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Metix has become the leader in South Africa for the supply and installation of furnace technology equipment to the ferroalloy industry, comprising everything vital to the smelter core, including: complete electrode columns, furnace roofs, power supply systems as well as furnace linings.

It is the only South African based company to design and supply fully forged solid copper pressure rings, the copper:silver forgings being custom made for each furnace with individual pieces weighing as much as 750kg. In this last year alone, Metix has fitted 10 South African smelters with this exceptionally robust and reliable design.

Another unique design to Metix is its solid copper furnace roof, where a delta section of the roof, traditionally fabricated from cooled stainless steel, has been replaced with one made of solid forged copper plates weighing up to 4 tons a piece. Due to the very high thermal conductivity of copper, this roof does not rely on refractory for protection from the harsh furnace conditions. Two of these copper roofs were installed in 2009 on a groundbreaking project where two semi closed ferrochrome furnaces were converted to be fully closed, and now with another currently being installed on the largest silicon smelter in China.

The company has recently experienced success in China where the ferroalloy production industry is growing rapidly and is following the South African trend of constructing larger furnaces with lower production costs and reduced environmental impact. In its move into China, Metix has opened a joint marketing and projects office in Beijing.

In 2009, Metix was commissioned by the China Yunnan Metallurgical group (CYMCO) to implement the largest submerged arc furnace project to be constructed in China to date. This is a 67.5 MVA silicon manganese smelter fitted with Metix electrode columns with an electrode diameter of 1.75m as well as the Metix forged copper roof.

In addition, Metix was also awarded the contract to supply and install a 'state of the art' freeze lining in this furnace, with special carbon and graphite portions designed and supplied by GrafTech.

This project is expected to be completed in the first quarter of 2011.

Internationally Metix, through associations with other companies, is also involved in ferroalloy markets in India, Canada and Russia

Since its formation in 2003, Metix has successfully completed the five most recent chromite pelletizing and sintering plants built in South Africa.

Recently, a black empowered engineering company, RB Met Engineering (Pty) Ltd, was awarded a contract to supply and install a pelletizing and sintering plant for Xstrata Merafe PSV's ferrochrome plant located in Rustenburg. The pelletizing and sintering plant will utilise Outotec's SBS® sintering technology. The contract is subject to an environmental permit being issued by local authorities in Rustenburg.

Metix has been selected as the engineering company on the project and their scope includes detailed engineering, procurement, construction, and commissioning of the 600,000 tonnes per annum chromite pelletizing and sintering facility. The core technology utilised for this project will be provided by Outotec OYJ. This Outotec® Ferrochrome process improves energy efficiency and reduces the carbon footprint of the plant.



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