

BACKGROUND

In order to handle greater pit tonnage, accommodate the larger Caterpillar 777 range of trucks being used in the pit and reduce double handling of ore, a new larger crusher installation was required. The existing dry SAG mill feed needed to be more consistent in size and the feed rate throughput improved.

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SCOPE OF WORK

MAED set about redesigning the entire plant feed system, in order to accommodate the increased requirements of the mine.

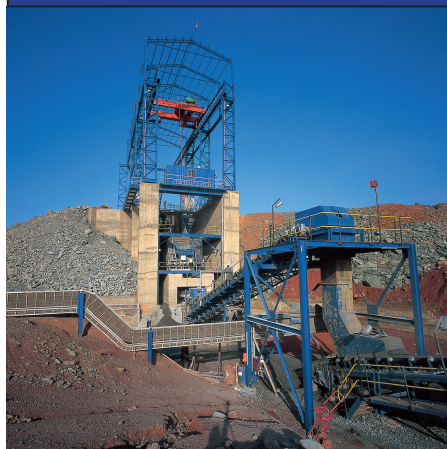
The new crusher that was installed, is an eighty-four by sixty-six inch single toggle Allis Jaw Crusher. The Crusher weighs 170 tonnes with a 300 kW motor and is fed by a 2.5m x 5.5m apron feeder that feeds the crusher at a rate of up to 1 000 tonnes per hour.

The civil foundations for the crusher required nearly 7 000 tonnes of concrete to complete.



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to feed the mills at 200 tonnes per hour, per stockpile. The positioning of the four feeders within the tunnel allows the mill operator to vary the size of feed, since larger rocks are at the front and the fines at the rear.

The PLC system controlling the feeders can automatically vary the feed from each stockpile, as the mill requires, in order to optimise performance.

INCREASED THROUGHPUT

The mill throughput increased by around 25% upon completion of this installation, while mill downtime was reduced by 8%, resulting in significant improvements to the total throughput. These stockpiles further significantly reduce mill downtime if any mining problems are encountered.

The installation of the entire system was completed in twelve months at a cost of \$ 4.4 million US.

STOCKPILE

The ore, which is crushed from - 1200mm to 80% - 250mm is fed onto a series of 1200mm wide conveyors where it is transferred to one of two mill feed stockpiles. The stockpiles have an individual capacity of 40 000 tonnes apiece.

Each of the stockpiles contain a submerged discharge tunnel that contain four heavy duty vibrating feeders. The feeders withdraw material from the stockpiles

