The Big Boys Roll into Las Vegas

By Greg Fenrick

t each MINExpo, the tradeshow floor is dominated by some of the biggest mining equipment manufacturers, including Caterpillar, Hitachi, Komatsu, Liebherr and Terex. MINExpo 2008 will be no different and Central Hall, again, will be where conference goers view these monsters with awe, and maybe even climb up into the box of one of the trucks to have a coffee and make a deal.

MINExpo, like the Olympics, only happens every four years so making a marketing splash is the name of the game. Nowhere else but Las Vegas will so many potential buyers congregate.

According to Michael Currie, a leading mining fleet economist and consultant, this year's MINExpo offers exciting new products from all the industry leaders.

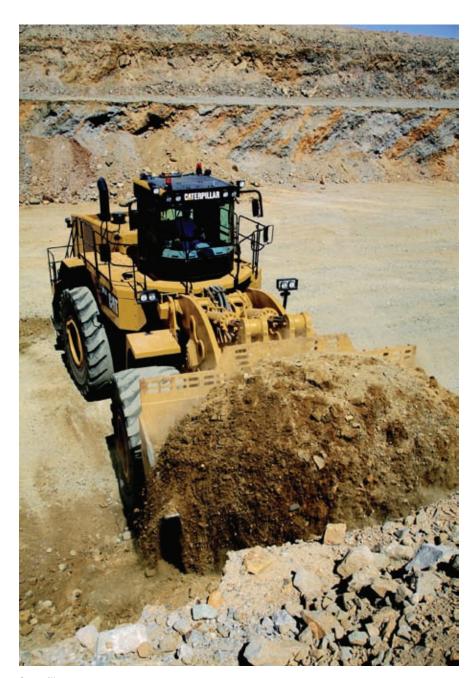
"The manufacturers are bringing a real feast of new machines to Las Vegas. Trucks are especially intriguing," says Currie.

This article summarizes what <u>Caterpillar</u>, <u>Hitachi</u>, <u>Komatsu</u>, <u>Liebherr</u> and <u>Terex</u> will be announcing and/or displaying in this version of MINExpo.

Caterpillar

Caterpillar (Booth 6229) will display surface and underground mining equipment and technology capabilities at the Central Hall. Caterpillar will introduce the new Caterpillar® F-Series mechanical drive mining trucks and the new Cat® AC electric drive mining trucks. MINExpo marks the public debut for the new trucks, which Caterpillar announced more than two years ago.

In addition to the long anticipated new trucks, the new <u>D11T track-Type Tractor</u> will be on public display for the first time, as will the newest in the line of Caterpillar large wheel loaders, the <u>993K</u>. The Cat® 993K Wheel Loader is a totally new model that offers a new size class in the Caterpillar® line. The 25-ton (23-metric-ton) loader capacity matches perfectly with the Cat 777 and 785



Caterpillar.

off-highway trucks. Built on an all-new platform, the new loader features Z-bar linkage, hydraulics and power train that deliver superior penetration into the pile and high breakout forces—20 percent more than the 992G.

The new loader also features the Cat C32 ACERT™ engine for increased

performance and US EPA Tier 2/EU Stage IIa emissions compliance. It produces net power of 950 horsepower (708 kW). The 993K also offers innovative solutions to ease maintenance and boost reliability. For example, the Cat exclusive sleeve bearing pins eliminate the need for daily greasing of the front linkage. To lower life

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Hitachi.

cycle costs, the 993K is designed to meet mining customer rebuild requirements and to have an estimated 45,000-hour structure life.

The D11T and D11T CD incorporate many new and updated features to accommodate operators and technicians. Getting on and off the machine is easier than ever, thanks to a hydraulically actuated access ladder that is available as an option. An optional rear walkway with a 505-gallon (1987-liter) fuel tank makes it easier to clean rear and side windows and to access the rear lights for maintenance. WAVS, an optional rear-vision camera system, improves visibility and can be ordered with one or two cameras.

