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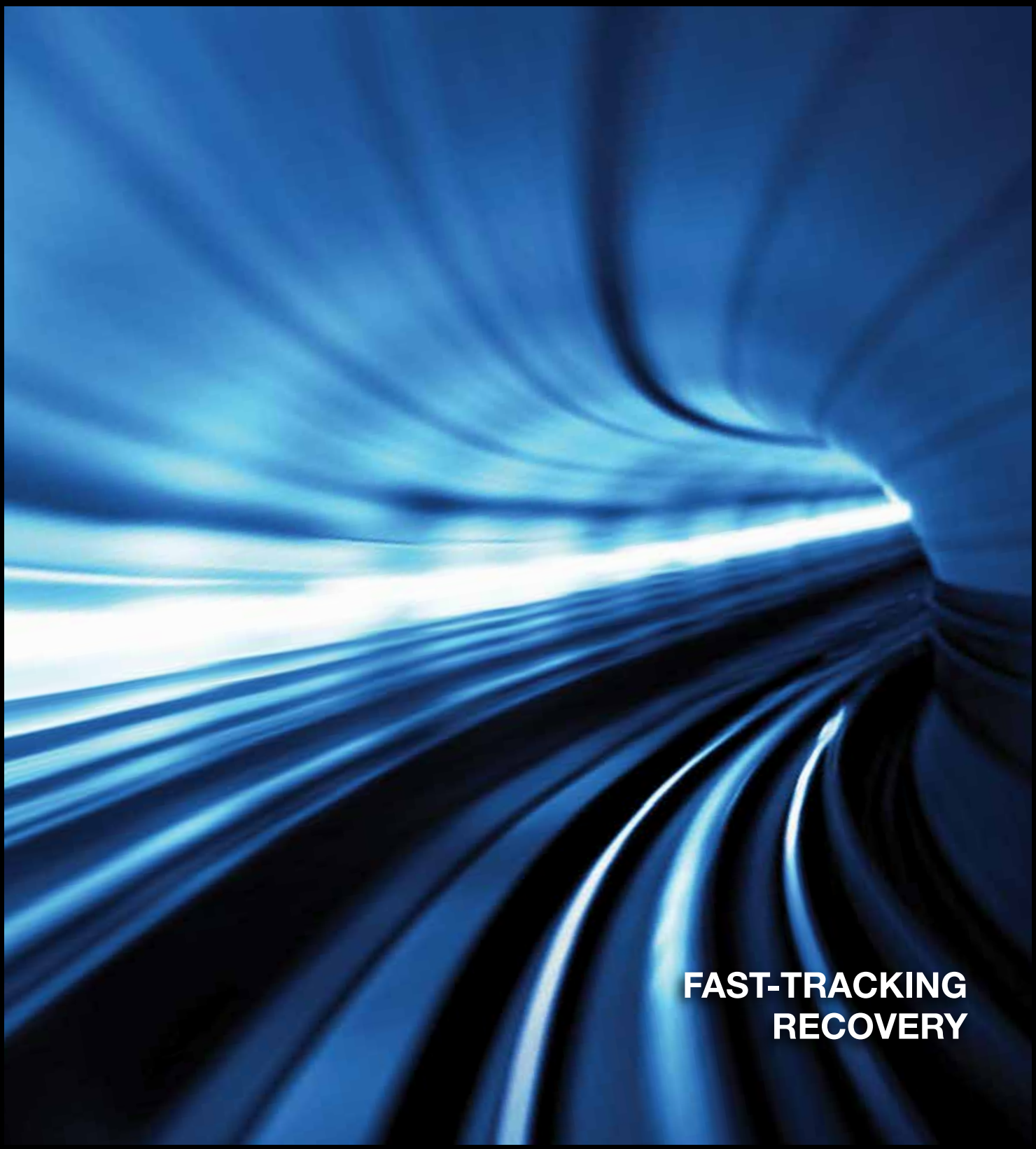

FAST-TRACKING RECOVERY

RAIL, SHIPPING & LOGISTICS

Special Feature: Business Management

State Spotlight: Queensland

QSP Engineering gears up for the future

With a vision for future demand, QSP Engineering recently moved premises from Loganholme to Bethania in the outer suburbs of Brisbane, and introduced new technology into its metal spraying business.

