

31. Weltleitmesse für Baumaschinen, Baustoffmaschinen,
Bergbaumaschinen, Baufahrzeuge und Baugeräte
11.–17. April 2016, Messe München

31st Edition of the World's Leading Trade Fair for Construction Machinery,
Building Material Machines, Mining Machines, Construction Vehicles and Construction Equipment
April 11–17, 2016, Messe München, Germany

www.bauma.de



No. 16/e
Munich, February 26, 2016
Press Release

bauma 2016

Trends in the mining sector - Part I

Since 2004, mining and tunneling have been an established and increasingly important part of bauma. The mining sector will present numerous innovations and developments at this year's world-leading trade fair for construction machinery, building material machines, mining machines, construction vehicles and construction equipment which will take place in Munich from April 11-17. The companies already unveiled a number of their trends at the bauma Media Dialog in Munich in January.

The new Certiq machine monitoring system from Atlas Copco Rock Drills AB is now the standard for the company's construction and mining machines. The Certiq system is based on telematics, i.e. wireless data transmission. It allows the owners and operators of above and below-ground drilling equipment for example to monitor the performance of their machines at any time and from any location. With the real-time data available, owners and operators can optimize their machines' equipment to ensure that they achieve maximum productivity and profitability. The Certiq software collects and records a huge amount of data while a machine is operating. These data are then shown on a special web portal in the form of easy-to-understand graphics. Users can easily log on to the portal with their unique login data in order to monitor an individual machine or an entire fleet. The system not only tells users how a machine is currently being used or was used in the past but also gives details of machine availability rates, maintenance requirements and much more. The system even produces performance reports automatically and sends them via e-mail to the owner or operator of the machine.

Bell Equipment has complemented its E series generation of articulated dump trucks with a total of four new models. With the current Bell B25E and B30E dump trucks, the new mid-range B35E and B40E models and the new B45E

Sabine Wagner
PR Manager
Tel. +49 89 949-21478
sabine.wagner@messe-muenchen.de

Messe München GmbH
Messegelände
81823 Munich
Germany
www.messe-muenchen.de



and B50E large dump trucks, Bell continues to focus on the "classic" categories and still offers the world's largest 6x6 program. The Bell B35E and B40E models are following the general market trend with considerably higher nominal loading capacities. Bell Equipment has made the step towards EU4/Tier4 final with new six cylinder engines from Mercedes-Benz optimized by MTU for off-road operations.

Trackman rubber caterpillar tracks from Continental AG help to ensure safe driving in the construction sector. They resemble closed drive belts with a tread profile on which heavy equipment and traction machines such as transporters or road building machines run. Thanks to the new Armorlug technology, the rubber caterpillar tracks offer even better performance and last longer. A number of layers of material embedded in the drive studs strengthen the material and thus increase its durability. The conveyor belt solutions for the efficient transport of goods are reliable, economical and environmentally friendly too.

Visitors to the trade fair will be able to find out about the latest product solutions in the area of inclined conveying, closed belt systems, heat-resistant conveyor belts, energy-optimized transport or lightweight PVC belts. Cummins Inc., Columbus, Indiana, USA, will present the next generation of ultra-clean engines which meet the EU's Stage V emissions regulations for construction machines and mining/materials handling equipment which are due to come into force in 2019. The engines which produce anything from 55 to 300 kW not only satisfy the "virtually zero emissions" requirement of the Stage V regulations but also offer an increase in power and torque of up to ten percent. The improvements in engine power for Stage V are achieved thanks to an innovative approach when it comes to combustion, airflow and fuel injection systems which allows Cummins to exploit the full potential of the four-cylinder QSF3.8 and QSB4.5 as well as the six-cylinder QSB6.7 and QSL9 – with no increase in cubic capacity.

