Communication is critical, not only to ensure that everyone's perspectives are captured, but to demonstrate that everyone's contributions are appreciated and to encourage further participation in the problem-solving process. The improved communications at Macsteel VRN has increased operational effectiveness. The radios are helping to ensure that customer demands are clearly discussed and actioned accordingly. The company is able to deliver a service according to the customer's requirements, which aids business sustainability and keeps it ahead of its competitors.

Customer Testimonial

Service, product knowledge and attention to address concerns increasing effectiveness to our business is key and was professionally addressed by Africa Critical Comms. Not just a product improving communication, but a partner adding value to our operational success.

—Uys Loubser, Senior Branch Manager, Macsteel VRN Gauteng



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