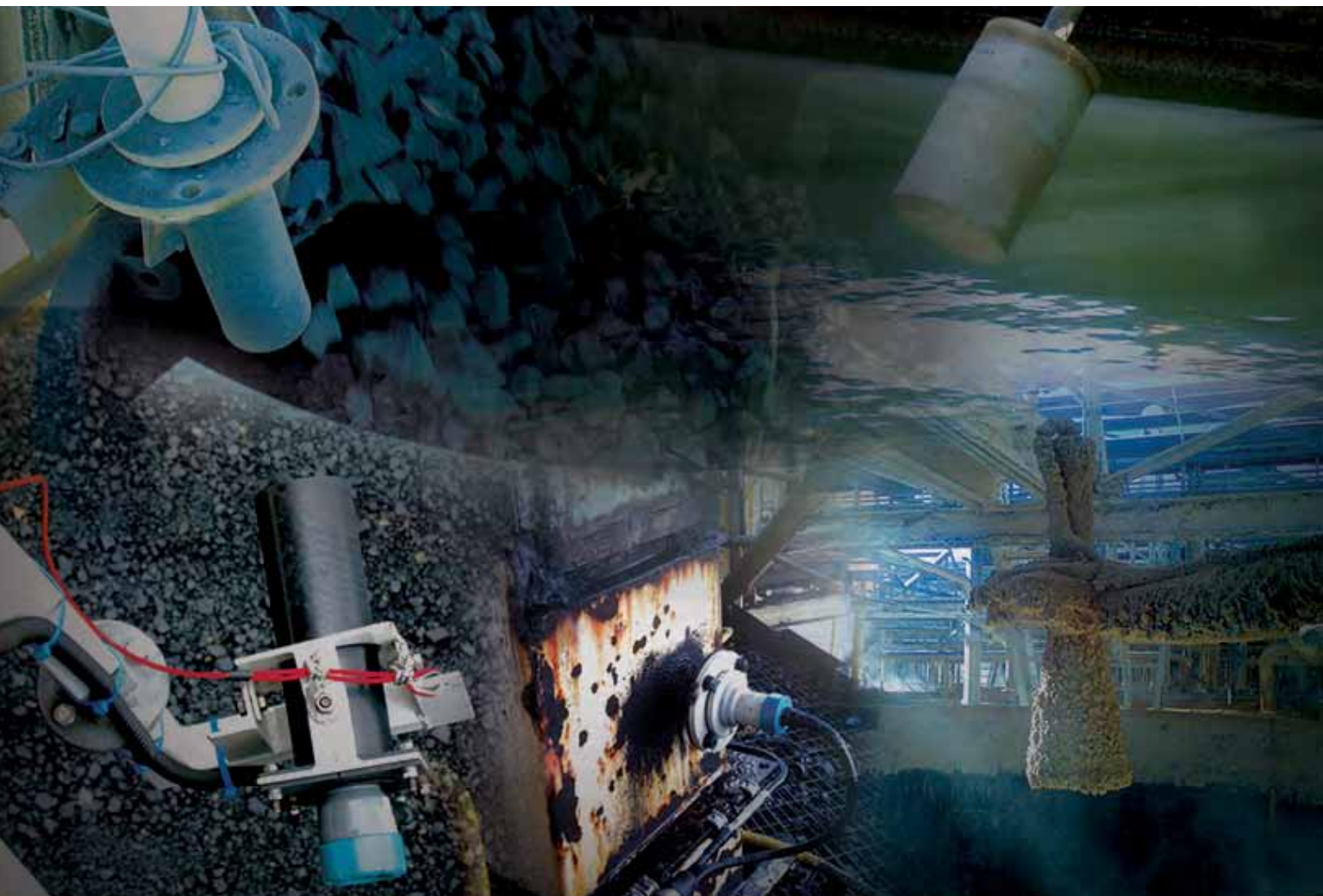




Hawk Measurement Systems (HAWK)

