

ESAB to showcase modern new range at EMA

African Fusion talks to Chris Eibl, Keith Saunders and Jannie Bronkhorst about ESAB's latest welding and cutting solutions, which will be on show at the 2022 Electra Mining Africa (EMA) exhibition in September.

Having returned from the 2022 Nampo exhibition in Bothaville, which received some 15 000 to 17 000 visitors every day for the five days of the show, Keith Saunders says ESAB was one of the few welding exhibitors at South Africa's leading agricultural Expo this year.

"We showcased our Rebel Multi-Process inverters range, the ESAB Caddy AC/DC TIG welding machines; and the Handy Plasma 45i. We were selling equipment and PPE straight off the stand, including our Sentinel A50 self-darkening helmets and welding gloves, for example, and we are now following up on enquiries for the bigger machines that attracted interest," Saunders tells *African Fusion*. "We were so pleased with the Nampo event that we immediately booked the same spot for next year," he adds.

Attention is now turning to Electra Mining Africa (EMA), though, which is taking place from September 5 at the Nasrec Exhibition Centre in Johannesburg. "As well as key equipment and consumable offerings, a key feature of our ESAB stand at Electra Mining this year will be our state-of-the-art digital and WeldCloud solutions," says MD, Chris Eibl.

The total weld cloud solution is now encapsulated under the ESAB Digital banner, continues Jannie Bronkhorst. "ESAB Digital embraces four different aspects:

recording data with precision and accuracy; monitoring operations, from everywhere; calibrating welding machines according to international standards; and collecting the digital data needed to manage welding documentation," he notes.

Four individual but interconnected solutions are available:

1. Procedure Qualification Records (PQR)
2. Welding Machines Calibration
3. Productivity & Fleet Management
4. Online Documentation

The PQR solution is built into a multi-purpose recording and data capture device called WeldScanner, manufactured by HKS Prozesstechnik in Germany. WeldScanner can be used directly as an oscilloscope to identify the root cause of welding errors; or as a data logger that uses external sensors to record welding parameters such as: voltage, current, arc time, heat input, weld length and gas flow.

An interactive touch screen is used to highlight and display the measured welding parameters, while built in analysis functions enable curves to be generated for easy interrogation. The data can also be conveniently exported using a USB stick for long term further analysis or storage.

Functional features of WeldScanner include:

- A rugged construction to withstand use in rough welding conditions.

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- Easy to operate and simple to connect to any welding power source.
- A wide variety of sensors can be selected to suit the application.
- Easy installation, which can be done by any welder within five minutes.

Solution 2, the machine calibration aspect is achieved using an add-on WeldScanner Validator package. In addition to all of the WeldScanner features, this also enables any brand of welding machine to be validated and/or calibrated in accordance with DIN EN IEC 60974-14. Validator generates precise measurements for welding voltage, welding current and other parameters. It can then generate calibration certificates valid for one year for each welding machine tested.

Three different packages are available, a BASIC version for SMAW, GMAW, FCAW and GTAW processes; an SAW version; and a full capability version for machines that use any of these fusion welding processes. WeldScanner Validator packages come with a load resistor along with an optional trolley.

Solutions 3 and 4: Productivity and Fleet Management; and Online Documentation, respectively, are both WeldCloud-based solutions that require a WeldCloud Universal, Mobile or Inbuilt communication module to connect the welding machine to ESAB's web-based WeldCloud platform.

The welding data collected by these modules is uploaded to WeldCloud for processing using custom developed packages tailored for managing welding processes and equipment.

- WeldCloud Productivity, which calculates and presents welding productivity results in terms of metrics such as arc time. These can then be trended, benchmarked and compared across different shifts, welding machines, workshops



guaranteed to be compliant to customer requirements and construction codes. Notes can also be used to maintain full traceability of every weld performed, which is now a common requirement for fabrication facilities operating according to ISO 3834 quality requirements for fusion welding.