Zetros is a range of HGVs from Daimler AG's Mercedes-Benz brand. They are primarily designed for heavy off-road use. With their conventional bonnet design, they offer very good off-road performance and are low in height. To allow easy maintenance, the engine is accessible without having to tip the

driver's cab. The Zetros has a long-bonnet design and is available exclusively with permanent all-wheel drive. Its standard wading depth is 800 mm, while 1,190 mm is optionally possible. The Zetros features an OM 926 LA six-cylinder diesel engine with a cubic capacity of 7.2 l and a power output of 240 kW. Engines with Euro3 and Euro5 emissions values are available. The drivetrain has permanent all-wheel drive as well as a transfer case with an off-road gear ratio of 1:1.69. The Zetros comes as standard with a nine-speed manual gearbox. However, it is also available with a fully automatic gearbox from Allison.

Construction machines, vehicles and equipment as well as mining machines are the principal applications for engines from Deutz AG. The manufacturer will unveil its newly developed TCD 2.2 diesel and gas engine as well as the established TCD 2.9 in a gas version. With up to 55 kW, the TCD 2.2 is a further option for materials handling and compact construction machine applications in particular. Unusually, the engine will be launched in both a diesel and a liquid gas (LPG or fuel gas) version. The gas version will produce 42 kW and is an innovation within Deutz's otherwise diesel-driven product range. The TCD 2.2 will go into production in 2019 to coincide with the EU Stage V emissions norm coming into force. All TCD 2.2 and 2.9 models use the same engine platform. This means numerous synergy effects for customers when it comes to integration, for example with regard to connections or the supply of spare parts.

With the LF-21H, GHH Fahrzeuge GmbH is launching a high-performance LHD with a 21 t loading capacity. The so-called Efficient Drive System (EDS) was optimized specially for mining applications. The environmentally friendly Deutz engine satisfies the highest EU Stage IV emissions norm, as a result of which the need for underground ventilation is minimized. In addition to the standard version, the LHD is available in various cab versions, thus allowing it to be used even in situations with a roadway height of just 2.5 m. A Z linkage designed for ore mining allows the very highest breakout forces and is designed for loading corresponding dump trucks.

The Hazemag Group develops and manufactures machines and other systems for the construction and mining industries. The products and systems are used to prepare and enhance raw materials in the construction industry and to travel underground routes in coal, salt, potash, ore, platinum and diamond mines for example. The Lehigh Cement Company (Heidelberg Cement Group) has ordered a semi-mobile limestone crusher from Hazemag for its Union Bridge site. The system will process up to 2,500 t of limestone per hour – with a feed size of up to 2,000 mm. The material is discharged from a 400 t feed hopper using an HAF 25160 apron feeder. The fines in the feed material are screened at 100 mm using an HRS 2638 roller screen.

Herrenknecht AG supplies tunneling machines with diameters of 0.10 to 19 m for all geologies worldwide. The company also supplies deep drilling rigs and drilling machines for vertical and inclined shafts. One innovation which is to be presented at bauma is a slant directional drilling (SDD) rig. Slant directional drilling is an alternative drilling technique which allows shallow, conventional or unconventional oil and gas deposits to be exploited. It is a symbiosis of horizontal (HDD) and vertical directional drilling (VDD). While the entry angle with HDD is between eight and 18 degrees, it is 90 degrees with respect to the earth's surface with VDD. Deposits at low depths for example can be reached quickly using an angle of 30 degrees, while the angle allows a horizontal deflection for further drilling.

Keestrack N.V. will present the new H4 caterpillar mobile cone crusher (35 to 50 t transport weight). At the heart of the model designed for high-quality secondary or tertiary production with a handling capacity of between 120 and 200 t/h is the proven cone crusher technology which was optimized specifically for mobile use. According to Keestrack, the innovative crusher control and monitoring solutions which have a direct influence over the output capacity and product quality are particularly groundbreaking. As the successor to the Galleon range, the Keestrack H4 has a completely new frame design which allows not only high-performance pre- and post-screening equipment but also the use of innovative drive technologies. As a result, the Keestrack H4 is the world's first mobile cone

crusher to offer a highly efficient three-deck post-screening module with an oversize material recycler for the production of three high-grade end products in one pass. Keestrack is offering a choice of two economical drive combinations: direct diesel drive of the crusher with electrical or electro-hydraulic peripherals (conveyors, screen units etc.) or the fully hybrid/"plug-in" version with an electrical crusher drive system powered by an on-board diesel generator or mains electricity.

