

Finlay machines give Fraser Alexander the edge on manganese mine

A company, that by its own admission has built a name for itself providing outsourced services and related infrastructure to move, manage and add value to minerals, waste and water, believes having the right tool for the job is imperative in getting it right the first time.

And this is especially important where that company enters a field that is relatively new to its portfolio of services.

Fraser Alexander was founded in 1912 by brothers Fred and Fraser Alexander and provided tailings disposal services to the fledgling mining industry in South Africa. In 2006, the company became a wholly owned subsidiary of Royal Bafokeng Holdings (Pty) Ltd, the investment arm of the Royal Bafokeng Nation.

Theo Wilcocks is the Technical Manager for the Bulk Mech Division of Fraser Alexander and he tells us more. "Over the years we at the Bulk Mech Division have made our mark in bulk material handling and crushing and screening, especially in the mining industry," he says. "In 2009, we first entered the crushing and handling of manganese ore, which was a new field for us and we were intent on equipping ourselves with the correct equipment for this daunting task."

Manganese ore is by its very nature a heavy and abrasive mineral, creating a black dust that cannot be suppressed by merely wetting it as it then produces an oily slick on its surface. The manganese ore at Fraser Alexander's present operation in the far-flung Northern Cape is no different and while this new mine's infrastructure and plant is being developed, the Bulk Mech Division is tasked with crushing, screening and stockpiling the ore using mobile equipment which is fed from run-of-mine (ROM) stockpiles.

"When we first entered this challenging and competitive field, we bought Finlay Screens and Crushers and in a relatively short five years learnt that this was one of the machines that served our purpose best," Wilcocks says. "At this current manganese project, we're employing no less than three Finlay 694 Screens to process manganese ore for our clients and these machines were bought specifically for this purpose due to their proven production rates and reliability."

The ore is first fed through a jaw crusher, then a scalper before it arrives at the Finlay Screens for screening into lumpy, chips or fines sizes. Lumpy ore measures between 76mm and 20mm, chips between 20mm and 10mm and fines smaller than 10mm. Lumpy and chips ore is exported by rail to dedicated harbours such as Port Elizabeth with fines trucked out to the local market.

Piet Fouche, Fraser Alexander's Bulk Mech Senior Site Manager on the manganese mining site, has been very impressed with the three Finlay 694 Screens' production. "While we acknowledge that these machines are still new, having done only 1 500 and 750 hours respectively, their high mechanical availability allows us to easily exceed our production targets which augers well for us as a contractor on this young mine," he says. "Using the three Finlay 694 Screens, we easily produce 100 000 tonnes of marketable ore, across the three grades, in a month.

"We currently make up the primary production line of the mine but once the mine's static plant becomes functional, we will become the secondary production process, but there should always be work for us," he adds. "The fact that these machines are mobile is a big plus factor for us as we constantly have to move around as the ROM stocks fluctuate."



Fraser Alexander's three Finlay 694 Screens were acquired with standard warranties and, due to the very abrasive nature of the manganese ore, wear-plates were retrofitted. The machines are generally in production for 18 hours in a 24-hour cycle and fuel consumption stays constant at 15 litres per hour.

"It is evident that Finlay, with their many years' experience in this field, has got the design of these Screens absolutely right and this makes our job so much easier in

a challenging environment," Piet continues. "What also works well for us is the fact that with Bell Equipment now being the distributor of Finlay Crushers and Screens, maintenance can tie in with that of our fleet of Bell Wheeled Loaders and Articulated Dump Trucks on this site."

Fraser Alexander now own a total of seven Finlay machines made up of five mobile Screens and one Jaw and one Cone Crusher respectively.



From left: Jan Neethling (Fraser Alexander sub-agent) and Piet Fouche (Fraser Alexander Bulk Mech Senior Site Manager).