# Success**Story**

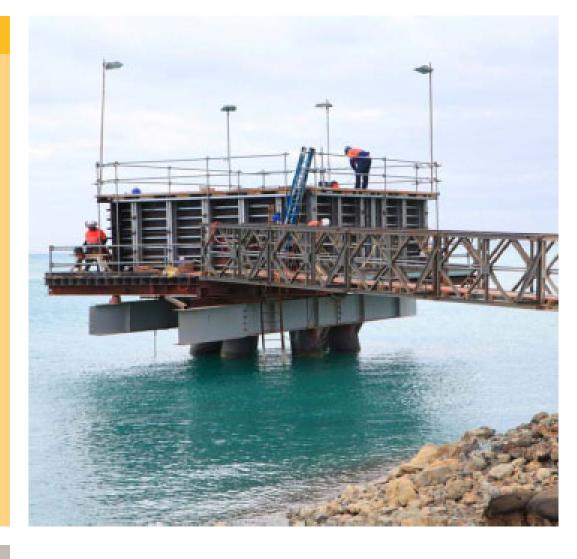## ESD and BMS protection for the Koniambo facility



### Project Overview

**Branch**
Minerals Processing
Industry (Nickel)

**Application**
Power station and calciner
emergency shutdown

**Hardware**
- 4 HIMax systems
- 12 HIMatrix systems

### Customer

End user:
Koniambo Nickel SAS

Project

**HIMA's safety solution, HIMax, is to be installed in one of the world's largest nickel mines, Koniambo**

Four HIMax safety systems are contracted to provide ESD and BMS protection for two met plants and two power stations.

**HIMA** SAFETY NONSTOP

# Project Description

The development of the Koniambo Nickel project, located in the North of New Caledonia, is a joint-venture partnership between Société Minière du Sud Pacifique (51%) and Xstrata Nickel (49%). Koniambo Nickel SAS (KNS) will construct a nickel refining facility using an ore calcining and smelting process to manage the giant deposits of nickel ore. When built, the open pit nickel mine will be one of the largest mines in the world.

HIMA Australia was commissioned by HATCH/Technip to provide a safety system solution for KNS's calciner units and power stations. The purpose of the calciner units is to turn liquid nickel into solids whilst the power stations produce steam to drive turbines that produce electrical power via turbine generators. To ensure the calciner unit and power station processes are safely managed, HIMA will supply four HIMax safety systems ('CPU' panels) and twelve HIMatrix 'Remote I/O' panels housing 126 HIMatrix modules to monitor and execute the safety functions.



As an intelligent next generation safety platform, HIMax will provide uninterrupted system operation throughout the entire life of the Koniambo Nickel plant while maximising plant availability, productivity and safety. The Koniambo operations team will be able to make changes, additions and perform maintenance online without any interruption of the safety system.

In the event of an unexpected deviation beyond the safe operating conditions the safety systems, totalling approximately 1500 I/Os, will provide emergency shutdown (ESD) and burner management system (BMS) protection, guaranteeing safe operations for the entire Koniambo facility.

In addition to supplying the safety system solution, HIMA will also provide functional safety and maintenance training covering the full safety lifecycle as per AS 61508 and 61511 guidelines.

## Overview of Features

- Certified up to SIL 3
- Cycle time of 50 ms with 1000 I/Os
- Maximum plant uptime
- Open platform integration with all leading DCSs
- Automatic module detection
- Fully integrated and protected power distribution eliminates the need for external wiring
- Module replacement without disturbing I/O or power wiring
- Built-in user management for hardware and software
- Three available rack sizes: 10, 15 and 18 slots

## Contact Details

### Perth | Head Office

Unit 4, 25 Belgravia Street
Belmont WA 6104
Tel: +61 (0) 8 9323 2100
Fax: +61 (0) 8 9323 2192
Email: info@hima.com.au

### Melbourne

Unit 13, 21 Sabre Drive
Port Melbourne VIC 3207
Tel: +61 (0) 3 8645 3600
Fax: +61 (0) 3 9645 3295
Email: info@hima.com.au

### Brisbane

Unit 19, 35 Paringa Road
Murarrie QLD 4172
Tel: +61 (0) 7 3390 6696
Fax: +61 (0) 8 9323 2192
Email: info@hima.com.au

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