

## CONTRACTS

# A South African first for furnace roofs

Metix has delivered the two furnace roofs that it designed and commissioned for Herculite Ferrochrome's furnaces, a feat that the company calls "a South African first".

"The roofs are currently on site and will be erected over the next few weeks while the furnaces are down," says Metix technology equipment director, Jacques Venter. According to him, Herculite Ferrochrome has already shut down the furnaces to facilitate the installation of the roofs, which is scheduled to be completed in the second quarter of 2009.

Venter tells that traditional roof centre section designs involve a thick layer of refractory material, which is usually made of stainless steel. "However, the material does tend to show fatigue quickly once the refractory lining is worn away," he says, adding that the two roofs have forged solid copper centre section panels, which need no refractory lining, even in this extreme environment.

"While a shutdown can ultimately be the most expensive part of any furnace operation, the copper section of the roof will result in a great reduction in downtime in the future," says Venter. "We expect a lifespan of at least 10 years with copper, which is 25 times more heat conductive than stainless steel."

He adds that on typical applications, steel roofs are not expected to last more than five years, and on a closed ferrochrome furnace, the process is significantly hotter than traditionally anticipated on the larger furnaces and problems arise quicker.

Herculite Ferrochrome is located 50 km outside of Johannesburg, and it produces 420 000-million t of ferrochrome annually. ☺