

MINING AND METALLURGICAL TECHNOLOGY

DBT's innovative, compact loader

DBT's innovative Compact Loader is designed and manufactured by DBT in Australia and was launched at AIMEX this month. The machine has unique features not found in any other product in the underground coal market, DBT reports, particularly in the area of the cab and controls.

It has been engineered to access low seam operations that have proven difficult to access with current equipment. A width of 1,995 mm gives stability for a variety of operations. The machine cover height of 1,350 mm gives enhanced visibility for the operator during low seam operations. Standard features include an enclosed operator's cab and the opportunity for the customer to select alternative operator's cabs if required. The Compact Loader reflects a small roadway presence and sets the bar in design and capability in the sub-10-t market.

Modularity was a key design criterion to ensure great flexibility. The cab, for example, can be left- or right-mounted, depending on the operator's requirements. The cab height can be selected: The standard height is 1,850 mm, with the ability to reposition it 100 mm higher (for superior visibility) or 200 mm lower (for operation in low seams). Driver visibility has been increased to within 10 m of the rear for the 1,850 mm cab height. A hydraulic height

adjustment option will be available later, allowing the operator cab to be raised and lowered for various seam heights, greater ground clearance and enhanced visibility.

The engine pod is of modular, bolt-on design, allowing a range of engine and exhaust configurations – including 107 kW 4-cylinder and 132 kW 6-cylinder engines with wet scrubber (particulate filter) or optional dry scrubber systems. The hydraulic tank and fuel tanks are separate from the frame, located within a pod-mounting system allowing optional mounting positions and capacities.

The Compact Loader employs a new steer joint arrangement allows articulation of 45° with up to 80° of oscillation. The attachment unit of the machine uses parallel lift technology for optimum control of the attachments or a 'Z' link rapid dump system can be selected. The lift plate has the capability to pick-up both RAS and QDS type attachments. The range of dedicated RAS attachments includes buckets, side shift forks, jib cranes and work platforms. Optional attachments are; fuel, lubrication and maintenance pod systems, concrete kibble, general purpose trailers, pipe trailers and belt/cable reelers.

Operation is simplified by a fully electronic dashboard and control stick steering. This is a unique feature within the DBT product range and is the first machine designed and manufactured by DBT Australia not to use a

steering wheel. The control stick is a DBT design and is fully flameproof. Control and use of attachment and implement control is fully electronically operated from the operators cab.

In China, DBT is now delivering Vers-A-Trac® shield haulers to Shenhua Wanli. Four VT650s were being shipped to the company during April and June and Shenhua Shendong ordered a further six, with shipments completed during July and September. The first Vers-A-Trac VT650 shield movers to be delivered to a customer in China, they will work along side two VT-630s and eight VT-636s previously purchased by Shenhua.

The VT650 is the latest addition to DBT's range of ultra-heavy-duty Vers-A-Trac battery-powered shield haulers. It offers 45.4 t of lift and tilts 1.6 m from the fork face, a capacity unparalleled by any other shield hauler on the market. www.dbt.de

Metso aftersales for Codelco

Metso Minerals has signed a contract with Codelco for on-site service and parts supply at Andina Division's process plant, northeast of Santiago, Chile. The value of the service contract over five years totals approximately €13 million.

Metso's service team of over 100 employees will service Andina's process plant, which processes copper ore from two local mines. The service contract includes plant maintenance

services for Metso and third-party equipment, process optimization services, wear parts replacement on crushers and grinding mills, parts supply, service tools, vehicles and labour.

www.metsominerals.com

Small beginnings in India

A 46 t/h South African-made vertical shaft impact crusher is making its contribution to the mining of iron ore in highly-industrialized India. The first sales of Pilot Crushtec equipment, a Pilot Modular DD2412 double deck screen and a Twister VS-AC06 static vertical shaft impact (VSI) crusher, into India represent a breakthrough. Export Sales Manager, Paul Chappel, said the Twister VS-AC06 VSI crusher is the smallest model in the static range of the popular Twister and mobile TwisterTrac series that are now in operation not only in African states but also in Europe and Australia.