"At Electra Mining, we aim to have HKS WeldScanner and Validator units running, which will enable us to do simulation welds and showcase the whole of ESAB Digital's solutions' suite, including WeldCloud Productivity, Fleet and Documentation applications," notes Bronkhorst.

The Fabrication journey

Having just released the ESAB Fabricator series into the Middle East and Africa, the air cooled and water cooled Fabrication options for this welding package will also be a key feature of ESAB's EMA stand this year. ESAB Aristo 500 iX pulsed machines, along with Robust feed wire feeders will be launched, along with ESAB Tweco Spray Master welding torches, which make an ideal welding package for high productivity and high quality welding.

Also new in the ESAB stable is the Pak 200i heavy duty plasma machine for handheld- and off-cutting use. This Victor Thermal Dynamics machine has a 70 mm cut capability on mild steel and, at full power, the unit can deliver cutting speeds of up to 254 mm/min on 50 mm mild steel plate – at a 100% duty cycle.

Dual Gas Capability ensures superior quality and performance on ferrous and non-ferrous materials, while energy ef-

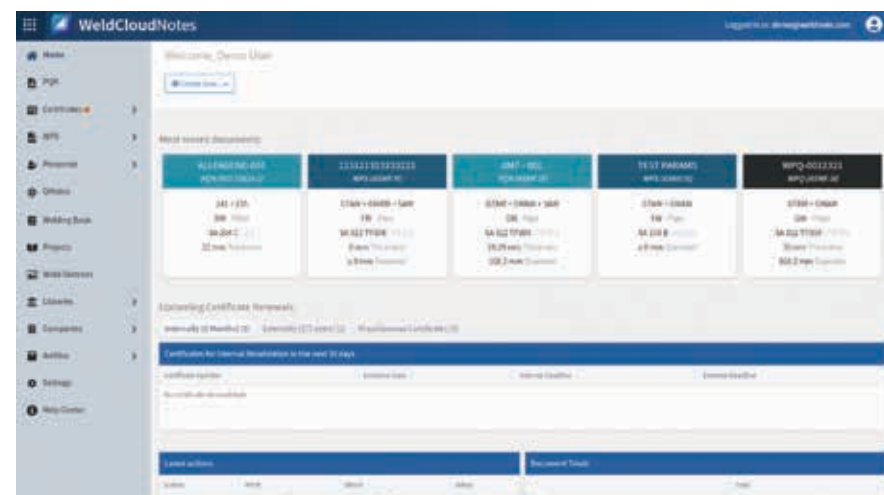
ficient inverter technology reduces the running costs. The Pak 200i also offers a gouging removal rate of 11.3 kg of mild steel per hour and comes with a two-year machine warranty and a one year torch warranty.

On the flatbed cutting side, Eagle CS technology will be highlighted. Offering a cutting area of 1 500 by 3 000 mm, this plasma and oxy-fuel cutting system offers compact, economical and precise CNC cutting at travel speeds of up to 6.0 m/min, while cut thicknesses of between 3.0 and 20.0 mm can be accommodated.

ESAB South Africa will also be promoting the recently acquired GCE-range of gas control equipment at EMA this year. "As well as its industrial range of oxy-fuel cutting equipment, GCE is a global leader in healthcare. We will be holding a morning launch of the GCE oxygen concentrator series, which are lightweight and ergonomically designed to make life simpler for patients that require long term oxygen therapy (LTOT)," continues Saunders. These devices, which enrich and purify the oxygen in the air, typically supply flow rates of up to 5.0 l/min of oxygen at 93% purity. They come with an integrated oxygen sensing device for monitoring oxygen purity levels and a low oxygen purity alarm.

ESAB can be found at Electra Mining Africa in Hall 6 stand B13 from September 5. "I think we have a really good story to tell about our equipment and we look forward to meeting you at our stand," concludes ESAB SA's Chris Eibl.

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Online documentation is achieved using WeldCloud Notes, which uses data collected from each welding machine to automatically generate and record PQRs; WPSs; and WPQs.

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