

Industry keeps tooling up to propel productivity

Economic uncertainty associated with the combination of a high Australian dollar, steep input costs and impending new taxes didn't dampen the faith of many in the steel industry during 2011 to invest in new capability. *Steel Australia* editor ALAN MARSHALL spoke with a number of ASI members to take stock of those tooling up.

It seems the high Aussie dollar was a 'glass half-full' for some like steel fabricator, Universal Steel Constructions in Sydney's western suburbs which recently bought a new HSFBD Peddinghaus plate line.



(L to R) Universal Steel Constructions proprietor, **Gian Callegaro** with **Robby Clark** from Peddinghaus Australian distributor, Headland Machinery.

"With the weak US dollar it was an opportune time to look at American made machinery," said Universal Steel proprietor **Gian Callegaro**.

"We needed a new machine due to the extra capacity required in the factory and also higher quality control and faster turnaround times. And we wanted to move away from the more labour-intensive processes to more automation to increase our profitability.

"Previously we used to outsource the processing of the plates and now we can produce in-house and improve our profitability. We can now look at doing work for other fabrication shops so that's an avenue we haven't be able to pursue in the past.

"The new machine drills holes, not flame cut them. We have had the machine for two months now and we are producing holes in five seconds compared to five minutes so it's only a matter time before we start seeing this make a real positive impact on the business.

"It also allows us to optimise the way we do things, and we can do the same process now in half the time. I feel the new machine will be able to pay for itself within two years."

There's been plenty of new machinery upgrades in the big West too apart from the massive investments in new industrial facilities by major local fabricators, Civmec and AllType Engineering covered by this publication over the past year.

For instance, All-Go Engineering located in the Rockingham-Kwinana industrial area of Perth recently invested around \$2.8 million in new machinery as well as costs in fitting out a new facility.

In the past 12 months, the company has built a new factory to complement its existing one installing a new vertical lathe, a CNC lathe and a CNC bridge mill that has a 1.4 metre by two metre capacity.

The new vertical lathe enables the company to enter a new market, and it expects the other machines and new building to increase capacity by at least 25 percent.

"The vertical lathe has a four-metre diameter capability which gives us the biggest capacity south of the river," said All-Go's Managing Director, **Phil Vergone**.

Medium-sized Western Australian fabricator Metrolintels recently upgraded the mains power feed to its number two workshop that has enabled the company to install a new beam line and profile cutting machines and give greater capacity to produce more structural steel tonnage.

"These purchases have been made to get us into a better position to secure more work and long-term contracts with the industrial mining sector," said Metrolintels Business Development Manager, **Chris Uchtman**.

Maximising the productive potential from a given workshop floor space was a key motivation for Advanced Steel Fabrications in South Australia in bringing on board Daito's latest CNC Robotic Plasma Coping Machine, Model CR11-7030.

The firm is now able to cut virtually any product and profile on the one robotic unit that can move to virtually any position and plasma cut all types of structural steel.





Ben George from the supplier, Industrial Machinery Sales (IMS) said that as an 'all in one' standalone fabrication solution, the unit has a very small footprint replacing the larger and longer traditional drilling and sawing lines to do all of the same functions as well as being able to do complex processes such as slotting, notching, bevel cutting, weld preparations, layout marking, extreme mitre cutting, beam splitting and custom haunches. He said that no adjustment or modification is required to cut different profiles enabling unhindered production.

Advanced Steel Fabrications also invested in two automatic CNC punch and shear lines from RGS Technology and having these two CNC lines enables simultaneous capability for both flat bars and angles to maximise productivity.

"Throughout the past year we have seen continued investment and high levels of interest in automated equipment from both small and large fabricators," said Mr George. "Everyone seems aware of the benefits that CNC machinery offer to their production and entire operation."

Another substantial ASI member fabricator in South Australia, Manuele Engineers recently moved to a larger purpose-built facility with a greater degree of advanced automation.

As part of the upgrade, Manuele procured one of the highest specification machine tools for structural steel on the market, Daito's High Output Carbide Drilling and Sawing Beam Line with capacity up to 1300mm from supply partner IMS to cater for high output demands on their steel processing.

Another key acquisition by Manuele has been a Maruhide HID-900MTSc 7-Axis CNC Pipe Profile Cutting Machine capable of handling pipe up to 900mm in order to achieve a much shorter cycle time on structural pipe applications. For example, in a typical pipe job, the time it takes to prepare pipes has dropped by up to 80 percent and its connections have perfect weld preparations without the need to use a manual grinder. It can also cut round pipe and square tube with the same machine.

A new business attached to Manuele Engineers, Truecoat Industrial Coatings has invested in a Kaltenbach Triathlon construction shot blasting machine from ProTUBE capable of processing welded constructions up to 3100mm wide by 1600mm high and plates up to 3000mm wide. The machine allows Truecoat to completely shot blast steel fabricated beams, sections and plates.

Across in Victoria, newly established ASI member, Independent Tube Mills (ITM) recently invested in a 'greenfields' installation to help propel its business focused on replacing imported structural steel tube by operating an efficient tube manufacturing plant locally.

