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**PORT ON  
HORIZON**

# IsaMill into Iberia

THE Australian-developed IsaMill has been chosen for the zinc expansion project at Lundin Mining Corporation's Neves-Corvo operation in Portugal.

The M1000 IsaMill is the second to be installed at the site after the successful commissioning of an M3000 IsaMill at the end of 2009.

**"This sizing will be daunting to conventional technology but the IsaMill used in this circuit will achieve this sizing easily."**

– Xstrata Technology global marketing manager – mineral processing Steve Smith

The 500kW M1000 is part of the lead regrind circuit that is required to liberate the lead rougher concentrate to very fine sizes, enabling the recovery of high-grade lead concentrate. The circuit is planned to operate in the first quarter of 2011.

Xstrata Technology global marketing manager – mineral processing Steve Smith said a design P80 of 6 micrometres was required for the concentrator. "This sizing will be daunting to conventional technology

but the IsaMill used in this circuit will achieve this sizing easily," he said.

The mill will use Magotteaux ceramic media. This offers the best chance for flotation as the freshly formed mineral surfaces can react with the flotation collectors without the interference of ferric ions. In many IsaMill operations, improved mineral recoveries and reduced reagent use are due to the use of inert media.

The M1000 will join the 1.5MW M3000 unit at the site. That unit is part of a copper tailings treatment circuit treating material at 30-40µm and reducing it to 8-10µm.

Ultrafine sizing is needed to allow sequential flotation of copper and zinc.

Besides supplying the mills to the site, Xstrata Technology also has designed the feed and discharge slurry handling systems, media addition and general layout of the circuit. It also helped with the commissioning.

IsaMills also are being installed at the Efemçukuru project in western Turkey. That operation will use the M500 IsaMill in its gold circuit.

One of the largest IsaMills, the M10,000, will be used as part of an Albion leach circuit at the Certaj project in Romania to treat refractory gold.

Testwork also has begun in Turkey and Russia, treating copper and gold deposits using small-scale IsaMill test units. These have been made available for onsite testing



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through agreements with Labris in Turkey and TOMC in Russia.

The ability of the mill to scale up accurately to full-scale operations is one of the touted advantages of the technology.

Xstrata Technology says the high-intensity grinding action of its mills is fully transferable from small-diameter test mills to large, full-sized ones. **AMM**

## MSP Engineering gains Allmineral agency

MSP Engineering, once known as McSweeney Partners, has acquired the Australian and New Zealand agencies for Allmineral Processing Equipment.

The Allmineral equipment will be marketed through a wholly owned MSP subsidiary called MSP Process Solutions.

The start of the company's process solutions business, as well as its mining services operation, prompted the company to find extra premises. In March, MSP Engineering moved to 110 Erindale Road, Balcatta, while its MSP Process Solutions and MSP Mining Services businesses remained at 24 Mumford Road, Balcatta.

"Allmineral designs and manufactures the Alljig, Allflux, Allair and Gaustec high-efficiency process equipment specifically designed for beneficiation of minerals susceptible to gravity and/or magnetic separation," MSP managing director Peter McSweeney said.

The Alljig unit is said to be ideal for beneficiating low-grade iron ore deposits, particularly haematite-style ore deposits. The technology already has been installed and proven on large product scale at Kumba's Sishen Iron Ore Expansion Project in South Africa. That project has a rated capacity of more than 4000 tonnes per hour. There are 24 Alljig units installed there.

Large-scale production facilities using Alljig technology also are being built in India.

The Allflux classifiers are the largest production units for iron ore beneficiation worldwide, with a number of smaller units already installed in Western Australia. The largest units can handle more than 300tph of minus 2mm feed material on iron ore. Allmineral already is considering developing larger production units.

The Gaustec Wet High Intensity Magnetic Separator is said to be the largest of its kind in the world with rated capacities exceeding

200tph and a top size capability of up to 3mm feed.

The units have been developed in Brazil and extensively installed throughout that country's fines iron ore dressing facilities.

McSweeney believes the application of one or the combination of all three technologies provides superior solutions to iron ore producers contemplating downstream, value-adding of low-grade haematite iron ore deposits.

"It is most likely the raft of junior and mid-tier iron ore exporters and emerging producers will apply the technology in the first instance, while the majors undertake a longer-term view on technology application," he said. "However, in the final analysis, downstream beneficiation of most DSO [direct ship ore] deposits is enviable and we feel we have the latest and most effective technology in low-cost processing solutions, which already is demonstrated in large-scale industry applications."