

Gravity Tales

When good things come together. ..



Pictured: Grant Lehne enjoying improvements to his working environment

Roche MT's new Fibreglass & Polyurethane Spraybooth project combines safety & environmental improvements with operational efficiencies and lower costs!

During the 2006/07 Christmas maintenance shut, two new, state-of-the-art spray booths were erected to further improve the business' environmental and safety performance. The new booths have eliminated the exposure of our operators to styrene fumes whilst improving the operational performance of the fibre glassing department at the same time. The new spray booths are providing a climate with sufficient airflow to eliminate the need to wear protective filter masks, which were uncomfortable to wear and could become unhygienic after prolonged use.

To increase operational efficiencies, a turntable has been installed into the floor to rotate the product whilst spraying, rather than the operator having to move around the product, saving valuable time and reducing clean up time. New custom built spray equipment for our proprietary polyurethane system has been set up in the second booth. This system will reduce the amount of product wastage and overspray by at least 5% and will greatly improve process control and operational performance of our world class spiral manufacturing process.

This project demonstrates that safety and operational efficiencies do go hand in hand when the scope is well planned and executed. A large number of staff have had input into the design and ergonomics of the plant and the outcome has exceeded management's expectations. It ensures that Roche MT retains its competitiveness through lower operating costs and higher manufacturing efficiencies whilst continuing to be an industry leader in safety performance.

Roche MT replaces Carpco Magnets in Western Australia

The commissioning on 3 April 2007 of Roche Mineral Technologies' new 1 X 2 X 1500 Readings Rare Earth (RE) Drum magnets for one of the world's largest mineral sands processing facilities has been a total success. These new drum magnetic separators replace the Western Australian operation's previous 9 Carpco Induced Roll Magnetic Separators.

The mine's Project Engineering department congratulated the Roche Mineral Technologies commissioning team of Owen Lickiss, Marc Wellsted and Sue Robinson for contributing to the successful commissioning and operation of this new equipment.

The company's Dry Mill Chief Project Coordinator said "based on the analysis of samples taken from the product chute outlets, these new Readings RE Drum Separators are on target to exceed the design specifications in the areas of quantity and quality of output".

"We have already noticed significant improvements in the down stream circuit loadings and have suffered very little in the way of interruptions to circuit feed rates during the installation process," he said.

Roche Mineral Technologies is proud once again to be able to provide improvements to a client's separation efficiency through the application of enhanced technology.

QIT MADAGASCAR MINERALS SA / MANDENA JOINT VENTURE

Roche Mineral Technologies spirals ahead with largest single order

In October 2006, Roche Mineral Technologies secured from QIT Madagascar Minerals SA one of the largest gravity separation spiral orders placed on a single supplier for any project worldwide. QITMM is an 80 per cent owned subsidiary of Rio Tinto Plc, with the Government of Madagascar retaining the other 20 per cent.

The deposit is situated near Fort Dauphin on the South East coast of Madagascar and is one of the world's largest known undeveloped high grade ilmenite deposits with a grade of 60 per cent titanium dioxide. The concentration plant will initially produce 750,000 tonnes of ilmenite per year that will be smelted at Rio Tinto's facilities at Sorel in Quebec.

The nine million dollar order consists of 2,400 spiral starts comprising a combination of specially designed MG4AA spirals as well as HG10A and WW6E spirals. These are the primary mineral separation devices to upgrade and recover heavy minerals in the 3,200tph Wet Concentration Plant, which is to be commissioned in 2008

Cliff Robinson, Roche Minerals Technologies' Business Development Manager (Australia), said "Our production facility in Carrara has started a manufacturing program that will extend over nine months."

"Following extensive testing of mineral from the deposit over a number of months in our metallurgical test facilities to help define the spiral flow sheet, the production spiral was selected after testing prototypes from a number of new moulds," said Cliff.

"Spiral frames are being manufactured by our Indian operations and delivery to Madagascar is timed to coincide with delivery of spirals from Carrara. The spirals will be assembled into the frames on site to provide cost savings to the client."

The Kelsey Jig Service Exchange Program

The Kelsey Centrifugal Jig is an innovative mechanical separator built by Roche Mineral Technologies that enhances fine mineral recovery at an efficient cost. One of the key focus areas successfully carried out during the past years has been the implementation of a Service Exchange Program for Kelsey Jig customers world wide.

Knowing the importance of a continuous operation to maximise production, this programme has been designed to supply our customers with an exchange Kelsey Jig for change-out with an operating unit in under 24 hours. The programme provides for a planned overhaul to ensure minimum equipment down time and provides RMT's service, warranty and expertise, to provide a trouble-free maintenance regime.

Customers will automatically benefit from our commitment to continual product improvement, by having the latest improvements in machinery and materials technology incorporated in the Jig Service Exchange programme. This gives our customers the advantage of getting an updated product into their production line.

The Service Exchange Program has been designed to provide local support to international clients with remote operations. Repair capabilities are set up geographically close to each site with a Kelsey Jig.

Thanks to the Roche MT Kelsey Jig team, this program has been able to almost eliminate critical downtime and provide excellent machine availability during planned overhauls while the latest product upgrades are incorporated in the process.



Australian Zircon NL – Mindarie Mineral Sands Project

Metallurgical testwork leads the way

Roche Mineral Technologies is currently supplying 436 spiral starts to Australian Zircon NL for their Mindarie Mineral Sands Project located 148km east of Adelaide, South Australia in the Southern Murray Basin. This is principally a zircon mine with 60 per cent of projected annual revenue to come from approximately 43,000 tonnes of zircon and 15,000 tonnes of rutile/leucoxene and 75,000 tonnes of ilmenite making up the balance.

Cliff Robinson, Roche Mineral Technologies Business Development Manager (Australia), commented, "Roche Mineral Technologies conducted a significant amount of metallurgical test work and undertook the process flow-sheet design. The order was won for 216 starts of HC1, 144 starts of MG4CF and 76 starts of HG10S spirals against very competitive pricing from two other spiral manufacturers."

"RMT are also supplying eight single deck Holman shaking tables for the Wet Concentrate Upgrading Plant due to be commissioned in June this year. We will have several of our metallurgists assisting in bringing the plant up to the rated capacity and recovery targets" said Cliff