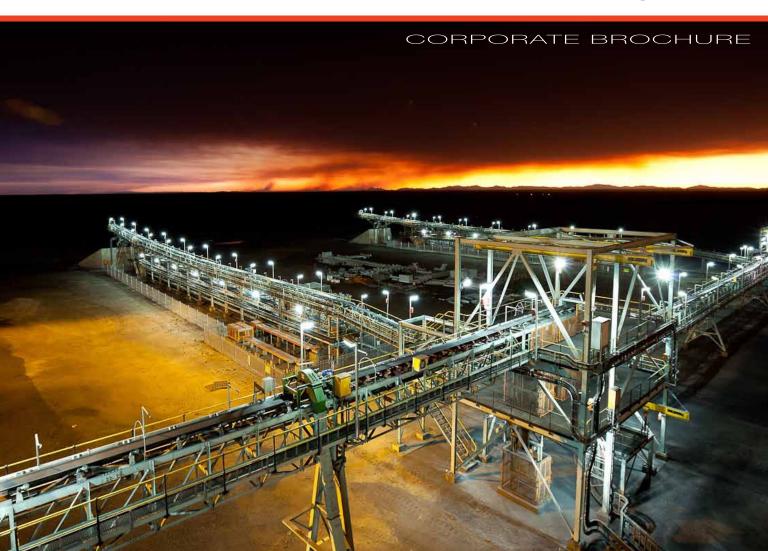


# ASSIMANG MANGANESE LIMITED

www.assmang.co.za







With a new beneficiation plant coming online, Assmang Manganese is preparing to double its production and become one of the biggest manganese mines in Africa, as Jane McCallion reports



ormed in 1935 and listed on the Johannesburg Stock exchange the following year, Assmang Manganese Limited specialises in the mining of manganese, iron ores and chrome. The company, which is owned jointly by African Rainbow Minerals Limited and Assore Limited, operates mines in the Kalahari manganese field in the Northern Cape province.

Assmang's Black Rock Mine operation is a large, underground operation consisting of three shafts and producing between three and four million tonnes of manganese per year. Eighty per cent of its production volume is destined for the export market, including China, Japan, India, Europe and others. The remaining 20 per cent is sold to the local South African market. The company also has its own ferromanganese smelters, located at Cato Ridge and Machadodorp.

The company has recently brought online a new beneficiation plant, which is capable of producing 900 tonnes of manganese ore per hour, making it one of the largest in Africa. It runs on a continuous, 24-hour basis, with 100 employees working at the plant in rotating four-hour shifts to oversee both maintenance and operations. "This is a state-of-the-art plant and we are able to carry out all of the processes necessary to prepare the ore for smelting, including crushing, washing and sorting by size," explains Sechaba Letaba, Assmang Manganese's senior general manager.

Construction began on the project in 2007 after a competitive bidding process, which saw TWP and DRA being awarded contracts for the



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### Assmang Manganese Limited

project. "The decision to invest in this new plant was driven principally by increased demand in the global market for manganese," says Letaba.

Perhaps unusually for a construction project, the total building cost of the beneficiation plant at Nchwaning was 20 per cent less than had been budgeted for. "In some ways we were fortunate with the timing of the recession, as it brought down the cost of steel and copper," says Letaba. "This was supported by excellent project management on the part of TWP and DRA as well as the mine team."

Prior to processing, the ore is stored in four

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purpose-built silos, each with a capacity of 2,000 tonnes. "While the beneficiation plant is on the same site as the Nchwaning mine, these silos act as a fail-safe mechanism," explains Letaba. "Should something go wrong underground and we are unable to bring the ore to the surface, we do not have to shut down the plant as we still have 8,000 tonnes to work with."

The new plant is fully automated and is connected via fibre optic cable to a control room four kilometres away at the mine offices in Black Rock. "We use two different software packages in the control room in order to manage the plant.

The first is ArchestrA Technology by Wonderware, which is a comprehensive automation and information software architecture. The second, also produced by Wonderware, is SCADA HMI, which works in conjunction with ArchestrA to give us complete remote access to our plant," says Letaba.

Assmang Manganese is currently running a continuous improvement project at the beneficiation plant, focusing on power and water consumption. "One of the main challenges we face in the Northern Cape Kalahari is the lack of available water," explains Letaba. "We do not



have it in abundance, so we need to look after each and every drop."

To achieve this, the company has implemented a water conservation strategy, which recycles the water used in the beneficiation process. "After the washing of the ore, you get a sludge run-off of water and slime. We recapture this run-off and separate the two, putting the water back into the plant to be used again. Additionally, all our water storage facilities are covered so that we do not lose any through evaporation."

Assmang had, for a long time, been one of only two key manganese producers in the Northern Cape Kalahari region. However, there has recently been an increasing number of new companies entering the market. The arrival of these new competitors presents a two-fold problem, Letaba says. "At Assmang, we pride ourselves on being the only high-grade producers of manganese in

South Africa and our market is slightly different to what these new players are targeting. So the problem for us is not that we are competing with them for customers, but that we are now competing for infrastructure.

"All mines use the existing railway network to transport their ore from the mine sites to their customers, and in the Northern Cape Kalahari region we are already pretty much running at capacity—however in the past we only had to share with one other company. Now, we have to share with the new entrants to the area and it has made transportation more difficult."

Not only are the companies now competing for logistical resources, they are also competing for human resources. "A lack of available skills is not a unique challenge to us, but one that affects the whole mining industry. But now, we find ourselves in a position where there are even more

# for the decision to invest in this new plant was driven principally by increased demand in the global market for manganese 33

companies trying to attract the same people, so that is a challenge too."

Assmang Manganese's plans for growth do not stop with the new plant. By 2018, the company is hoping to have doubled its current output to six million tonnes per annum if the project gets approval. "We run a very efficient and productive operation here and we have a positive workforce. We also maintain a very safe environment and recently won the Northern Cape Mine Managers Association's Safety Award, which we are very

proud of," says Letaba.

"These things provide a solid base for the growth of our business and we are building on that currently, carrying out feasibility studies for other possible projects in order to meet our goal of doubling production over the next seven years. With all these factors in our favour including our experience and expertise as a manganese producer, I am confident that we will continue to build on our past successes," he concludes. www.assmang.co.za

