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The ASIA Miner www.asiaminer.com

Asia Pacific's bi-lingual Resource Industry Magazine 亚太双语资源产业杂志

Volume 7 - Second edition March-April, 2010 Industry technical information

矿业技术信息

Golden glow

金色光芒

THIS ISSUE

本期

■ Gold project developments across Asia and Australia

亚洲和澳大利亚的金矿项目

SPECIAL FEATURES

特写

■ Australian technology

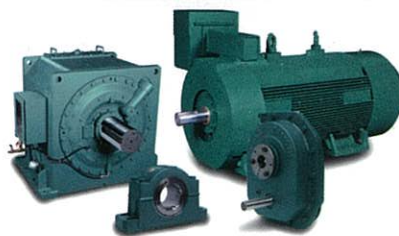
澳大利亚技术

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Jameson Cells in coal and base metal flotation

XSTRATA Technology has recently won the supply of Jameson Cell technology for Energy Resources LLC Ukhaa Khudag's coking coal project.

The project is 540km east from Dalanzadgad in Mongolia, about 245km from the Chinese border, and involves development of an open pit coal mine with coal handling and preparation plant.

Two very large Jameson Cells (B6000/20) incorporating the recently released Mark IV design will be part of the preparation plant, which will produce premium hard coking and semi-hard coking coals ranging between 8% to 10% ash.

Xstrata Technology global marketing manager Steve Smith says this project required high quality coal product to be produced, with versatility needed to produce a range of coal products.

The Jameson Cell can achieve these varying specifications by regulating the use of wash water, which washes out the gangue that is carried over in the froth, making the Jameson Cell well suited to this application.

It is one of several new coal projects using Xstrata Technology Jameson Cells, including Riversdale Mining Benga Coal Project in Mozambique and the Moorlaben Project in New South Wales, Australia, which will be using the cells in a two stage operation to produce low ash coal.

Steve Smith says that there has been a lot of interest in Jameson Cells, particularly in prefloat and copper scalping applications.

"The fast flotation times in the cells make them ideal to use in applications where the mineral has fast flotation kinetics. The ability of the cells to be installed without the need for compressors and blowers, as well as having a small footprint, make them ideal to retrofit at the head of conventional circuits in 'scalping' duties to provide high-grade concentrate while reducing the load on the following circuit.

One circuit that uses Jameson Cells in a copper scalping duty is OZ Minerals Prominent Hill operation in South Australia. In this circuit, the copper rougher concentrate is ground in a M10,000 IsaMill, also supplied by Xstrata Technology, and then is 'scalp' floated in a single Jameson Cell to quickly recover a high grade froth-washed concentrate, while the tailings gravitate to conventional flotation cells to recover the remainder of the concentrate. The inert ceramic media used in the IsaMill provides optimum conditions to enable the copper minerals to float fast.

This circuit makes the most of technology suited to the flotation characteristics of the particles; in this case using a Jameson Cell to target the fast floating particles while using conventional technology to target the slow floating particles requiring high residence times.

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Two B6000/20 Jameson Cells will be used at the Ukhaa Khudag coal project.

The Jameson Cell and IsaMill at Prominent Hill in South Australia.

Jameson Cell技术运用于煤和基本金属浮选

斯特拉塔科技公司 (Xstrata Technology) 最近获得了为Energy Resources LLC公司旗下Ukhaa Khudag焦煤项目提供Jameson Cell技术的供应权。

该项目位于蒙古国Dalanzadgad以东540公里, 距中蒙边境约245公里。项目包括建设一座露天开采煤矿和焦煤物料处理及选矿厂。

其中的选煤厂将采用最新Mark IV型设计的两套大型Jameson Cells (B6000/20)设备, 产品为优质硬焦煤和半硬焦煤, 灰分介于8%至10%之间。

斯特拉塔科技公司全球营销经理Steve Smith说, 该项目不仅需产出高质量焦煤, 而且要求设备具有良好的适应性, 能满足一系列不同煤产品的生产需要。

Jameson Cell技术能够通过调整洗煤水, 即煤矸石在不同洗煤水所产生的泡沫中被带走, 从而满足不同生产需求, 这一特性使得该技术符合项目要求。

近期有多个煤项目采用了斯特拉塔Jameson Cell技术, 如Riversdale 矿业公司在莫桑比克的Benga煤矿和在澳大利亚新南威尔士州的Moorlaben煤矿, 它们都将采用两段式工艺生产低灰分的煤。

Steve Smith还称近来有许多公司表示了对Jameson Cell技术的兴趣, 尤其是在预浮选和铜精矿清洗领域。“该工艺在浮选槽内的浮选时间极短, 很适合于那些具有快速浮选动力学的矿物。”浮选槽不需要辅助的压缩机和风机, 而且所占空间小, 可以在常规浮选设施的入口处稍作改动进行安装, 提供“清洗”功能, 提高精矿品位, 也减轻了对后续流程的压力。

Jameson Cell工艺在铜矿清洗领域的一处应用实例是OZ Minerals公司位于澳大利亚南部的Prominent Hill项目。在这套生产流程中, 较粗的铜精矿先通过IsaMill磨机(也是斯特拉塔公司的技术)磨到M10,000的粒级, 然后通过单台Jameson Cell槽的清洗浮选作用快速得到发泡洗涤后的高品位铜精矿, 尾矿在重力作用下进入传统浮选单元以提取剩余部分精矿。IsaMill磨机内衬的陶瓷介质能够为含铜矿物的快速浮选提供最优条件。

该技术对于不同的矿物颗粒浮选特性有着广泛的普适性; 因此可以采用Jameson Cell技术捕捉具有快速浮选性能的矿物颗粒, 而同时运用常规技术处理需要更长沉降时间的慢速浮选性的矿物颗粒。

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Ivanhoe Oyu Tolgoi construction for 2010

ABOUT US\$758 million will be spent during 2010 to begin full-scale construction of the joint Ivanhoe Mines-Rio Tinto Oyu Tolgoi copper-gold mining complex in southern Mongolia.

A construction schedule has been prepared that could see construction of the initial open-pit mine completed in 2012 in commercial production begin in 2013.

Ivanhoe's president and chief executive officer John Macken says the 2010 budget allocation represents the next big step towards bringing this project into production.

"It provides for an early start on a site-wide development program."

Work this year is planned to include reump-

tion of the sinking of the 10-metre diameter Shaft 2, which will be used to hoist ore to the surface from the deep, underground copper-gold rich Huge Dummett deposit. It is also planned to construct a 97 metre high, reinforced concrete headframe for this shaft.

Also planned is:

- Pouring the concrete foundation for the 100,000 tonne/day concentrator and delivery of building materials for the concentrator and infrastructure.

- Installation of a 20MW power station and 35KV distribution system.

- Initial earthworks for the open-pit at the Southern Oyu deposits.

- Continuation of lateral underground devel-

opment off Shaft 1 at Hugo Dummett.

- Construction of a 105km highway link to the Mongolia-China border which will be fully paved by the time production begins.

- Construction of a regional airport with a concrete runway to accommodate Boeing 737-sized aircraft.

Ivanhoe's consolidated cash position is around US\$1 billion and John Macken says additional funds are expected this year either from Rio's exercise of Series A warrants yielding US\$385-\$397 million or through potential investments in Ivanhoe by one or more strategic shareholders, including sovereign wealth funds, that have expressed unsolicited interest in participating in the project.