



FOR ALL YOUR THERMAL PROCESS REQUIREMENTS

## CASE STUDY

# 100 Tonnes per Hour Bar Mill Pusher Billet Reheating Furnace Control and Burner Safety Re-Vamp

A major Egyptian steel manufacturer wished to update a bar mill furnace to improve and update furnace controls and improve burner safety to match current safety requirements. Magma Combustion Engineering were awarded a contract to carry out the entire works to fulfil the client's technical and health and safety requirements.

## AIM

The main aspects of this project were to restore the combustion system to the design level of safety operation, eliminate the adverse effects on zone, and hence furnace, performance of individual burner failures, improve reliability and enable remote furnace control and monitoring, via a new SCADA. As a secondary objective improved scaling loss and Natural Gas consumption were anticipated.

## SCOPE OF THE WORK

The existing 23 burner control units were replaced along with pneumatically controlled safety valves in each burner gas supply. The original PLC and SCADA system were replaced with modern units and the software configured to control the process temperatures, recuperator controls, billet handling and pusher and push bar co-ordination and burner safety systems. Two SCADA nodes were provided, one in the furnace local control room, for maintenance use, and one remotely in the Mill pulpit to enable the roller to control and monitor furnace operational factors. The whole system was then re-commissioned.

## BENEFITS

- Compliance with Company and Statutory Health and Safety Requirements
- Improved operational flexibility
- Improved operational reliability and resilience
- Reduced scaling and Natural Gas usage
- Modernised plant

## CONTACT US

Want to know more about how Magma can help you?

- [magmacombustion.com](http://magmacombustion.com) / [info@magmacombustion.com](mailto:info@magmacombustion.com)
- 01709 521144 / Magma House, Rotherham, S60 1SG

