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A Word From the Publisher

In this issue of InfraStructures, you will find a lot of information on new products that have been displayed at recent international trade shows.

In the coming weeks, we will attend the World of Asphalt in Atlanta, the National Heavy Equipment Show in Toronto, and the Rental Show of the Quebec Rental Association in Saint-Hyacinthe.

It is not too late to think about going to Bauma + Mining in Munich, the industry's biggest trade show in the world. However, given the enormous number of attendees going to this event – over 400 000 visitors – lodging can pose a problem. Over the next few months, we will offer you reports on the new equipment displayed at the show by the manufacturers.

As usual, InfraStructures also features the news of the industry as well as technical articles written by experts in their respective fields.

Send us your stories and comments. We always appreciate hearing from you. Tell us what is brewing in your part of the country...

We hope that you will enjoy reading InfraStructures,



Editor/Publisher



On the cover:

Ingersoll Rand has re-entered the milling market with the global introduction of two new milling machines.

The MT-2000 half-lane milling machine, engineered and developed in North America is joined by the MW-500, is a utility-class milling machine engineered in Europe.

ATLAS COPCO TO ACQUIRE DYNAPAC

Atlas Copco AB has entered into an agreement with Altor 2003 Fund to acquire Dynapac AB of Sweden, a leading supplier of compaction and paving equipment for the road construction market. The acquisition will strengthen Atlas Copco's position in an expanding global market and add a new range of products for construction customers worldwide.

The new business is a very good fit with,

and at the same time an extension of, other businesses in Atlas Copco. Atlas Copco has a recognized presence in construction, which currently represents about 22% of its revenues. The acquisition will give Atlas Copco additional products and sales channels to grow in the expanding road construction market, as new roads are constructed in many countries, such as China and India.

Dynapac will be part of Atlas Copco's Construction and Mining Technique business

area. The completion date of the acquisition is dependent upon the required approvals from the relevant authorities.

Source: Atlas Copco AB

CON-E-CO MARKS 50TH ANNIVERSARY

CON-E-CO Company, a subsidiary of Oshkosh Truck Corporation, kicked off its 50th Anniversary celebration on January 23rd at the World of Concrete in Las Vegas.

"Fifty years is a true milestone for CON-E-CO and represents a tradition of stability, growth and commitment to our customers – but it's just the beginning," said Neil Smith, general manager of CON-E-CO. "As we look forward to the next half-century, we're proud of our accomplishments, but realize that the best is yet to come."

Founded in 1957, Concrete Equipment Company (CON-E-CO) has produced many industry milestones:

1957 – Introduced its first product, a Challenge Runabout mobile concrete plant.

1964 – Built its first factory on the site of the current company headquarters in Blair, Nebraska.

1972 – Introduced the first live bottom aggregate batcher for uniform blending and delivery into ready mix trucks.

1975 – Introduced and patented the LO-PRO[®] cement batcher and LO-PRO portable batch plant.

1983 – Began rolling out a nationwide Dealer and Representative Distribution organization.

1986 – First use of computerized drafting and design tools for concrete batch plants.

1994 – Introduced all new 12 and 15 cu. yd. central mix drum.

2004 – Was acquired by Oshkosh Truck Corporation and then integrated its resources with McNeilus.

CON-E-CO's products have a well-earned reputation for quality, durability and reliability. Around the globe, CON-E-CO batch plants are operating in the United States, Canada, Mexico, Australia, New Zealand, Israel, Costa Rica, Venezuela, Ecuador, Peru, Indonesia, Trinidad, Puerto Rico, and El Salvador.

Source: Oshkosh Truck Corporation

MULTIQUIP-AMMANN SIGN VIBRATORY ROLLER DEAL

A couple months ago, Multiquip Inc. finalized an agreement with Switzerland's Ammann Schweiz AG to serve as the exclusive distributor for Ammann's tandem vibratory rollers in North America, plus in several Latin American and Caribbean nations.



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A Vermeer Grinder in a Chipper-Sized Package

Turns wood chips, construction debris, and green into a range of usable end products

The unit's side-discharge belt conveyor allows operators to load material into dumpsters

Optional magnetic head pulley helps separate nails and metal debris from discharge material

The patented Vermeer SmartFeed system monitors engine rpm rates and automatically stops and/or reverses the feed roller

- 85 HP Cummins diesel engine
- 20 in. (50.8 cm) feed roller diameter
- 12.5 in. (31.8 cm) throat height
- 16 in (40.6 cm) width discharge conveyor
- 66 in (1.7 m) discharge height



Vermeer also offers a full line of equipment for all your landscaping jobs

Under terms of the agreement, Multiquip will market 1,5 to 5 t weight class tandem and combination rollers. The rollers are the next generation of Ammann's AV Series asphalt rollers and emphasize maximum job site performance with high frequency vibration, superior operator comfort, advanced safety features, and a maintenance-free service concept.

