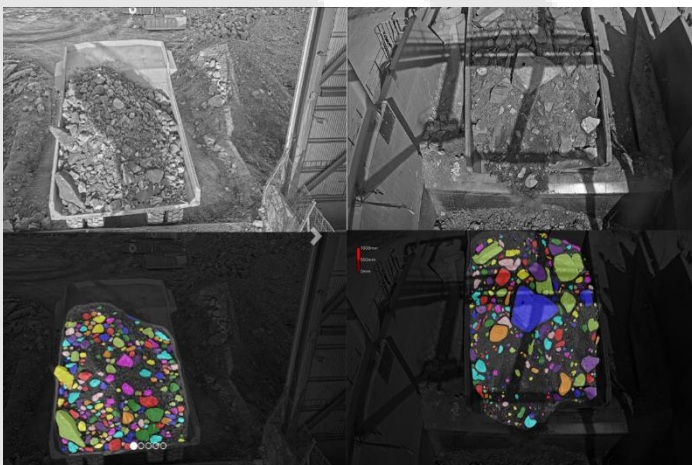## Stone Three Conveyor Particle Size Analyser

Stone Three introduces its latest deep learning based Particle Size Analyser (PSA), offering improved accuracy. The Stone Three PSA system is a reliable and robust machine vision-based system used to measure the size distribution of bulk material such as mineral ore on a conveyor belt. The Stone Three PSA makes use of the latest industrial high-resolution laser and camera technology for superior accuracy and robustness. Benefits include real-time and continuous measurements that enables process performance monitoring and is ideal for use in Advanced Process Control Systems for process stabilization and optimization. The laser based system also provides volumetric flow measurements with auto-calibration functionality.

Stone Three Belt Health

Managing your key assets is always vital to keeping costs down on site, particularly when it comes to conveyor belts. Belt failures can be costly, dangerous, disruptive and even fatal – but thankfully, can also be prevented. A machine vision system, the Stone Three Belt Condition Monitoring Solution will identify surface defects on your conveyor belts, such as cuts, tears and edge deformations, while detecting splice deterioration and belt drift at the same time. The system provides real time alerts to stop the conveyor if damages beyond set limits are detected. This enables you to limit damage and downtime to a minimum.

Stone Three Truck Particle Size Analyser

Stone Three's deep learning PSA models are particularly usefull on haul trucks. The deep learning techniques are robust against shadows and sunlight on the imaging area. The ore region is automatically detected and areas containing fines are quantified and included in the PSD analysis for improved accuracy. The system uses multiple images during the tipping sequence to construct a representative PSD measurement. The system is ideal for fragmentation monitoring to provide feedback to blasting operations and crushing optimisation.

The deep learning methods provides unsurpassed large rock detection performance to protect your crusher against blockages and damage.
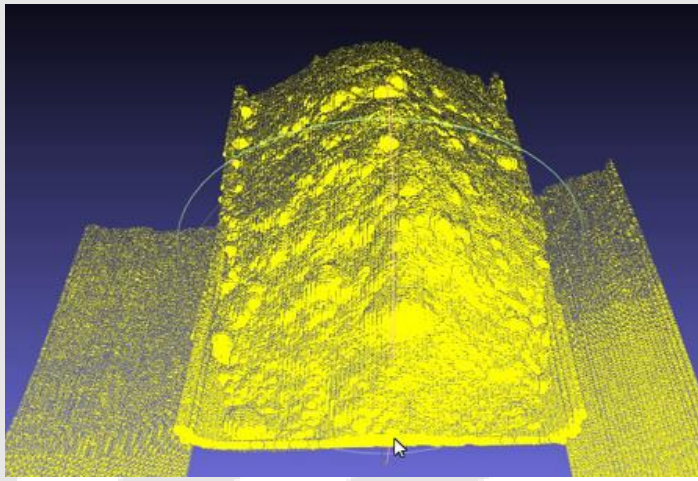
Stone Three Truck Volumetric Analyser

Overloading and underloading can present certain challenges to the haul trucks carrying materials between pit and plant – challenges that the Stone Three Truck Payload Volumetric Measurement Solution has been specifically designed to offset. With this machine vision system in place, each and every truck will be monitored and accounted for, with overloading or underloading alerts sent to you in real time, allowing you to manage any potentially dangerous or costly issues before they escalate. The benefits incude higher productivity, more visibility, and more control of your fleet utalization.

Stone Three Froth Sensor

Through automated imaging and analysis of individual flotation cell performance metrics, the intelligent froth sensor system delivers improved recovery and more consistent operation within the flotation circuit. The industrially proven software calculates a robust froth velocity measurement by analysing multiple regions in the image. A laser based top of froth height measurement allows for tracking the height of froth overflowing into the launder and makes it easy to spot cells which are not producing. Our cutting edge deep learning powered bubble size metric is robust against environmental lighting changes and allows reliable measurement across all bubble sizes. Colour and bubble stability metrics allows for further optimisation of the flotation process.
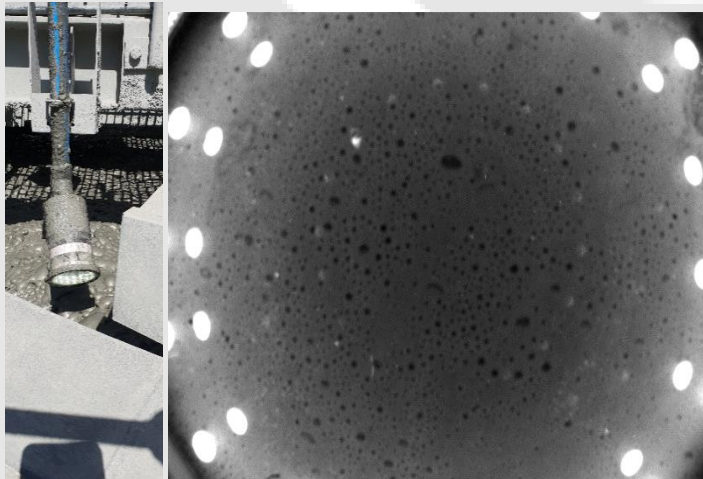
Stone Three Pulp Sensor

This world first in-situ machine vision based sensor provides on-line measurement of Bubble size, Bubble rise velocity and Gas-holdup. This opens a new realm in process monitoring and control of individual floatation units for optimisation of reagent dosage and cell operation. The unique camera and lighting setup provides high quality in-situ images and it utilises high frame rate cameras to track bubbles. It has a wear resistant housing to withstand years of operation inside the cell with minimalistic maintenance required to keep it fully operational and reliable. Simple on-site installation allows these systems to be commissioned remotely.

Support Services

Stone Three places significant emphasis on timely, consistent and accurate technical support and has developed reliable and cost-effective systems to achieve this objective. Stone Three supplies a comprehensive technical support plan as part of their value adding services. Technical support includes remote support and routine site inspections. Weekly reports are sent to the client detailing system uptime, OPC health and PSD performance indicators. Stone Three continuously monitors system health for sensor issues with communication, camera or lighting equipment. Server health monitoring includes disk space, CPU usage, Memory usage, and OPC connection health monitoring.