"We commissioned the Twister VSI crusher at an open pit iron ore mine near Goa where it is being used to crush ore down to minus 2-mm to liberate iron ore from the host material," said Chappel. "We believe that the machine will have quite a ripple effect in sales of our equipment in India. We expect more sales, possibly even of larger Twister VSI machines, to that mine and to other iron ore mining operations in the area."

The VS-AC06 sold complete, ready to run and mounted on a skid-frame, typically takes less than four hours to setup and commission and is easily relocatable.

www.pilotcrushtec.co.za

Additive enhancement for gear oils

Fifty years after the introduction of its anti-wear additive ALMASOL®, Lubrication Engineers (LE) launches its latest additive for the enhancement of LE gear oils. Offering even more superior protection than ALMASOL, the company claims, DUOLECT™ has a 'dual action' that also shares the



Robust turbo coupling increases production

There is a new member of Voith's TPKL family of fill controlled turbo couplings: The new, alignment free version (TPKL-T) is Voith Turbo's response to demand from users who want an alignment free drive solution. Since the market introduction in 1998, the Voith TPKL series of couplings have a proven history of performance and reliability.

These turbo couplings are fed by an external oil supply system. The oil supply system is located near the drive assembly and uses several flexible hydraulic hoses for easy assembly and connection to the TPKL-T housing and oil cooler. This allows optimum placement of the oil supply system and associated electrical components. The result is good accessibility around the drive. The actual drive, made up of the motor, Voith TPKL-T turbo coupling and gearbox, is centrally supported using a standard torque-arm support below the drive. This means that not only the Voith turbo coupling, but the entire drive can easily be attached to and detached from the drive pulley on site.

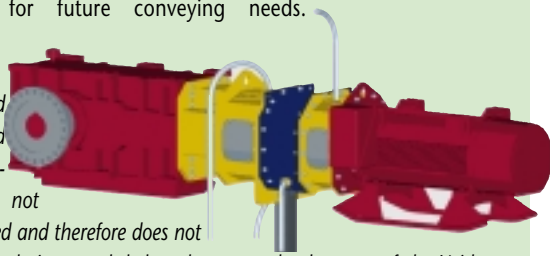
The first 12 drives with this new 'tunnel design' are being installed in a mine in South West Pennsylvania, USA, which produces in excess of 10 Mt of coal. A follow-up contract for a further 32 Voith TPKL-T turbo couplings has already been announced; the mine wants to use the tunnel design as standard on all new belt drives. Meanwhile, other mining companies have expressed interest in the benefits of the Voith TPKL-T turbo coupling and are considering this drive design for future conveying needs.

www.voith.com

Market demand for a fill controlled Voith turbo coupling that does not

have to be aligned and therefore does not

have to be regularly inspected, led to the recent development of the Voith type TPKL-T tunnel design turbo coupling: left to right: gearbox (red), tunnel housing (yellow), TPKL-T (blue), tunnel housing (yellow) and motor (red).



attributes of both LE's ALMASOL & MONOLEC® anti-wear additives. It is a temperature activated, dual acting, liquid additive that imparts special properties & synergies to the lubricants in which it is used. DUOLEC increases lubricant film strength and protects metal surfaces by outperforming at greater temperatures and loads. In a wear test according to ASTM protocol, DUOLEC was found to reduce wear by as much as 11% when it was the only additive incorporated into base oil – proving its outstanding performance without the interference of other ingredients.

"The performance of this new and unique additive is quite exceptional – even in comparison to our current proprietary additives. It really is a new dimension in lubricant additive technology and we are confident about the major positive impact it will have on the gear lubricant market", said Scott Schwindaman, President. www.le-inc.com

Industry specific metal detector

Eriez Magnetics' new Metalarm MA3600 uses pulse induction technology with balanced coil detection sensitivity and performance that delivers a high specification metal detector, which the manufacturer says is ideally suited for installation in mines. The development of the new MA3600 has been driven by the specific needs of customers and outperforms all existing pulse induction detection systems. The development programme centred on several key features.

Features listed by Eriez Magnetics were higher detection sensitivity; ease and efficiency of shipping; a self diagnostics and fault indicator; a hardware and software filtering algorithm giving enhanced noise immunity from plant equipment; and ease of mounting on walls or framework local to the metal detector.

www.eriezeurope.co.uk

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