"We are excited about this opportunity as it completes the MQ line of confined area and medium range construction equipment," said Multiquip president Roger Euliss.

Marketed as the AR Series tandem vibratory rollers, the units will carry the MQ/Ram-max brand name to complement Multiquip's full line of light- and medium-sized compaction equipment which already includes rammers, plate compactors, and trench and asphalt rollers.

There are 10 diesel-powered models in the AR Series with drum widths from 80-130 cm. Centrifugal forces range from 13 kN on the AR-16 to 67 kN on most powerful model in the series, the AR-40. Standard features include folding ROPS, dual frequency and amplitude, back-up alarms, pressurized water systems with dual filtration, noise attenuation, sliding seats, 100% side clearance through full flush drums, drum offset and lockable instrument panels.

Multiquip Inc. is a leading supplier of compaction equipment, concrete and masonry cutting, placing and finishing products, power generation equipment, dewatering pumps and other construction equipment.

Source: Multiquip Inc.

NAPA UPDATES POPULAR GUIDE TO ASPHALT RECYCLING

The National Asphalt Pavement Association announces the publication of a new update to the popular technical document Recycling Hot-Mix Asphalt Pavements. The text of this guide to the processing of RAP (reclaimed asphalt pavement) at the hot-mix asphalt plant has been significantly expanded. The publication has also been enhanced with new photographs and illustrations.

The revised 27-page publication explains the how-to of RAP: how to reclaim, size, store, and process the material. The various types of HMA plants are covered. Calculations for determining the value of using RAP are also provided.

Recycling Hot-Mix Asphalt Pavements (order number IS-123) is available from NAPA at \$16 per copy. Orders may be placed through

NAPA's online store at www.hotmix.org

Source: The National Asphalt Pavement Association

HUSQVARNA CONSTRUCTION PRODUCTS LAUNCHES NEW BRAND

Husqvarna Construction Products, part of the Husqvarna Group, has chosen to consolidate all of its construction brands under a single brand: Husqvarna. Dimas, Partner and Target will be phased out in the

beginning of 2007.

"By focusing on a single brand, Husqvarna, we can clearly show our strength in the market and be recognized as a strong, global brand. From a historical perspective, our strengths have been product development, global distribution and service and support. Now, since we are investing all our resources in a single brand, we will become even stronger in these areas," says Anders Berggren, president of Husqvarna Construction

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The launch of Husqvarna will be carried out simultaneously throughout the world and will be introduced through the advertising campaign, "Do you see the difference?" Beginning January 1, 2007, products will carry the new logotype and will be delivered in the Husqvarna colors: orange and gray.

A certain amount of double-branding will occur during the first year of the new Husqvarna brand. This will be done to make

the changeover as smooth as possible for customers.

"We will become more visible, have a clearer profile, and be perceived as one company. Our customers will get better service and support and we will be able to offer more new products," says Mr. Berggren.

HCP's brand for the stone industry, Diamant Boart, will not be changed.

"Diamant Boart is our strong, global brand for stone operations within HCP, which is

a totally separate business with its own customers and sales organizations. It is of vital importance that we retain the brand, Diamant Boart, for this operation," says Anders Berggren.

Source: Husqvarna Construction Products

SNC-LAVALIN AWARDED EPCM CONTRACT IN SPAIN

SNC-Lavalin is pleased to announce that it has been awarded a contract by Cobre Las Cruces S.A. (CLC) to carry out engineering, procurement and construction management (EPCM) services for the processing plant and associated infrastructure at its new greenfield copper project near Gerena, Spain. The contract has a value of approximately \$35 million. Cobre Las Cruces is 70% owned by Inmet Mining Corporation and 30% by Leucadia National Corporation.

"We are very pleased to be working with Cobre Las Cruces on this strategic project and with this opportunity to leverage our expertise in leaching, solvent extraction, electrowinning and design out of our Centre of Excellence for Copper in our Santiago office," said Fernando Garcia, vice president and general manager of SNC-Lavalin Chile S.A. "The plant will have a design capacity of 72 000 t of copper per year."

"This contract reflects CLC's confidence in our expertise in designing and managing construction of major copper projects," said Pierre Duhaime, executive vice president, SNC-Lavalin Group Inc., in charge of worldwide mining and metallurgy operations. "We also recognize the value of repeat business from Inmet, having successfully completed another EPCM gold project for the company in Canada."

Work is underway and the project is scheduled for completion, start-up and commissioning in early 2008.

Source: SNC-Lavalin Group Inc.

SNC-LAVALIN AWARDED EPCM CONTRACT FOR ETHANOL PLANT IN ONTARIO

SNC-Lavalin Inc. is pleased to announce that it has been awarded a contract to provide detailed engineering, procurement and construction management services for GreenField Ethanol's new 200 million l/y ethanol plant in Johnstown, Ontario.

