

Source: *isasmelt.com*

mopani copper mines copper smelter

An award-winning project completed in record time.



Xstrata Technology commissioned the new ISASMELT™ plant with Mopani Copper Mines during 2006. The plant is located at the Mufulira copper smelter in Zambia's copper belt, close to the border to Congo. It was designed initially to smelt 650,000 tpa of concentrate with the potential to expand to 850,000 tpa in the future. The Mopani ISASMELT™ plant replaced an existing electric smelting furnace. The plant comprises a new feed preparation system,

electric settling furnace, waste heat boiler, electrostatic precipitator, gas cleaning plant, oxygen plant and acid plant. There are also improvements being made to the converter aisle and anode plants.

The project was an excellent example of a well executed project on a brownfield site involving a wide number of engineering companies and vendors from different countries working together in a remote part of the world. Despite the logistical challenges of constructing a new smelter in a land-locked country in the middle of Africa this project was the fastest of all ISASMELT™ projects completed to date. It took only 28 months from signing of the engineering and licence agreement to achieve the first feed on in the furnace in September 2006.

In addition to the engineering design of the ISASMELT™ plant and supply of key equipment such as the waste heat boiler, XT designed and supplied a plant wide process control system for the project based on a Yokogawa CS3000 platform. The control system allows the acid plant, oxygen plant and ISASMELT plant to be controlled from one central control room. The project was recognised as the 2006 winner in Process and Control Engineering's Zenith Awards.

In another example of XT's multi-faceted approach to technology transfer, Mopani staff trained at the Mount Isa copper smelter for over 3 months prior to startup of the plant, while Xstrata personnel with many years of operating experience on various

smelters assisted with the pre-operational training and hot commissioning of the plant in Mufulira. Key process personnel remained on site for an extended period to assist with ramp up of the plant and provide comprehensive training for Mopani operations staff.