Underground mining products on display include the latest underground loader and truck models, as well as technology to boost productivity and safety in the underground environment. New surface mining technology products, too, will be shown. Caterpillar and Cat dealer product support capabilities share the stage with the big iron and the technology products.

Hitachi

Hitachi (Booth 8527) will have on display two new Dash-6 mining excavators — the EX3600-6 and the EX5500-6 — and one of its new ACII AC-drive rigid-frame haul

trucks — the EH3500ACII. Also in the Hitachi booth, there will be three "pillars," or kiosks, showcasing various aspects of Hitachi mining support.

The first pillar will provide more information on the Hitachi AC-Drive System used in the new ACII trucks and the CONSULT $^{\text{TM}}$ mining software program.

The second pillar will show and explain the new Global e-Service program. Standard with all Dash-6 excavators, Global e-Service provides owners with critical field data at their finger-tips through the Internet via satellite. The second pillar also reviews various maintenance training programs that are available through Hitachi and its dealers. It also provides a closer view of the sophisticated in-cab shovel monitoring system that lets operators and service personnel make fault diagnoses and troubleshoot.

The third pillar will highlight Hitachi's manufacturing capabilities, including a brand new 138-million-dollar, state-of-the-industry, mining-excavator-and-truck factory in Japan. It will also showcase successful Hitachi users from around the world and explore the various ways Hitachi provides dependable product support.

Komatsu

Komatsu (Booth 7027) will display four machines: the <u>960E-1</u> (960E) AC electric drive haul truck introduced in May 2008, the <u>D475A-5SD Super Dozer</u>, the <u>Komatsu PC5500 Hydraulic Shovel</u> and the <u>Komatsu WA1200-3</u> wheel loader.

The 960E is powered by the Komatsu SSDA18V170, which uses a unique dual-stage turbo air handling system to deliver 3,500 horsepower with the lowest brake specific fuel consumption (BSFC) at rated horsepower for this truck class.

Komatsu America Corp.'s Tier 2 D475A-5SD has an operating weight of 249,560 pounds and features a powerful, clean Komatsu SAA12V140E-3 turbocharged, air to air after-cooled diesel engine, which provides a maximum net output of 890 HP (664kW). The engine is Tier 2 EPA, EU and Japan emissions certified, while continuing to provide industry-leading reliability and fuel economy.

Komatsu America Corp.'s PC5500 hydraulic super shovel, with an operating weight between 525–540 tons (1,157,000–1,190,000 lbs.) and a shovel capacity of 37 yd3 can help mines move more material in less time, thereby reducing the cost per ton and increasing profits. The PC5500 has two powerful

MINExpo



Komatsu.



Liebherr.

Komatsu SSA12V159 diesel engines. Both engines are rated 1260 HP.

Komatsu America Corp.'s WA1200-3 wheel loader has the largest bucket in its class and the most advanced technology available to make it the most productive wheel loader in its class. With an operating weight of 452,390 pounds, the WA1200-3 is equipped with numerous features to increase reliability and provide the improved productivity and economy that today's mines demand from large machines.

Liebherr

Liebherr Mining Equipment Co. (Booth 7627), will be one of the largest exhibitors at MINExpo 2008. The mining equipment displayed will be the T 282 B Ultra Class 400 ton (363 metric tonne) haul truck, the TI 274, 320 ton (290 metric tonne) innovative prototype haul truck and the R 9250 excavator, a 22yd3 hydraulic excavator in a backhoe configuration.

The earthmoving and quarry equipment that will be on display will be the world's largest hydrostatic, the <u>Liebherr PR 764 Dozer</u> and the <u>L 586 Wheel Loader</u>.

A brief technical overview of the mining equipment to be exhibited follows: The T 282 B has a 400 short ton payload and a gross operating weight of 1,305,000 lbs. It features a 3650hp MTU/DD 20V4000 engine to power its alternator and supply AC current to its two rear electric drive motors. The T 282 B has the lowest Empty Vehicle Weight in its class, and one of the highest payloads in the industry. The low empty vehicle weight to payload ratio provides a low cost per ton in all types of applications.