Construction is already underway and the Johnstown plant is slated to open in 2008.

"Greenfield Ethanol is a valued customer with whom we have had an excellent working relationship that allowed us to deliver their



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plant in Varennes, Quebec on schedule and within budget," said Pierre Duhaime, executive vice president, SNC-Lavalin. "We look forward to continuing this successful cooperation with this project."

Source: SNC-Lavalin Group Inc.

SNC-LAVALIN AWARDED CONTRACT FOR DMS UPGRADE IN AUSTRALIA

SNC-Lavalin Energy Control Systems Inc. (SLECS), a wholly-owned subsidiary of SNC-Lavalin Inc., has been awarded a contract by SPARQ Solutions Pty Ltd., a subsidiary of ENERGEX, an Australian corporation managing energy distribution networks, to upgrade its distribution management system (DMS) in Brisbane, Queensland.

SLECS will provide project management services, as well as engineering, testing, installation, commissioning and training for the DMS system, part of its GENE line of products.

"We are pleased to be working with ENERGEX on this upgrade project," said Paul Dufresne, senior vice president and general manager, Energy Division, SNC-Lavalin.

"This new GENE contract reflects a growing demand worldwide for our GENE products and services."

SNC-Lavalin's DMS product provides utilities with a comprehensive suite of applications and tools for efficient, reliable and cost-effective management of electricity distribution networks. DMS applications are fully-integrated, and designed to analyse network connectivity and outages in real time, while providing state-of-the-art switching, service call and load control management.

"The objective of the project is to update the DMS to a supported hardware and software environment with minimal business disruption," said Stephen Whittle, DMS project director, ENERGEX. "SNC-Lavalin's GENE DMS provides all of the features we need to manage our distribution network, now and in the future."

Work on the project is underway, and the new DMS will be operational by May 2008.

Source: SNC-Lavalin Group Inc.

RONA ACQUIRES OF MAJOR CHAIN OF SPECIALIZED STORES IN ONTARIO

RONA, the leading Canadian distributor and retailer of hardware, home renovation and gardening products, has acquired 100% of the assets of Noble Trade Inc., one of the largest plumbing and heating supply wholesalers in Ontario, serving a commercial and

professional customer base. The transaction has been finalized pending the usual conditions and certain regulatory approvals, and will be financed from RONA's existing credit facilities. The transaction is expected to close in the second quarter of 2007.

According to RONA president and CEO Robert Dutton, "This transaction is perfectly in line with our strategic development plan. Following the acquisitions of Matériaux Coupal, Chester Dawe and Curtis Lumber

in 2006, adding Noble Trade to our network enhances our presence in the specialized commercial and professional market. Noble Trade, a highly profitable company with an experienced management team, is a solid platform for pursuing our expansion into this market with strong consolidation potential. The transaction will also allow us to diversify our customer base and smooth the cyclical variations inherent to the retail market."

Source: RONA Inc.

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Congress 2007 Set The Pace For This Year's Horticultural and Garden Season and That of Years to Come!

Canada's premier attraction for those in the horticultural lawn and garden trade set the pace for the upcoming 2007 season. Congress 2007 hosted over 12 000 green trade professionals and over 750 exhibitors displayed unique, trendy and must-have products and ideas for this year's lawns and gardens. Products ranged from nursery stock to outdoor power equipment, garden tools, greenhouse supplies, irrigation products and other landscaping accessories and services.

"Congress is where our industry meets and learns so that consumers can have access to the latest and most innovative products and services available from around the world," said Paul Day, CDE, tradeshow manager for Landscape Ontario. "We really work year-round to make sure we find and feature the most current and leading edge products for

our industry." Congress, one of the 50 top fastest growing shows in North America, is truly an international attraction and is rated in the top 5 horticultural shows in North America.

The concurrent Congress Conference, the premier educational event in Canada, offered over 40 sessions with strong business and design/landscaping themes. "Attendance at the conference increased by 30% to over 1300 people. People in the landscaping trades are counting on education to give them an edge on their competition and boost productivity," said Pat Hillmer, conference coordinator for Landscape Ontario.

Congress has been bringing the horticultural industry together for over 30 years. The tradeshow and conference is produced by Landscape Ontario.

The Rental Show, Third Largest Ever

For the third consecutive year, exhibit space at The Rental Show had sold out. With almost 33 000 m², it was the American Rental Association's third largest Rental Show – in terms of exhibit space

new exhibitors and products; they are always looking for a



– in all of the show's 51 years.

Of the 717 exhibitors at the Georgia World Congress Center in Atlanta, 94 companies – 13% – were first time exhibitors at The Rental Show. "Looking at the number of returning exhibitors, equipment manufacturers and distributors continue to be interested in The Rental Show," said Carla Johnson, ARA director of associate member services. "The Show is also one of the best venues for companies to introduce themselves or new products to the rental market. Rental store attendees appreciate the



competitive advantage."