HAWK'S EYE VIEW





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Hawk Measurement Systems (HAWK) is regarded as a world leader in the design, manufacture and provision of level, positioning and flow measurement systems, with exports to over 30 countries across a range of industries, including mining, water, food, power stations and cement

It's not random chance that puts mining at the head of the list of industries – and it's a long list – that HAWK serves. HAWK is an Australian company, founded in 1988 with a focus on serving that country's resources sector with locally designed and produced products. Over the years the company has expanded into different geographic areas, mainly into countries with a mining presence, working through a network of specialised distributors. Today, with the export demand for level measurement growing because of the global mining boom and water crisis, HAWK is forging into emerging markets including China, India and South America.

And HAWK has a growing presence in the North American market. Jack Evans, formerly President and CEO of German competitor Krohne's USA subsidiary, founded his own company near Boston Massachusetts exclusively to distribute HAWK products to the North American market, something he did so effectively that two years ago HAWK's CEO Les Richards bought the company. Evans is still CEO of that operation, combining the job with that of director of global operations for HAWK from the company's headquarters in Melbourne.

He puts the company's success down to the level of support it gives its customers. "For me that is the critical thing. Of course HAWK is the global leader in having exceptional and

"For me support is the critical thing ... Hawk is the global leader in having exceptional and innovative products but that alone wouldn't be a sufficient basis for growth"



Process control
solutions for mining

"Mining companies can't run a lean operation without the best measurement"

innovative products but that wouldn't be a basis for growth on its own. I say that from experience. In the USA distribution of product is effected by hiring the right independent manufacturers and organisations and training them to be able to support the customers. Throughout my career I have helped customers grow by supporting them at every stage and that philosophy is the foundation for HAWK's growth today too."

The greater part of HAWK's sales are still in Australia, but over the years it has expanded into many other markets, initially by striking agreements with specialist mining distributors but also working directly with the major extraction and processing concerns. HAWK lists Rio Tinto, BHP Billiton, Xstrata, Outotec and FLSmidth Minerals among its impressive line-up of international customers. "Mining companies can't run a lean operation without the best measurement. They are competing with other companies and the ones that are the most efficient at getting the ore out of the ground, processing it and selling it are the ones that are doing well. We help them do that," he asserts. And since the technology has applications in a host of other industries, notably chemical process and the oil & gas sector but including cement, pulp & paper, and food, the company has expanded its research focus to develop custom solutions for them. Right now, says Evans, HAWK is exploring exciting opportunities in the growing water and wastewater industries.

It is also expanding its geographical footprint, and about six years ago entered



Microwave blocked chute protection

the China market by setting up a joint venture sales company, the Chongqing HAWK Chuan Yi Instrument Co. Ltd. HAWK's forward strategy is definitely to continue to lead with its products for mining, which include advanced monitoring systems for thickeners, slurry tanks, tailings dams and many more applications. At the same time it will ensure continuity during mining's periodic slowdowns by developing product for other sectors. "Our research teams are currently very busy developing new products for our oil & gas (O&G) customers. One of those is using fibre optic for pipeline monitoring, which is able to give us more information from a single sensor," he reveals. The technology uses 'smart sensors' distributed across the network. These are able to identify anomalies in pressure, temperature and sound and send that information, together with the precise location and size of any leak to the control room in real time. The system is robust and reliable enough to be used in the harshest environment, and combines external and internal monitoring. The sound element is particularly interesting in places where pipeline security is an issue, as it can detect anyone digging, or even walking near the pipe. The product is being tested now and its launch is eagerly anticipated. "This is a crossover product that will be valuable in the water and wastewater market, where it is particularly useful in older infrastructures," he says.

