

Handheld Laser Scanner

THE ZEB1 handheld laser mapping system is being used to map excavations at a historic gold mine in South Africa. Mining has been taking place at Barberton Mines, in the Mpumalanga province, since 1884 during which time mine managers have employed a range of surveying techniques and technologies. The latest innovation in surveying is allowing for three-dimensional (3D) measurement of mined-out excavations at depths of up to 1 450 m. The ZEB1, purchased from 3D Laser Mapping, is exceeding all expectations in terms of accuracy, productivity and performance. Prior to the introduction of CAD in the early 90s, Barberton Mine conducted the majority of stope survey work through offsetting with a 2D tabular deposit method. This did not highlight features, such as folding, branching, thickening or thinning of mineralisation. Following the introduction of CAD in 1994, measurements were made using a hanging compass and clinometer. This method was far more accurate and enabled the production of 3D models but was, however, very time consuming. The Barberton Mine is located 10 km north-east of the gold rush town of Barberton, in the Mpumalanga province, 260 km to the east of Johannesburg. The lode gold deposit is hosted in a volcanic and sedimentary sequence of the 3.5-billion-year-old Barberton Super Group. The extreme age and complex structural history of the orebody have resulted in a wide spectrum of lode shapes and dimensions. Various mining methods are employed due to variations in the deposit from the mine entrance level to depths of 1 450 m, but the majority of tons mined are by semi-mechanised cut and fill.

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Compact Equipment



COMPACT in design, high in performance and economical to operate Wacker Neuson skid steer loaders, compact excavators, all-wheel steer loaders, telescopic-boom all-wheel steer loaders and telescopic handlers meet South Africa's wide diversity of agricultural applications head on. "In fact, no farm should be without one," says Wacker Neuson Africa regional president Eugene Brown. Like any other industry, farmers are also faced with ever increasing costs. Farm sustainability and profitability depend on finding ways to reduce operational and input costs. "And this is where the real strength of our compact equipment lies. Simply put, the machines deliver what farmers want – maximum productivity with minimum input costs. In other words, a unit that performs reliably and efficiently, is easy to use, needs little maintenance and is inexpensive to operate," notes Brown. Quality is incorporated throughout the precision-engineered compact, rugged design, which encompasses all the features necessary to deliver essential benefits. Together with a selection of attachments, the machines deliver compact solutions for virtually any agricultural application, from stacking bales and bush clearing, to loading trucks and drilling holes for fencing, and have proven to be more than a match for local agricultural conditions. Wacker Neuson compact equipment offers the right balance between high performance and low-cost operation wrapped up in

a compact and rugged design. Economy is not only achieved through the machine's performance, but is present in the whole package to deliver a cost-effective agricultural solution that enables farmers to reap all the benefits associated with lowest overall total cost of ownership.

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Construction Equipment

THE Bobcat skid-steer loader delivers on all fronts – high performance, compact design, versatility and low-operating costs, making it an indispensable machine on the farm. The Bobcat skid-steer is the last word in versatility. Thanks to the compact design, the skid-steer can operate in confined spaces that cannot be accessed by larger machines such as tractors. The range of over 200 attachments further augments the skid-steer's versatility. Avocado and macadamia farmers constantly require technical knowledge. The growers' organisations South African Avocado Growers' Association and South African Macadamia Growers' Association – over-arched by Subtrop – assist farmers with solving technical queries through study groups, information days and training courses. Bobcat is also proud to be part of the Levubu Valley Avocado and Macadamia Study Groups in Limpopo. The Bobcat skid-steer is in its element on Macadamia farms, where the smaller, entry level S530 is effectively used to auger holes to plant trees and fencing as well as to trench lines to lay water pipes and electricity.

The bigger machines, ranging from the S650 to the S850 and the T870, are ideal for applications, such as loading of trucks, mulching, pruning as well as road maintenance and dam building. The unique features of the

new Bobcat M 500 series has improved overall comfort as well as increased visibility, therefore enhancing the work environment for the operator, thus improving productivity.

With Bobcat's in-house training facility to offer professional training to ensure optimal operator skills completes the tasks at hand.

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Portable Aluminium Cranes



ERNEST Electro Engineering has launched the quick-mounting aluminium gantry crane. One operator can mount the gantry crane in only five minutes.

These cranes can be used for industry and building, sanitation and air conditioning works and also by drilling and sawing companies and local city and county companies.

The crane assists with moving and lifting of heavy loads, repair and maintenance on pumps, loading trucks and trailers and it can be used in workshops.

The side frame comes in different sizes and it can handle a capacity of 1 500 kg.

The gantry crane has many accessories including the under carriage which is used for quick mounting. It also has a transport carriage, which assists in reaching sites that cannot be reached by vehicle.

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Flood Detection

IN an important development for the solid/liquid separation industry,

Tenova Delkor has developed and patented a novel belt linear screen (BLS) flood detection device.

The device detects when a waste (trash) removal screen is overloaded, then sends a signal for corrective action to be taken.

As flooding of screens is a common problem, the device has the potential to significantly improve productivity on a variety of processing operations. Besides many other applications, Tenova Delkor Belt Linear Screens are typically applied in gold mines' carbon-in-pulp circuits.

The screens have two purposes: immediately after the mill, to discharge cyclone overflow for the removal of waste (trash) and oversize prior to a leach or flotation circuit and, for carbon safety at the back end of the leach circuit.

In gold mines, the Delkor BLS flood detection device is particularly beneficial for waste (trash) screen duty after milling, but it can also be used for any oversize duty, for example, the removal of shell or fibres from dredged mineral or silica sand.

When it detects overloading of the screen, the device sends a signal through the control system to the screen's drive motor.

Upon receiving the signal, the drive motor speeds up the belt linear screen's cloth speed so as to provide increased open area to the slurry flow, thereby mitigating flood events. Delkor BLS flood detection is also invaluable in applications where it is common for mills to discharge cyclones to rope, that is, to operate in an upset manner, sending coarse material to the belt linear screens.

The BLS flood detection device informs the operation that it is roping and assists as a control measure to react to this upset operating condition.

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