As it is always the case, a good number of Canadians attended the show, either as visitors or exhibitors. Next year, The Rental Show returns to Las Vegas. It will be held at the Mandalay Bay Convention Center, on February 11-14, 2008.

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*Michel Théorêt, Director of Resources
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International Truck Unveils Its New WorkStar™

With the 2007 emissions standards for diesel engines coming into play, International Truck, a Navistar company, has developed a new hood design on its International® WorkStar™ trucks to increase the cooling capacity. International decided not to relocate the larger radiator down between the frame rails so that the trucks will still be able to provide direct front engine PTO options for even the most demanding stationary applications such as well-drilling, oil field, remote power generators and field service pumps. Additionally, the design allows for other non-stationary applications, including concrete mixers, refuse trucks and snow plows.

“Not only will the International WorkStar have a more robust hood, we are still able to provide customers with the option for direct front PTOs,” said John Wadden, director of severe service marketing, International Truck. “With the high demands of construction, municipal and waste industries, maintaining the front PTO option is an important feature to our customers. The new hood

design provides easy access to the engine compartment for maintenance and continues with the bold look of the International WorkStar.”

International’s new hood design includes an innovative multi-piece layout with the purpose of only having to replace one of the pieces in the event of any damage. This helps the customer avoid paying a high price for an entirely new hood, when they have the option to replace just the damaged portion of the hood at a significantly lower cost. All of the parts for the new hood design will be available at the more than 900 International dealer locations across North America.

The new design will accommodate International® engines and engines from CAT



and Cummins. In late 2007, the WorkStar will debut MaxxForce™ 11 and MaxxForce 13 big bore engines. International’s trucks will be fully compliant with the EPA’s 2007 mandates. The hood of the International® PayStar™ Series – the other line of severe service trucks – will remain the same.

Source: International Truck

Hirschmann Mentor In Use With Madal Palfinger BR 400

The Brazilian crane manufacturer Madal Palfinger will install the Hirschmann mentor LMI on their newly introduced telescopic truck crane BR 400 (same as the Sennebogen HPC 40). The crane has a capacity of up to 40 tons and a boom length of 37.5m. The BR 400 complements their existing truck crane line which includes the MD 300 and MD 600.

The first Hirschmann mentor was installed on a BR 400 telescopic crane and presented to the public at the M&T Expo in Sao Paulo; since then all BR 400’s

have been fitted with the Hirschmann mentor as standard equipment.



Madal Palfinger’s truck crane range is well positioned in the Brazilian market and customers appreciate the low operational costs, compact and reliable construction and the high level of mobility. The load moment indicator Hirschmann mentor offers

maximum crane operation at an ideal cost benefit ratio.

The Hirschmann mentor provides the operator with a continuous display of the crane’s actual and allowable load, boom length, boom angle, and load radius. The

system also includes an integrated bargraph which displays the cranes utilization.

The combination of the central unit being integrated into the console and the use of



CANBus sensors provides for quick and easy installation. Set-up and calibration is done via the user-friendly console which also incorporates a large backlit LCD display with automatic contrast adjustment. Maintenance free sensors from the latest generation are connected via CANBus and controlled by means of CANopen. The Hirschmann mentor also provides the flexibility of optional Working Area Definition (WADS), event recorder, and the use of wireless sensors.

Source: Hirschmann Automation and Control, Inc.

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Mack Introduces TerraPro™ Cabover

Mack Trucks, Inc. is taking the opportunity of this year's World of Concrete show in Las Vegas to introduce the TerraPro™ Cabover model – the latest, most advanced offering from the leader in heavy-duty cabover trucks in the U.S. An evolution of the company's popular MR model, the TerraPro Cabover is optimized for demanding refuse and construction applications, including concrete pumping. It combines Mack's traditional ruggedness with a new driver environment designed to maximize comfort and productivity.

The TerraPro Cabover interior features ample belly room, ergonomic seats, and accelerator and brake pedals suspended above the cab floor and mounted in-line to reduce driver effort (the suspended pedals also make the floor area easier to clean).

In addition, the TerraPro Cabover model offers a smooth quiet ride and delivers exceptional driver comfort.

The TerraPro Cabover model features the next generation of Mack's Vehicle Manage-

ment and Control System – V-MAC® IV which includes DataMax™, advanced software that captures information such as vehicle trip histories, duty cycle information and scheduled maintenance intervals.

Both customers and bodybuilders will appreciate the in-cab Control Link and back-of-cab Body Link™ II interface systems in the new TerraPro Cabover model. These provide required quick-connections to the bodybuilder's control unit, as well as pass-through harnesses and connectors from the controller to the body – meeting the needs of any application in the refuse and construction industries.