Supplier ProTUBE together with its affiliates provided all of ITM's major equipment such as the tube mill itself from OTO Mills which consists of an entry line, forming mill, sizing and cut-off which utilises the latest welding and preheating technology from EFD Norway, a finishing line from Mair Research and other equipment like inline painting, strip edge preparation, NDT testing, bead chopping and tube drying after painting.

The mill is capable of producing tubes 33mm to 127mm in diameter with wall thickness from 1.5mm to 6.3 mm and at a production rate up to 120 metres a minute. The company's turnkey system's production capability is in the region of 50,000 tonnes per annum depending on the product mix, most of which is import replacement.



"As more and more sophisticated processing equipment is being installed our customers are finding good service and advice with regards to equipment and layout increasingly important as crucial for any capital investment to get the process and logistics right in order to remain competitive," said ProTUBE Asia Managing Director, **Robert Resch**.

"Specialised exhibitions like the International Partners in Steel organised by Kaltenbach in Germany prove to be very useful and we find the number of attendees from Australia is increasing at these events."

Manuele also installed Konecranes' high performance CXT overhead cranes in its new plant with advanced inverter control technology for enhanced safety.

Steel distribution centres too have been busy gearing up with more reliable, safer lifting gear to speed logistics and curb unscheduled downtimes.

OneSteel Steel and Tube's facility in Queensland's Mackay recently installed a new Truninger purpose-designed magnetic lifting and handling system for its tubular products and merchant bar.

The new TM magnet system was specifically designed in close conjunction with OneSteel to improve the handling of tubular bundles with inherently high levels of air-gap – larger dimensioned bundles of hollow sections with thin walls.

The new magnets are also fitted with sliding 'finger poles' which allow for easier picking of much smaller quantities and provide higher levels of operator safety during unloading/picking/loading operations as the operators do not need to get up onto trucks or into the storage racks. The unit also improves storage density as there is no need for separation timbers between bundles or access ways between storage racks.

The magnet system/crane was also fitted with a new HBC-radiomatic SPECTRUM A radio control where the magnet status indication system is replicated on the radio transmitter which makes it easier for operators to quickly check the status of the magnet system without

needing to look up at the crane. OneSteel currently has another two of these systems on order for other branches around the country.

Meanwhile, BlueScope Distribution in Cardiff NSW has introduced a new LRP1-DP Symeo anti-collision system between overhead cranes and semi-portal cranes.

Like many distribution businesses throughout Australia, the warehouse layout features multiple overhead cranes servicing storage locations and also a semi-portal crane running at 90 degrees at a lower level servicing product processing, namely a plate profile cutting bed. The arrangement allows processed plate parts to be removed from the cutting bed without the need to utilise one of the overhead cranes and the new anti-collision system prevents the cranes from clashing in dangerous locations.

Safety levels at the site are much enhanced and the risk of major crane collision damage and subsequent wasteful downtime has been eliminated.

The Southern Steel Group has been upgrading and expanding its plate handling and processing capabilities throughout the country with new magnetic systems. New systems have been installed at Southern Steel in NSW, SURDEX Steel in Victoria and Southern Steel in Western Australia complementing the systems installed in 2008 at Southern Queensland Steel.

The new plate magnets all feature the latest Truninger SmartPick™ control systems including remote download capability of the magnet systems' 'black box' recorder to allow for faster troubleshooting and assessment of the methods employed by Southern Steel's operators.

Incorrect or unsafe operations can be identified and therefore rectified as well as providing the operators with help in achieving the most efficient ways of handling product. The systems' vertical handling capability allows for a much increased storage density of plate, maximising the use of available floor space at the Southern Steel facilities whilst also keeping plates well sorted to ease identification and stocktaking. Plates can be loaded directly onto the processing beds from the vertical plane.



All the systems are capable of peeling off plate and pre-selection of the magnet force in order to speed-up picking operations and all the new magnet systems are controlled by HBC-radiomatic radio remote controls.

Southern Steel Group also recently installed a number of Konecranes systems and now operates over 100 cranes across its branch network.