Crossover is a feature of many HAWK innovations. Flow of materials is after all a universal matter. The company's new generation of microwave products is a case in point - devices used among other things for blocked chute detection and analysis in

"The New Generation Gladiator Microwave products have proved very effective in eliminating false trips"



Ship loader positioning and protection

mines. It is, he explains, a circular polarised device which eliminates the problem of false tripping. "Whatever the mineral, if there is moisture present it can block the chute and you have to shut down the operation. But false tripping happens when the device says it is a blocked chute but it really is not. It still means they have to shut the conveyor down and then start it back up again. The New Generation Gladiator Microwave products have proved very effective in eliminating these false trips." He is not exaggerating: in Australia downtime is typically costing the industry \$500,000 per hour. A recent installation of HAWK blocked chute switches saved Cadia Mining over \$2.8 million in a single year, according to the client's own figures. This is a classic answer to a real world application challenge, he adds. Our example may be from

Did you know?

25%
Of revenues devoted to R&D

\$500,000
Estimated hourly cost of downtime to Australian mining.

mining but the same microwave product is used for shiploading and also for collision detection and prevention.

Water management is a big problem in mining, one to which HAWK has addressed its attention over the years. The water and wastewater sector is a market in which HAWK has not been a big player, but its issues are not much different, Jack Evans emphasises. "Our products lend themselves very nicely to measuring difficult level applications. We have a product that can measure even when there is foam present, or dust or vapours, and in difficult sewage applications like turbulence. We have hundreds of level devices installed in the City of New York for measuring water levels underground and to determine where the flow of all their waste water is going and



Bed level and chemical dosing control for thickeners



Jack Evans
Director of global operations

Jack currently lives in Melbourne Australia with his family. Jack has been involved with the process controls industry for over 25 years and recently served as Chairman of the Measurement, Control & Automation Association. Prior to HAWK, Jack was President, CEO of KROHNE, Inc. in Peabody, MA and National Sales Manager for Milltronics in Arlington, TX. Previous to his tenure with Milltronics, he spent seven years with Micro Motion in various positions. He holds a Bachelor's Degree in Industrial Engineering Technology from Georgia Southern University in Statesboro, Georgia, United States.

“We have been lucky in getting very talented and qualified people who believe in where the company is going”

send the information back to their control room so they can open and close valves and gates as they need to.”

HAWK spends an impressive 25 percent of its annual revenues on research & development, mostly targeted at new product development to solve customers' application issues. Last year the company launched its new Sultan Sonar for flocculent (the stuff that binds together the sludge particles) interface or sludge bed-level measurement for the water and wastewater industry, where it fits an important niche. In the mining and power industries, HAWK's ORCA industrial bed level controller is recognised for providing robust and dependable bed level measurements in punishing environments. Sultan Sonar is built on this same proven technology. Now the research teams are developing guided wave radar technology, which gives a very precise continuous reading, is energy efficient, and can operate in difficult situations where other approaches like through-air radar. “This is an exciting growth product for us, and one which is being developed not just for flow and level applications but also for interface. One of the big problems in O&G is oil & water interface in the crude, and we are close to having a product developed to be able to measure that crude level both from the top down and from the bottom up.

Lots of things differentiate HAWK as a company. One might select the ability of all of its instrumentation to be accessed remotely from anywhere in the world via the cellular



Ship loader collision detection

networks. That's of increasing importance as mining companies and others move towards total automation - led by Rio Tinto which already has remotely controlled conveyors, and even trucks. However asked what the most important differentiator is Jack Evans, with hardly a pause for thought, settles on its human capital. “We have been lucky in getting very talented and qualified people who believe in where the company is going, and if we can get the right people we can do almost anything!”. **BE**

HAWK MEASUREMENT SYSTEMS (HAWK)

+61 (0)3 9873 4750
 info@hawk.com.au
 @HawkMeasurement
 www.hawk.com.au
 www.hawkmeasure.com



Hawk Measurement Systems (HAWK)

☎ +61 (0)3 9873 4750

✉ info@hawk.com.au

🐦 @HawkMeasurement

www.hawk.com.au

www.hawkmeasure.com

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