Offered with the proven Mack camelback suspension, the TerraPro Cabover can also be specified with the Mack M-Ride™ 6-rod suspension, allowing up to 17-inch articula-



tion for maneuverability in landfills and on jobsites.

The TerraPro Cabover comes standard with the EPA'07-certified Mack MP7 engine. Also available is the EPA'07-certified MP8 engine. Offering superior low-end torque and power, both the Mack MP7 and MP8 feature single overhead cams, electronically controlled ultra-high-pressure fuel injection, one-piece steel pistons, and robust bearings and cylinder heads.

Source: Mack Trucks, Inc.

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Hilti Turns 40

Drilling in concrete and masonry was slow and strenuous until 1967, when Hilti revolutionized the drilling process with the introduction of its first electropneumatic rotary hammer, the legendary Hilti TE 17. By allowing drill bits and chisels to hammer their way into concrete with ease, this innovation took a 90 minute job and made it a 90 second job. Since then, continuous Hilti innovation has resulted in hammer drills with ever-increasing efficiency, reliability and comfort.

Right from the start, to ensure that these tools were capable of withstanding tough, everyday jobsite use, Hilti rotary hammers

were equipped with not only an electropneumatic hammering mechanism, but also a robust chuck, which incorporated a roller locking mechanism that allowed impact energy to be transferred directly to a drill bit's connection end. This fully enclosed system brought other advantages, including sealing against dust entry and permanent lubrication, which greatly reduced the need for maintenance. To further reduce unnecessary wear on the motor, the Hilti TE 17 was equipped with a mechanical slip clutch to

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prevent the motor from suddenly stalling in the event the bit hit steel reinforcement.

The 1967 invention of electropneumatic hammering technology has inspired Hilti technology development ever since. The next Hilti technological breakthrough was the introduction of the industry's first Active Torque Control (ATC). ATC provides added operator protection by constantly monitoring the tool's status and disengaging the drive system if it senses the housing beginning to rotate too quickly. If a drill bit binds and causes rapid rotation of the tool body, ATC stops the tool in a fraction of a second and helps prevent the operator from losing control of the tool. Technological advances like electropneumatic hammering and ATC contributed greatly to the sophisticated construction process known today. With a continued focus on increasing productivity and safety, concrete contractors can take comfort in the fact that Hilti will continue striving to improve working conditions through innovation and technology.

And Hilti innovation does not stop at electric tools. More ground-breaking success was achieved through the introduction of drill bits with a welded solid carbide head and the new polygon chisels, while innovative services such as Hilti Fleet Management and Hilti Lifetime Service have also been launched with great acclaim. Unique in this industry, Hilti Lifetime Service covers the entire life of the product, comprehensive service and maximum cost control. And thanks to Fleet Management, Hilti customers always have access to the most technically advanced, safest tools.

Additionally, in 2007, Hilti will introduce a range of new tools, including rotary hammers and breakers with even greater performance and durability, as well as an optimized Active Vibration Reduction (AVR) system that makes these tools less tiring to use.

Source: Hilti, Inc.

Cummins QSB3.3 Awarded "Diesel of the Year 2007"

Cummins QSB3.3 engine has received the prestigious title of "Diesel of the Year 2007" from a leading European publication. The award recognizes the innovative technology which enables the 110-hp rated 3,3 l engine to offer equivalent performance to that of larger 4.0 to 4.5 l engines - but with a 30% smaller and lighter installation package.

The QSB3.3 has also been recognized for innovation in North America, named as one of the "Top 100 New Products of 2006" published by Construction Equipment magazine in the December edition. This award list brings attention to the most significant new products of the year with the capability to enhance productivity in the construction industry.

Introduced in April 2006 to meet EPA Tier 3/EU Stage IIIA emissions across the 80 to 110 hp power band, the QSB3.3 is the first industrial engine of its size to incorporate full-authority electronic controls and a High Pressure Common Rail (HPCR) fuel system. Equipped with this advanced technology, the QSB3.3 brings premium performance characteristics previously associated with larger engines, such as the QSB4.5 and QSB6.7, to the compact engine sector.

"We are honored to receive these two awards by leading publications in both Europe and North America, reflecting how the QSB3.3 challenges conventional diesel industry thinking on compact engine performance. The awards are a fitting accolade to the Cummins engineers who developed this breakthrough product," commented Chris Kete, Director of Cummins Light Construction Business.

"The innovative benefits of the engine for powering compact equipment were expressed in a marketing theme of 'Every Rule. Rewritten.' Now, in pilot installations, we are proving that the engine is rewriting the rules. Our customers are telling us that the QSB3.3 is more powerful, quieter and more sophisticated than they considered possible for such a compact and economical engine," he added.

Source: Cummins Inc.