With the aim of retaining QSP's position as a key provider of metal spraying repairs for worn parts, Managing Director Neville Brokenshire looked to install the latest innovations in metal spraying technology, to ensure high-quality output and a more efficient, cost-effective process to integrate into its workshop services. Already utilising a fibre-coupled high-power diode laser by Laserline supplied by Raymax Applications for laser cladding with metal powder, Brokenshire sought advice from Dr Cédric Chaminade from Raymax in regard to improving output. A new coaxial nozzle was deemed the solution.

High processing speeds with specifically designed coaxial nozzles used with Laserline fibre-coupled diode lasers provide distinct advantages, including low exposure time, strong metallurgical bonds between the cladding layers and substrate, low warpage, and short, highly energy-efficient cladding times. By introducing a new laser cladding nozzle, QSP has effectively extended the current available advantages to its customer base.

A coaxial nozzle combines inert gas flows and metal powder with exceptional throughput capability. Additionally, protection glass monitoring extends the lifetime of consumables, while at the same time ensuring a reliable process. The new Coax11, developed by the Fraunhofer Institute for Material and Beam Technology, represents a flexible processing tool for cladding applications and guarantees a stable and controllable process as well as the highest precision in material deposition. High-power diode lasers from Laserline in Germany can provide cladding solutions with up to 20kW of laser power, and use wide track processing optics providing the highest powder deposition rates available.

Industries where components are constantly exposed to high stress become fatigued and worn, requiring replacement or repair. Today, high-throughput laser cladding, or metal deposition, is demonstrating not just the effectiveness of repair but the metallurgical connection between the additional layer and the basis material can actually extend the life of the original part. Repairs to large-sized drilling tools used in oil extraction, boring or mining, marine engine parts, or earthmoving equipment can all be effectively repaired using laser cladding.

In Australia, there is a growing market for laser coating of hydraulic cylinders from technical mining facilities such as coal extraction. Its new laser cladding equipment is a timely acquisition for QSP, as the economic downturn and limitations imposed on importing new component parts are changing industry behaviour and fuelling demand for local repairs. With trained and experienced staff and over 25 years in the industry, QSP stands to gain an edge over its competitors, geared up and ready to meet this increased local demand. **www.qspengineering.com.au www.raymax.com.au**

Global Manufacturing Group continues to invest in Mazak.

Global Manufacturing Group (GMG) has recently made significant investments in productivity, adding three new Mazak CNC machines to its already-impressive machine shop.

Established in 1982, GMG is a metal manufacturing and engineering company offering customers exceptional quality and service utilising the latest advances in technology. Located in Maryborough with a second facility in Gladstone, GMG employs 60 highly skilled staff servicing industries including mining, defence, construction, transport, rail, medical, marine/shipping, and oil & gas. GMG offers a complete turnkey solution using world-class equipment and Lean manufacturing principles.

The new Mazak machines are a VTC-530/20 vertical travelling column machining centre, a VCN 530C vertical machining centre, and a HCN-5000 twin-pallet horizontal machining centre. GMG Managing Director Richard Aylward cites increasing client demand as the driver for the investments, together with productivity increases brought by newer technology. "The latest Mazatrol Smooth conversational controllers have delivered a significant reduction in programming and set up time for us," he explains. "And together with the latest technology Mazak offers in their machines, this has given us significantly reduced in-process times."

The Mazak VTC-530/20 vertical machining centre features a fixed 2,300mm x 530mm table design and travelling column, providing exceptional versatility for mounting long workpieces as well as multiple parts along the table length. The VCN-530C vertical machining centre has a 1,300mm x 550mm table and performs heavy-duty machining of steel and high-speed machining of aluminium. The HCN-5000 horizontal machining centre, with 500mm x 500mm pallets and a BT50 spindle, is capable of heavy machining and high-speed operation. "We know Mazak machines very well so we didn't need to look any further than John Hart for advice in the purchasing process," Aylward adds. "Just a good deal and short lead time was what we needed, and John Hart delivered on all fronts. The training with each new purchase was a big benefit. Most of our operators are already well across Mazatrol, so our young apprentices were able to get some really high-level one-on-one training, which advanced them significantly."

The Mazak machines continue to perform under high workloads, so GMG benefits from John Hart's service and support.

"The fact John Hart is committed to providing support for our much older Mazak machines means we would be reluctant to look elsewhere," says Aylward. "I think the back-up service is 80% of your decision. John Hart responds very rapidly to our needs, and this reliability is a big part of why we like to continue with Mazak machines." **www.johnhart.com.au www.gmqld.com.au**

Two of the new Mazaks at GMG: the HCN-5000 twin-pallet horizontal machining centre (left) and the VTC-530/20 vertical travelling column machining centre (right).