Siemens starts up second Corex C-3000 plant at Baosteel, China – Continued commitment to environmentally friendly ironmaking technology

At the end of March 2011, the Corex C-3000 Module 02, installed with a nominal production capacity of 1.5 million tons of hot metal per year, was started up at the steelworks of Shanghai Baosteel Pudong Iron and Steel Co. Ltd. (Baosteel) in Luojing, near Shanghai, China. The new plant incorporates all of the experience acquired from the operation of the first Siemens VAI-supplied Corex C-3000 Module 01 at the same site, which commenced operation in November 2007. Baosteel's decision to install a second Corex plant underlines the company's commitment to cost-effective and environmentally friendly iron production that fully meets the strict emission regulations imposed by the Shanghai municipal government.

The order for the second Corex module, which is basically identical in design to the first module, was received in December 2007. Siemens VAI provided the complete process technology, and engineered and supplied key equipment and components. This included oxygen burners, screw conveyors for the coal and direct-reduced iron, two Gimbal Top charging systems (one for the charging of burden into the reduction shaft and one for the charging of coal into the melter gasifier), gates at the dust-recycling systems, electrical equipment for Level 1 and Level 2 automation and core instrumentation.

A special design feature of the new Corex module is the so-called aerial gas distribution (AGD) system. AGD supports the injection of reduction gas through the bustle system into the Corex shaft by means of an additional gas distribution into central zone of the reduction shaft. This further enhances shaft performance in that a more homogeneous reduction of the burden is achieved, leading to an increased productivity.
The top gas from the two Corex plants is used for the generation of electrical energy and for heating applications throughout the Baosteel steelworks.

Since October 2010, the previously installed Corex Module 01 has been in stable operation with an overall availability of 94% and high productivity rates. The specific hot-metal costs and the consumption figures attained their lowest levels since the start-up of the plant.

Corex technology enables the production of liquid hot metal predominantly using non-coking coal as the energy source and as the iron ore reductant. Compared to the conventional coke-oven, sinter-plant and blast-furnace production route, Corex allows hot metal to be produced at lower unit costs and at significantly lower specific environmental emissions.

Further information about solutions for steel works, rolling mills and processing lines is available at
http://www.siemens.com/metals

A photo supplements this press release. Please see:
New (left) and previously installed (right) Corex C-3000 plants with a combined annual hot-metal production capacity of 3.0 million t/a at Baosteel, Shanghai, China

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