Vermeer's RTX1250 Features New Quad-Track Design

Vermeer Manufacturing Company introduces the innovative Vermeer® RTX1250 ride-on trencher with a quad-track design. This unique application of the quad-track concept delivers exceptional traction and stability with outstanding flotation in soft or sandy soils.

The quad-track design enhances the performance of the standard dual track system. For example, the RTX1250 has relatively no break-over point, which improves operator comfort and control. In addition, the quad-track design maximizes tractive effort and stability by maintaining constant four-point ground contact and providing full power to all four tracks. The ground drive features available on rubber-tire units, such as axle oscillation, four-wheel steer and crab steering, are also functional with the quad tracks.

The specialized undercarriage system with suspension offers a new level of versatility by fitting either rubber tires or tracks, depending on ground conditions and application needs.

Vermeer has an exclusive agreement

with Loegering Manufacturing, Inc. for the RTX1250 track design. Loegering is a leader in the development of a wide range of track systems.

The RTX1250 features a 120 hp Cummins engine that delivers a more aggressive torque curve. This results in a 5 hp power bulge that allows the RTX1250 to run at maximum horsepower in work mode.

All attachment controls on the RTX1250 trencher's operator station are located within easy reach. The operator's station also rotates over 90°. The attachment controls rotate with the operator, keeping them within easy reach at all times. The RTX1250 also features automotive-style steering, a servo-controlled ground-drive system and standard planetary axles.

In addition, the RTX1250 exclusive forward/reverse ground-drive foot pedal with patented creep override leaves the operator's

hands free to control the many versatile tools.

The RTX1250 attachment options include a center-mounted trencher, hydrostatic plow, rockwheel and backhoe. A joystick control



featuring a float position for a six-way backfill blade allows smooth backfilling and finish work. Standard backhoe remote controls permit the operator to precisely reposition the machine without leaving the backhoe operator's station.

Source: Vermeer Manufacturing Company



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New FleeceBACK Membranes

Carlisle SynTec, the leading manufacturer of single-ply roofing systems, introduces new, five-foot wide FleeceBACK® EPDM membranes. These 1,5 m by 12,2 m membranes weigh less than 45 kg and offer easier material handling and rooftop delivery than standard-sized roofing products.

The new five-foot FleeceBACK membranes are ideal for tall buildings located in crowded inner-city neighborhoods where rooftop access is limited and the use of large cranes to load the material is impractical or impossible. Offering the ease and convenience of a single-ply roof system without the hassle of large, heavy rolls, the new membranes easily fit in most buildings' service elevators and are an ideal alternative to commonly used asphalt-based roofing products.

Utilizing its patented hot melt adhesive technology that provides consistent bond strength between the fleece backing and membrane, Carlisle's new membranes offer the same superior puncture and tear resistance as traditional FleeceBACK EPDM

membranes. The smaller FleeceBACK membranes are also available in the same 100- and 115-mil thicknesses as traditional FleeceBACK membranes and come standard with Carlisle's traditional or proprietary AFX fleece that inhibits asphalt bleed-through to the membrane.

To eliminate the cumbersome installation equipment associated with larger rolls, Carlisle offers three, portable adhesive options for the new five-foot FleeceBACK membranes. These portable adhesives include easy-to-handle, five gallon, cold-applied adhesive buckets, aqua-based adhesive in caulk-like tubes and a FAST™ Adhesive box set that comes with everything you need to install a strong, FAST-FleeceBACK system.

Like traditional FleeceBACK membranes, the new membranes feature Carlisle's innovative Factory-Applied Tape (FAT), eliminating the need to use slow-drying, cold-applied adhesives on the seams. Applied in a



factory-controlled setting, FAT seam technology provides uniform adhesive width and thickness, ensuring a watertight seal within minutes of seam installation.

All FleeceBACK roof systems come with a host of pressure-sensitive and prefabricated accessories that increase installation speed, saving contractors both time and money. These innovative accessories are easy to install and have a proven history in the commercial roofing market.

Source: Carlisle SynTec Incorporated

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Subaru Robin Introduces Balloon Light Tower

Best known for its engines, pumps and generators, Subaru Robin expands its product lines with a new balloon light tower. The system casts an even 360° glow, making it ideal for road construction, special events, parties and parking lot lighting.

The balloon light tower's design keeps the unit compact for easy transport. Set-up is simple with fold-out outriggers, an easy-to-operate manual winch and steerable pneumatic wheels. The balloon self-inflates to 1,2 m in diameter, providing a brilliant 110 000 lm from the 1000 W metal halide lamp. A three-stage mast extends the light to a height of 4,3 m.

Additionally, the light tower includes a standard 40 W sub-light. When the halide lamp is shut down to cool before reassembly for transport begins, the sublight continues to glow, making shutdown safer and more convenient.