The TI 274 (insert Figure 4 – Liebherr TI 274) is an innovative design based on an unconventional concept. The "TI" concept incorporates independent rear axles, four drive motors, a revolutionary dump body design and relocated hoist cylinders. The TI 274 has two rear axles that can oscillate independently of each other to reduce tire wear and maintain straight line forces from the load through the tires into the ground throughout the haul. Another characteristic of the TI concept is a revolutionary dump body, which acts not only to carry material but also as a structural member of the truck itself. The dump body on the TI 274 is



Terex.

supported by only four points and does not rest on the frame as it does in conventional mining trucks. Due to this dump body design and lack of a rear axle box, the weight of the truck is significantly reduced while a high payload is maintained. At 1.70 tons payload per ton of dead weight, the TI 274 currently has the highest ratio of payload to empty vehicle weight in the mining industry.

For the mining excavator, the R 9250 hydraulic excavator with backhoe attachment will be on display. It has an operating weight of 551,000 lbs, with up to a 22 cubic yard bucket.

Terex

Terex Mining (Booth 7309) will be launching two exciting new products at MINExpo 2008. The new massive MT 6300AC haul truck is the first in the ultra-truck size class designed specifically for 400t load capacity. At 400 ton (363 t) payload capacity and rated power of 3750 hp (2796 kW), the massive MT6300 truck is classed alongside the largest trucks in the world. The new AC drive allows a maximum speed of 40 mph (64 km/h), a cab for two full-size reclining seats and added storage capacity and GVW: 520,000 lb (325,830 kg).

Also in the Terex Mining booth, visitors will be able to see the MK7 underground jumbo drill, DTH hammers and bits, high wall miner push beam, cutter head, cab and scale model. The MK7, two boom electric/ hydraulic drifting Jumbo has the flexibility to drill crosscut holes, bench holes and rock bolt holes. The HPR3818 Rock Drill (18kw) is powered by an energy-efficient hydraulic system. The TR Series Feeds are built for easy maintenance. Feeds can be ordered in various lengths to fit your mine needs.

The UTB60 boom is designed to rollover 360 degrees, permitting the operator more flexibility and coverage. The MK7 is the world's only "computer ready" jumbo. Ergonomic lay out of the operators compartment allows for comfort and safety: ROPS/FOPS certified canopy, high efficiency EDI lights, joystick controls, full instrumentation, and rubber isolators to limit vibration in the compartment.

Due to the size of the Terex® O&K RH400, Terex's booth will have a video wall to showcase the world's largest excavator. With recorded bucket payloads of up to 100 sht, the RH 400 easily fills 240 sht trucks with 3 passes and up to 400 sht trucks with 4 to 5 passes respectively.

Intriguing New Trucks

Joergen Ole Haslestad, Chairman of the Board and Group President of Siemens I&S, says that the new truck has high technology incorporated. Its AC drive system, he explains, increases the available power and performance of the truck. "With the use of electric drive systems for mining haul trucks, the weight of the haul truck is reduced," he adds.

"In addition to low operating costs, the benefits of the Siemens drive system include the capability to provide very high torque at stand still for acceleration of the truck in the severe application, high top speed and high electrical braking capabilities. Using the electric wheel motors reduces mechanical brake wear and lowers operating costs." (Siemens cooperates with Komatsu on Drive Systems for Mining Haul Trucks).

Links and References

- Caterpillar
- Hitachi
- Komatsu
- Liebherr
- Terex
- D11T track-Type Tractor
- 993K
- EX3600-6
- 960E-1
- D475A-5SD Super Dozer
- Komatsu PC5500 Hydraulic Shovel

- Komatsu WA1200-3 wheel loader
- Terex Mining
- T 282 B Ultra Class 400 ton
- TI 274
- R 9250 excavator
- Liebherr PR 764 Dozer
- <u>L 586 Wheel Loader</u>
- MK7 underground jumbo drill
- Terex® O&K RH400
- Siemens cooperates with Komatsu on Drive Systems for Mining Haul Trucks

Click here for full list of links: http://go.mining.com/sept08-a3

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