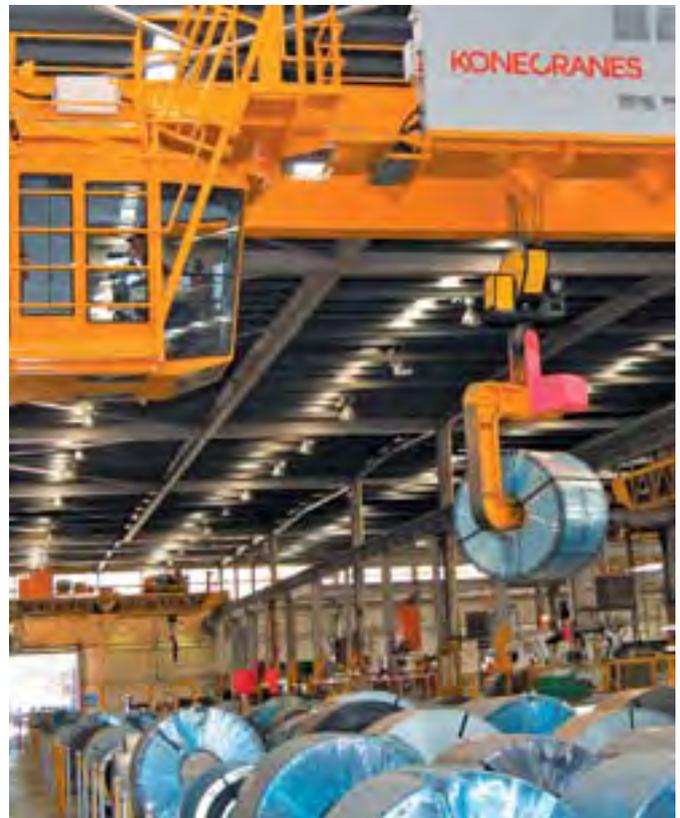
BlueScope in Wingfield, South Australia recently became the first company in Australia and one of the first in the world to install Konecranes' new SMARTON heavy-duty modular crane system built to maximise safety while minimising downtime.

Midalia Steel in Western Australia has incorporated similar technology.

"From a reliability perspective, heavy duty process cranes like BlueScope's new coil handling crane at Wingfield are equipped with remote condition monitoring where data is transferred through a 3G connection to a central data base," said Konecranes Australia and New Zealand Managing Director, **Brad Hyem**.

"Information such as runtime, emergency stops, load cycles and motor temperature are fed back to a database daily so reports can be generated and sent through to our customers to lift workplace safety and productivity."

Steel Australia is always interested in hearing about new technologies and facilities being adopted by its members that significantly increase capacity and capability. Telephone the Editor on 02 9931 6606 or Email alanm@steel.org.au.



On the Beam (continued from p8)

First steps toward 'fairer go'. The ASI welcomed initiatives announced at the Jobs Summit on 6 October to make major projects benefiting from taxpayer dollars more accountable for their procurement through the Australian Industry Participation Plan (AIPP) process. In particular, the ASI embraces Prime Minister, Julia Gillard's announcement about "making major federal grants of \$20 million or more, including grants to the States and Territories, contingent on maximising opportunities for Australian businesses". This is well in line with policy proposals the ASI has been advocating to the Government and Opposition for many months to help ensure that the nation gets a fairer return from major projects, and regards its acceptance by the unions and Australian Government as a positive signal and a major step in the right direction. "We are also encouraged that the AIPPs will be more transparent. This is all about making sure that project proponents are up front about exactly what level of Australian industry content is contained in their projects," said ASI National Manager – Industry Development, **Ian Cairns**. The ASI also welcomes moves to require project developments receiving the five percent tariff exemption on imports through the Enhanced Project By-law Scheme (EPBS) to publish more details on opportunities available to Australian businesses. "There clearly needs to be more detail and transparency injected into the EPBS process to help ensure entitlements under this scheme are justified and the Government has said that will happen," Mr Cairns said.

Defence buying provisions saluted. The ASI welcomed new procurement provisions announced on 10 November by the Australian Minister for Defence Materiel, **Hon Jason Clare MP** to make levels of commitment to local industry more transparent. The new provisions will make it mandatory for details of Australian Industry Capability Plans (AICPs) for all future Defence acquisition projects worth over \$20 million to be made public, currently applicable only to those valued over

\$50 million. "It is encouraging that following the Prime Minister recently acknowledging the local steel sector as an industry of strategic national importance that another arm of the Australian Government has further reinforced the spirit of reform in the national interest," ASI Chief Executive, **Don McDonald** said. "The Australian steel industry has a solid track record in supplying major Defence projects such as the current redevelopment of Lavarack Barracks in Townsville and the manufacture of Bushmaster armoured vehicles that have also found a receptive export market. It stands to reason that these key reforms should be followed by introducing a similar policy direction for managing Australia's non-renewable resources and infrastructure projects." The ASI has presented a proposal to both major political parties in Canberra centering on more accountable and transparent use of AIPPs for all major resource and infrastructure projects.

New BIM guide free online. NATSPEC released its free National BIM (Building Information Modelling) Guide on 30 September. The project stems from industry-wide collaboration and the support of the Built Environment Industry Innovation Council. BIM can provide a platform for integrated project delivery; improve sustainability outcomes through modelling; increase productivity through decreasing variations during construction; and provide a tool for facilities and asset management. NATSPEC will release its National BIM Management Plan in coming months. It is a not-for-profit organisation that aims to improve the quality of construction in Australia. The Guide aims to reduce confusion and wasted efforts and can also be used as a planning tool by consultants to clarify the services they propose to provide when preparing bids for projects. Whilst it is expected to remain constant for a number of years, the supplementary documents including the NATSPEC BIM Reference Schedule and NATSPEC BIM Object/Element Matrix can be updated as required to reflect the developing BIM industry and international developments and systems. The Guide along with reference documents on BIM are available at www.natspec.com.au by clicking on the 'NATSPEC BIM' logo.