The balloon light can be powered by a conventional or inverter generator, which is sold separately, or run on commercial power. Adding Subaru Robin's ultra-quiet inverter generator to the balloon light cart provides the best solution for noise-free illumination in any situation.

Source: Robin America, Inc.



50th Anniversary of the Backhoe Loader

It was in February 1957, that CASE introduced to the world, the CASE 320 backhoe-loader – the world's first purpose built unit. Since then, the company has sold almost 750 000 units worldwide.

Models built in 2007 will feature a 50th Anniversary decal on the loader arms and backhoe. Customers can also purchase a special 50th Anniversary Edition, which features bundled options and a special limited-edition decal that is different from the standard decal.

In addition, Case will have on display at Bauma 2007 show (Stand No: 707/708 outside area) a custom black Anniversary model that will feature a frosted-window treatment of the original Case 320 in one window and in the other a futuristic model.





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GOMACO Introduces the New GT-3400

GOMACO introduces its new GT-3400 three-track machine. It comes with some new and exciting features that put the GT-3400 in a class all by itself – it is the first curb and gutter machine to be controlled by remote control.

The GT-3400 features all-track steering. The new footprint features two close tracks on one side and a single track on the other for a tighter turning radius. The design also minimizes machine length.

The GT-3400's direct-drive trimmerhead is the most powerful on the market today. The radial piston hydraulic motor directly drives the trimmerhead. The trimmer's closed-loop hydraulic circuit and radial piston motor provide 27 280 ft lb of torque at the trimmerhead. The 610 mm diameter trimmer is equipped with Kennametal teeth, and the trimmer's width can be varied from 762 mm to 1981 mm.

The GT-3400 has a direct-drive, 356 mm diameter, charging auger to deliver concrete to the mold. The auger also hydraulically

slides to help minimize the transport width. It slides down for hopper positioning and receiving concrete from the trucks and it slides up to reduce transport width.

Changing molds is quick and easy. The operator simply has to drive the GT-3400 up to the mold, hook the mount to a special attachment plate on the mold and lower the holddown. The operator then hydraulically lifts the mold and goes back to work slipforming the project.

The versatile GT-3400 is powered by a fuel-efficient 127 hp Caterpillar® engine with a remote mounted cooling package.

The GOMACO G21 and exclusive "smart" cylinders provide simple push-button steering setup on the GT-3400. The cylinders are attached to a new style of leg. GOMACO engineers have designed a new piston-style leg that acts like a cylinder. The legs have bearings on both ends of the inner tube so there is no steel-on-steel contact. A keyway is utilized for steering control and adjusting



wear pads is a thing of the past with the new legs.

Two-speed track motors provide fast job-site mobility up to 38 m/min. It is one of the fastest tracking speeds in the industry.

The new GT-3400 has been designed to be a multi-application machine and will slipform right-side or left-side curb and gutter, tight radius, safety barrier, bridge parapet, sidewalk, recreational paths and flat slabs up to 1,8 m wide. Contractors can pave with either stringline or go stringless. The G21 controls interface with stringless technology/3D control systems.

Source: GOMACO Corporation

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P.A.M. For Concrete Demolition

P.A.M., a positioning-actuating-manipulator capable of supporting a wide range of pneumatic hammers and demolition tools, is manufactured in Canada by RNP Industries Inc.

Building on many years of experience in the logging industry, the staff at RNP came up with this highly portable, labor saving, device.

The issue that was drawn to their attention was the hazardous and injury prone use of percussion hammers in the rehabilitation of concrete and masonry bridging and arching. The nature of this work requires that operators physically manoeuvre the impact hammers above waist height and overhead. They must do this with some precision whilst performing repairs, renovations and restorations not required for demolition purposes.

The much increased productivity provides contractors with a competitive edge and more flexibility in job costing and delivery time.

A quick pay-back can be realized on

P.A.M. purchases. Another advantage to the contractor is the significantly reduced risk of injury to the workers.

The multi-purpose socket is capable of holding a wide range of hammers and tools.



The robust frame of the machine can withstand repeated chipping impacts.

Operation is effortless. Fingertip controls are easy to use and P.A.M. supports the weight of the tool and can swing over 100°.

The unit can be powered by pneumatic-hydraulic, electric or engine power unit.

Source: RNP Industries Inc.



RNP Industries Inc. will take part in the upcoming National Heavy Equipment Show at the International Centre in Toronto on March 22 and 23, 2007



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- US Patent #4865752221B1 • Canadian Patent #2 415 330

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Doka Systems Combine to Create Complex Maumee River Pylon

*Diana Wojtaszek, Doka USA, Ltd.
Special collaboration*

structure and the project management consultant team is lead by HNTB Corporation. It is the largest project ever undertaken by ODOT and, at US\$280 million, the most expensive.

