

Carl Firman Editor, *Global Capital Magazine*, with thanks to Rotex

## PotashCorp gets larger capacity and smaller footprint from the new Rotex mineral separator

Rotex Inc's sales of its minerals separators have gone through the roof since it fortuitously enlisted PotashCorp to assist in designing the equipment. The meeting between the pair in 2002 helped shape the new product, which PotashCorp eventually bought.

PotashCorp was looking for a mineral separating screener that delivered more than its current machine, while Rotex Inc was enlisting companies' input to design new separators for minerals markets. The two came together in a cooperative venture that benefited them both.

"This was a situation where Rotex was the home team in the bottom of the ninth and needed one run to win," said Terry Daniels, general foreman of PotashCorp's Rocanville mill. "And with two strikes and two outs, they hit a home run to win the game."

In an effort to respond to changes in the market, Rotex launched a campaign to build a new minerals separator. "We knew that to stay competitive in the minerals industry, we had to upgrade our product offerings with newer technology," said Scott Haley of Rotex. "So rather than guess what best suited our customers' needs, we decided to ask them." In a programme

called 'voice of the customer,' Rotex engineers enlisted feedback from manufacturers across the industry. This gleaned valuable information that Rotex used to begin developing initial designs, and was also good timing for

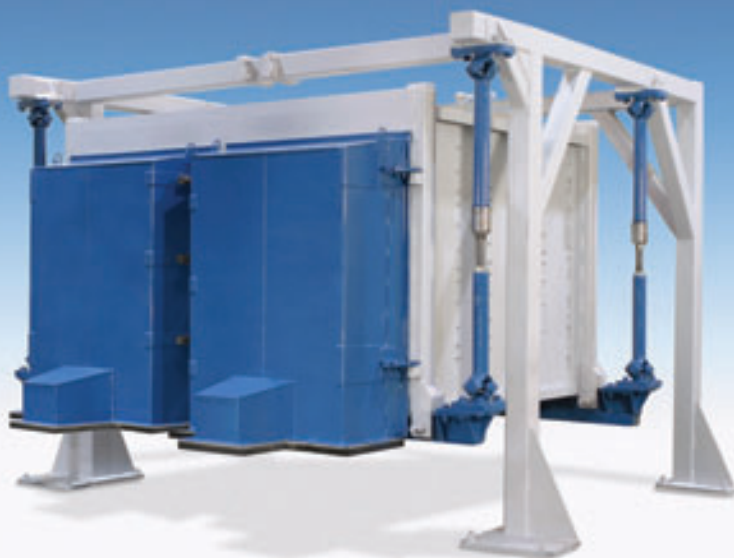
*"Their success would advance our efforts and further our success."*

the Rocanville mill, because it was actively exploring new mineral separation technology.

Before the mineral separator upgrades, Rocanville was using Rotex 522 screeners in its production operations. The mineral separator project that Rotex was working on held great potential for improving the mill's production capabilities. "They pretty much asked us to give them a wish list of everything we wanted a minerals separator to include," said Mr Daniels. "And this gained our interest because they were addressing important issues that we felt would help us achieve our objectives. Their success would advance our efforts and further our success."

Those efforts involved gearing up for an expansion programme. And it included exploring new technology that their current machines lacked. "Our expansion plans centered around two important needs," said Mr Daniels, "a higher capacity screener, but in a compact footprint that maximised the use of our floor space. Rotex seemed sincerely interested in designing a machine that addressed those needs along with several other ones too. But whether or not they could meet our timetable was another thing."

Below: The Rotex MEGATEX XD mineral separator was specifically designed to meet the screening requirements of mineral applications. The minerals separator provides screening performance when sharp separations and high efficiencies are required.



### Combined efforts

PotashCorp of Rocanville, which is located in Saskatchewan, Canada, is a division of PotashCorp – the largest single producer of agricultural fertiliser in the world by capacity. The Rocanville plant employs approximately 360 people and is a preferential supplier of potash to North America. The division manufactures two primary products – granular and standard potash.

Rotex develops screening equipment and technology for the process industries. The company offers a line of separation equipment that includes; gyratory and vibratory screeners and sifters for dry applications, liquid-solid separators for wet applications, automated particle size analysers, and vibratory feeders and conveyors. Since the sale of the mineral separator to PotashCorp, the product has now found a marketplace in other industries including industrial sand (frac sand, bentonite clay etc.)

### The separator

Although Rotex enlisted feedback from manufacturers across the minerals industry, Rocanville's expansion plans increased motivation from both sides and encouraged a closer working relationship on the project. Representatives from Rocanville visited Rotex to examine and provide feedback on initial designs and Rotex fast-tracked the project in order to meet Rocanville's schedule. As a result, the new Rotex mineral separator was built in record time and incorporated many new made-to-order features from Rotex's 'voice of the customer' campaign.


Specifically designed to meet the screening requirements of mineral applications, the Rotex minerals separator provides screening performance even when sharp separations and high efficiencies are required. The elliptical-linear motion separator provides screening performance to handle coarse to fine separations from ¼" to 100 mesh (6.3mm to 150µm). This is accomplished through equal feed distribution to all screen decks, uniform bed depth across the entire screen surface, and aggressive blinding control using durable mesh cleaning balls. Its multiple stacked deck provides high capacity in a small footprint and new screen access permits a single screen change in minutes. The external drive is now accessible and has been redesigned with fewer moving parts for less maintenance. Furthermore, the elliptical-linear motion provides for good screening performance. The Rotex minerals separator enhances recoveries at material temperatures up to 205°C.

"The Rotex minerals separator delivers high

performance in a design that is easy to maintain," said Daniels. "That's a great combination for any production facility."

### Good timing

Of course, the measure of a true champion is coming up with the goods. "We had explored other equipment and advanced to the point of selecting another supplier and were just short of issuing a purchase order number," said Daniels. "But a delay on our end and a final push forward on Rotex's end made the final outcome on this project a win for both of us."

After successfully testing a Rotex Beta model in its facility, PotashCorp of Rocanville ordered a fleet of new Rotex mineral separators for its operation. In doing so, they increased their production capacity from 40% granular to a plant that could product 60% granular at 23% higher throughput, and still conserve floor space. "The Rotex minerals separator has performed above our expectations," said Daniels. "And Rotex has continued to stand behind and support their product in a way that not only enhances our business, but says that we are an important customer." 

Above: PotashCorp of Rocanville, which is located in Saskatchewan, Canada, is the largest single producer of agricultural fertilizer.

Below: After successful beta testing, PotashCorp of Rocanville ordered a fleet of new Rotex Mineral Separators

