

SUPPLY SITUATION REPORT: Refractory bauxite

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SUPPLY SECURITY

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Critically, the refractory bauxite market is limited to sourcing most of its material from China mainly from the Guizhou and Shanxi provinces and Guyana (operated by Bosai Minerals Group of Chongqing, China).

Late last year the Chinese government closed all mining operations in Xiaoyi after a number of accidents occurred in the region's coal mines.

At the time Xiaojun Ren, president of leading bauxite producer and exporter Shanxi Fangxing Refractories Co. Ltd, told **IM** that although a reopening in Q1 2010 was unlikely, local demand could force a reopening by the second half of the year.

Now even that timeframe is generous. Berbel Kaczich, from Shanxi Fangxing's subsidiary EcoMinerals GmbH, told **IM**: "For the moment it does not look like the mines will open in the near future. Some expect they will be closed for at least one or two more years."

Kaczich revealed that in addition to the mine closures, the volume of bauxite coming from Xiaoyi's mines had been falling and the quality of the remaining material was "very poor". She said: "50% of the remaining bauxite cannot be used for production."

The upshot of China's decision to close the Xiaoyi mines is that bauxite mining has started in other areas of Shanxi, such as Jiaokou.

But can the new mines meet demand? Kaczich told **IM**: "There is not enough bauxite ore from stockpiles. Shanxi Fangxing already mines in Jiaokou in order to meet demand and in future we will also mine in Fangshan, Liu Lin and Li Shi."

PRICE TRENDS

Unsurprisingly, bauxite prices have been affected by the mine closures in Xiaoyi. With most of the material limited to China, the refractory bauxite market is heavily influenced by the country's government policies; meaning that availability and prices are not fully market-driven.

In December 2009 the Chinese Chamber of Commerce of Metals, Minerals and Chemicals Imports and Exporters (CCCMC) increased the non-metallurgical bauxite export licence fee to RMB300/tonne (around \$44/tonne) in 2010, up from a figure of RMB135/tonne (\$20/tonne) last year. To counter this increase, the bauxite export tax previously costing about \$50/tonne was erased.

Chinese prices for the refractory material began to move upwards in December last year owing to the clampdown on mining in Xiaoyi. At present refractory bauxite (Shanxi, FOB Xingang, round kiln) is in the range of \$480-535/tonne for 87/1.8/3.20+ material; \$500-535/tonne for 87/2.0/3.2 material; and \$490-525/tonne for 86/2.0/3.15-3.20 material (*see graph*).

MARKET DEMAND

Consumption of refractory bauxite began to decline in 2008 as the production of cement, ceramics, glass and steel the main refractory consuming markets followed the global downturn. The refractories market remained depressed throughout 2009, severely affecting demand for refractory minerals.

But now the refractories market is beginning to recover, buyers are looking to replenish their depleted stockpiles. The principal concern for this market is whether the Chinese government will attempt to further control the country's bauxite production.

At present, prices for non-met. bauxite from China and Guyana are on an equal footing. But further restrictions of Chinese material could potentially increase both domestic and export prices. If this happens, consumers could be forced to look elsewhere and at alternative materials for future supply.

This has already occurred to some extent regarding consumers evaluating sillimanite minerals as possible bauxite substitutes.

OUTLOOK

A potential shake-up for China's bauxite producers is the government's decision to redevelop the key port area of Tianjin, where many processing facilities for bauxite and other minerals are located. This year all of the bauxite companies in Tianjin will be required to move and build new facilities elsewhere.

Shanxi Fangxing has already secured land in Tanggu (around 40km from the centre of Tianjin) where it is planning to build new warehousing, processing and packing facilities. Kaczich told **IM**: "We will start to build a new warehouse soon, which hopefully will be ready in autumn."

Elsewhere, refractory bauxite's prospects have improved following the development of a new source in Guyana by Canadian company First Bauxite Corp.

In February the exploration company contracted engineering group ThyssenKrupp AG to design processing plants at its Bonasika property one of three bauxite properties in the area from which First Bauxite aims to produce 100,000 tpa of calcined bauxite using a pressurised vertical shaft kiln (*IM 22 February 2010: First Bauxite eyes 100,000 tpa*).

Refractory bauxite prices (Shanxi, FOB Xingang, round kiln), 2008-2010

