

CASE STUDY

IMPROVED AGGREGATE PARTICLE SHAPE

H-E PARTS INTERNATIONAL (H-E PARTS) IS A MARKET LEADER IN THE SUPPLY OF A FULL RANGE OF CRUSHING EQUIPMENT INCLUDING OUR VERY OWN RANGE OF AUSPACTOR™ VERTICAL SHAFT IMPACT (VSI) CRUSHERS TO THE MINERALS PROCESSING INDUSTRIES WORLDWIDE.

In a NSW aggregate quarry, the customer used a portion of the materials produced for their concrete production business, thus requiring precise particle shape to meet exact concrete compressive strength specifications. The quarry crushing plant consisted of a jaw and cone crusher; a configuration that may not always produce the desired particle shape.

After careful analysis of the particle shape requirements and plant output tonnage (approx. 60 mtph) being too low for the efficient running of a larger machine, H-E Parts recommended the Auspactor™ VS75RR vertical shaft impact crusher. The Auspactor™ vertical shaft impact crushers have lower operating costs than competing machines and are renowned for improving aggregate particle shape. Being the smallest of the Auspactor™ range; the Auspactor™ VS75RR suited the customer's requirements perfectly.

A VS75RR machine fitted with a variable speed drive (VSD) was installed to single pass crush -22 +3.15mm product from the cone crusher. The VSD allowed fine tuning of the Auspactor™ rotor speed to achieve improved particle shape whilst turning the weaker particles into sand. An immediate improvement in aggregate shape was observed and subsequent concrete batch testing showed a significant improvement in compressive strength due to the improved aggregate quality, opening the opportunity for cost savings for the customer.

Since installing the Auspactor™ VS75RR the following benefits have been achieved:

- Greatly improved aggregate particle shape.
- Greatly improved aggregate particle strength.
- Concrete plant cost savings were a result of the production of superior strength aggregate material.

LOCATION	New South Wales (NSW), Australia
APPLICATION	Quarry - Aggregates
PRODUCT	Auspactor™ VS75RR VSI



Product shape before Auspactor™



Product shape after Auspactor™