



The Xstrata Technology M10,000 and a M3000 IsaMill that have been installed at Anglo Platinum's Amandelbult PGM concentrator in South Africa

IsaMill progress

Today Xstrata Technology's IsaMill™ has been developed from its initial duty of producing ultrafine sizes in lead/zinc ores (7 micron in the case of McArthur River ore types) to coarser duties, where sizes of 40 to 50 micron is required from the mill. The same grinding efficiency that was a priority in their initial duties is still achieved with the coarser grind sizes, the direct result of the large number of media per volume of mill capacity, abrasion grinding and imparting the energy into the solids. No energy is wasted turning a shell in the IsaMill™, instead the power is transferred to the media by a series of rubber discs, and this, along with using media less than 6 mm in diameter, results in maximum energy efficiency being used for grinding.

The range of IsaMill models has increased recently, and still includes the M10,000 3,000 kW unit that is popular in many large operations, as well as the smaller M3000 (1,500 kW), and M1000 (500 kW) models, but it also includes the M100 (75 kW), M250 (132 kW), M500 (200 kW) and the very large M50,000 (8,000 kW) models that allows all

operations the opportunity for energy efficient grinding. Furthermore, the mill can be supplied as a complete full grinding circuit package incorporating feed and discharge pumps and pumpboxes, surrounding steelwork, and the newly released IsaCharger™ media addition system. Steve Smith, Operations Manager at Xstrata Technology said the IsaMill package is like a "plug and play" concept now, and minimises project risk for the client. "We have over 80 installations worldwide, so we have a lot of design knowledge that we impart in each project – it gives the operator comfort that their project will work to its optimum design as soon as it is switched on."

IsaMills have recently been chosen for the Antapaccay project in Peru, where two M3000s will be installed in the copper regrind circuit. This is the first IsaMill project in South America, with a smaller M100 unit being chosen by Exportadora Aurifera gold mine in Ecuador. Xstrata Copper has also recently purchased an M10,000 for the Ernest Henry magnetite project in Australia, while three M1000s are being manufactured for the Endako project in Canada, to be part of the molybdenum regrind circuit.

Smith commented "The IsaMill has been moving into newer regions and applications as operators required more energy efficient technology. When magnetite operators require large tonnages to be ground to sizes of 40 to 50 micron to make a saleable concentrate, it makes sense to use IsaMill technology that is well suited to achieve these duties in the most energy efficient manner".