

NEW BLUE CUBE MQa AT-LINE MINERAL QUANTIFIER

Blue Cube Systems (Pty) Ltd, a South African technology company based in Stellenbosch, Western Cape, has added an additional model to their range of mineral quantifiers, designed specifically to fulfil the need for spot applications requiring fast turn around times in a harsh plant environment. The new model, branded as the Blue Cube MQa At-line Mineral Quantifier, is based on the proven technology of the Blue Cube MQi In-line Mineral Quantifier. In an effort to keep the operating mode user friendly, two versions of the MQa At-line is available. In respect of the embedded software, spectrometer and data processor components, both versions use exactly the same technology as the MQi in-line models. The only difference is the way in which the sample is presented to the optical scanning probe and a graphical user interface (GUI) to provide a suitable operator interface. The output data is displayed on the GUI and can also be channelled directly to the client's SCADA or data base.

The MQa At-line Dry Pour Through quantifier model is suitable for dry, free flowing ores. A bulk sample (typically around 1 – 4 kg) is decanted straight into a funnel above the optical scanner. The sample will pour through the scanner over a period, varying from a number of seconds up to a few minutes, depending on the quantity. The analytical result is available within a few seconds. In a typical dry mineral separation plant, no sample preparation or sample splitting is normally required.

The MQa At-line Universal quantifier model is suitable for both dry and wet filter cake samples. The sample of typically about 120g is loaded in a layer of a few millimetres on a turntable where the optical scanner will survey the exposed upper surface of the sample. The scan head is custom designed for each application and a sample size of 50g or even less can be accommodated.

The MQi In-line technology has been successfully tested on many different types of ore and has found application in the heavy minerals industries of South Africa and Australia, platinum and phosphates. Tests have been positively concluded on chromite, silica and furnace slags. Blue Cube Systems has a high degree of confidence that the MQi technology can provide fast and reliable information towards the control and optimisation of most mineral separation plants. Particularly during commissioning and start-up, the MQi technology can assist tremendously towards the rapid stabilisation and tuning of a separation plant.

Calibration of the MQi can be achieved by the scanning of samples with known

composition. The determination of the composition of the reference samples can be done by any method acceptable to the client. Blue Cube Systems can provide a grain counting service in this respect.

Blue Cube Systems has developed a dedicated data transfer link to facilitate communication with every MQi unit in the field, whereby software updates and calibrations can be implemented directly from Stellenbosch.

Three Blue Cube MQa At-line mineral quantifiers have already been shipped and is being used in applications in heavy mineral separation, wet magnetic separation of furnace slags and flotation of base minerals.

The MQi technology has been developed by Blue Cube Systems in their Stellenbosch facilities, and is protected by world-wide patents.

Blue Cube MQa At-line Universal

