

# Mopani



## Mufulira Smelter Upgrade –

Plant Wide Process Control

### Fast Facts

**Customer:**

Mopani Copper Mines (Glencore 73.1%, First Quantum Minerals 16.9%, ZCCM 10%)

**Location:**

Mufulira, Zambia

**Project:**

Copper Smelter Upgrade

**Date:**

2004 - present

**Plant Details:**

The Mufulira Mine has been in operation since 1933 & has produced approximately 20 billion pounds of copper. The smelter is being rebuilt & will have an installed capacity of 650,000 tonnes.

**Control System:**

Yokogawa CS3000



### Project Overview:

Upgrade of existing copper smelter involving replacement of core smelting technology and installation of associated oxygen plant, acid plant, electric holding furnace & services.

### MIPAC Scope:

Design, specification, configuration and commissioning of full plant wide control system for the upgraded smelter.

- ISASMELT and Waste Heat Boiler; Oxygen Plant; Sulphuric Acid Plant; Electric Furnace; Materials Handling Area; Services and Utilities
- Development of plant wide measurement and control standards for the project and upgraded smelter
- Detailed instrumentation design for the ISASMELT plant & Waste Heat Boiler areas
- Electrical design and procurement specification for associated Low Voltage Motor Control Centre
- Client training in control system configuration and maintenance

### Technical Highlights:

- Strong focus on simplicity and reliability for maintenance groups
- Transfer of knowledge from multiple technology providers into common control system to provide consistent operations interface
- Fast tracked project with control system on critical path

### Results:

- Reduced project costs through economical project implementation by one group with minimised design group interfaces.
- Efficient and cost effective ongoing control system maintenance due to commonality of equipment and consistency of design
- Minimised project risk
- Cohesive approach to instrument design standards, control system design and configuration

*“...MIPAC have conducted themselves with a professionalism & integrity that would suggest the Mufulira Smelter is their asset.”*  
 – John Ross, Metallurgical Manager, Smelter & Concentrator, Mopani Copper Mines