With the Mobicone MCO 11 PRO mobile cone crusher, Kleemann GmbH, a Wirtgen Group company, is heralding the launch of its newly developed PRO Line. It offers quarry operators particularly robust machines for high-performance applications. The machine is driven by a powerful yet economical diesel-electric drive system which allows operation with an external power supply. The cone crusher with a maximum feed capacity of up to 470 t/h is equipped with the innovative Continuous Feed System (CFS) which ensures efficient use of crushing capacity. The MCO 11 PRO is also ideal for use in linked combinations of machines. In addition, the machine can be transported in one piece and can be quickly put into operational position thanks to hydraulic moving machine components.

Kögel Trailer GmbH & Co. KG will present the new Kögel Multi. This versatile trailer is particularly suitable for transporting building materials and for weather-resistant freight. The platform semi-trailer has a reinforced chassis and a semi-trailer load capacity of 15 t to meet the heavy-duty requirements in the construction industry. Depending on the application, the trailer's aluminum walls can be removed. This makes the Multi ideal for transporting various building materials.

In response to customers' requirements, Komatsu Mining developed the new PC7000. Komatsu designed the 677 t machine with a view to creating the safest and most efficient large hydraulic excavator in its class. The PC7000 is powered by two 1,250 kW diesel engines and is optionally available with an electric drive system. With its 36 m³ shovel or backhoe bucket, the PC7000 is designed for use in a range of conditions. The PC7000 is tailored to the 240 to 290 t 830E

and 860E dump trucks from Komatsu. Drivers will notice the machine's improved control system. After all, Komatsu has optimized both the shovel design and the hydraulic system. As a result, the machine can swing around more quickly and the shovel can penetrate the material more easily.

To coincide with bauma, Liebherr-International Deutschland GmbH will launch the Liebherr PR 776, the first infinitely variable hydrostatically powered crawler tractor in the 70-ton category. Designed for the most demanding mining and quarrying applications, it is powered by a Liebherr twelve-cylinder diesel engine with a maximum power of 565 kW. It has a maximum operating weight of 74 t and can be equipped with blades with a capacity of 18 m³ (semi-U blade) or 22 m³ (U blade). Thanks to its modern drive concept, the new PR 776 crawler tractor is extremely economical. The infinitely variable hydrostatic drive system which is used in all Liebherr crawler tractors is an innovation in this class of machines. Another advantage of the modern drive concept is the needs-based feed pressure supply. If, for example, the full feed pressure supply is not required during operation, this is automatically returned.

Part II of the trends in the mining sector will be published in March.

Further information is available at www.bauma.de

About bauma

bauma is the world's leading sector event for construction machinery, building material machines, mining machines, construction vehicles and construction equipment. With a total exhibition space of 605,000 square meters, bauma is also the largest trade show in the world. In 2013 bauma broke all previous records, attracting a total of 3,421 exhibitors from 57 countries, and 535,065 visitors from over 200 countries. bauma takes place every three years in Munich; the dates for the next edition are April 11 to 17, 2016.

Construction machinery trade shows of Messe München

Organizing trade shows for the international construction machinery sector is a core competence of Messe München. Its portfolio includes not only the world's leading trade show, bauma in Munich, and the brand event bauma China in Shanghai – it also cooperates with the Association of Equipment Manufacturers (AEM) in the organization of BAUMA CONEXPO INDIA in Gurgaon/Delhi and BAUMA CONEXPO AFRICA in Johannesburg.

Messe München

Messe München is one of the world's leading trade-show companies. It organizes some 40 trade shows for capital and consumer goods and key high-tech industries in Munich and abroad. Each year more than 30,000 exhibitors and some two million visitors take

part in events held at the Messe München trade-fair center, the ICM – Internationales Congress Center München and the MOC Veranstaltungszentrum München. In addition, Messe München organizes trade shows in China, India, Turkey, South Africa and Russia. Messe München has a global business presence with affiliates in Europe, Asia and Africa and more than 60 foreign representatives serving more than 100 countries.