The cable-stayed bridge has a precast segmental concrete deck and a 373 m main section over the Maumee River. It will carry six lanes of traffic on the I-280 highway and will aid the passage of shipping by providing a high level fixed route in place of the existing drawbridge. The roadway will be up to 39,6 m above water level.

Doka formwork has also been used for the 197 octagonal piers, which each stand 38 m high. They have maximum dimensions of 7,3 m by 3,7 m.

European and US technology has been combined in the systems provided by Doka for the project. The project brings together Doka's Steel Girder system – popular in the USA – and the European platform and multiple lift concepts.

Virtually the full range of Doka USA's product line is used, including Top 50 formwork, Framax Xlife, Steel Girder, MF 240 climbing system and SKE 100 self-climbing system.

Doka produced the concepts and drawings for the formwork as well as carrying out the

"This was a strong engineering solution that delivered speedy results at an economical price," says Fru-Con's Warren Hallam. He welcomed being able to use a single supplier to handle all aspects of the work.



The pylon was built using a combination of systems that varied as the cross section changed. A lift of 60 m³ to 69 m³ was completed every 10 to 14 days for the lower octagonal sections. When work reached the upper pylon, the rate increased to a pour every four days.

As well as having a complex shape, further challenges came from the pylon's requirement to support a cradle system weighing more than 6 t. The bridge is one of the first in the world to have this type of stainless steel stay cable cradle system. The cradles keep

A wide range of Doka formwork systems has been used to create the dramatic central pylon and almost 200 piers for the Veterans' Glass City Skyway – formerly known as the Maumee River Crossing in the USA.

Focus of Doka's formwork has been the construction of the 127 m high main pylon which will dominate the skyline of Toledo, Ohio. The pylon's construction has been highly complex, with a transition in cross-section from an octagonal shape to a "gothic cross". The cross-shaped upper section enables the incorporation of a glass curtain wall on each



of the four faces. An advanced array of LED lights will shine in unlimited color combinations through the 56 m tall glass panels.

The bridge is being built for the Ohio Department of Transportation by Fru-Con Construction, a division of Bilfinger Berger. Figg Engineering Group designed the main



supply and providing an advisory presence on site during the casting operation. All systems were delivered within two months from the order being placed. "It was an enormous amount of formwork to design and build in such a short period, but we did it," says Dave Monnot, account manager.



the cables in separate protective tubes as they pass through the pylon. Tolerances for the pylon formwork were particularly tight as the cable penetration opening had to be accurate to within 1,6 mm.

The first two lifts for the pylon's octagonal lower part were formed with Doka's Steel

Girder self-spanning steel form system, using both standard and custom components. The next three lifts had an added complexity as their corners had compound curves, with a vertical radius of approximately 42,98 m and a horizontal radius of 4,8 m. The Doka Top 50 system was used for this area and integrated into the standard steel girder.

The Steel Girder and Top 50 formwork components were fitted to Doka's MF 240 crane-handled climbing system which provides a 2,4 m-wide platform for safe working. MF 240 also makes provision for the formwork to be retracted by 750 mm to allow easy cleaning as well as fixing of the reinforcement.

This arrangement continued up to the eighth pour where the pylon incorporates cantilevered diaphragm deck units, formed using Steel Girder. "That was an amazing pour," recalls Dave Monnot. This level marked a transition from the octagonal form to the upper cross-shaped section. Custom-made steel and wooden units were used for the transition area.

The SKE 100 self-climbing system allowed multiple climbers to be combined to achieve

the cross shape of the pylon's upper section. Use of SKE 100 also eliminated the need for a crane to move the formwork and created a safe working environment while enabling climbing to be carried out largely independently of the weather. The system was also able to cope with the difficulties of stripping and rolling back the forms for such complex sections.

The self-climbing system took the pylon to almost its final height, with the top section cast at ground level using Top 50 formwork and positioned by crane.

Six sets of formwork were used for the 197 piers. Rapid progress was achieved, with each set cycling two to three times in the six-day working week. The 197 piers were octagons of varying dimensions, from 2,4 m by 3 m to 2,4 m by 6 m. The wall thickness also varied, as did the height, from 44 m down to just 2,7 m. They were formed using a custom Steel Girder solution and MF 240. The "martini glass" shaped caps were cast using custom formwork.

As there was a wide range of pier heights on the project, Doka looked for ways of adopting some standardization. The MF 240



system could support the Girder form system to a height of 4,9 m. Each pier was given a starter pour to a height of between 2,7 m and 6,7 m, which enabled the remainder to be cast in standard 4,9 m rises using formwork which had already been mounted on the MF 240. Use of the platform-based system enabled material to be carried up to the next level without needing constant access to a crane.

Dodge Introduces All-New Sprinter

Armed with an all-new supersized Sprinter, Dodge continues to build on its presence in the commercial-vehicle market.

Compared to the previous model, the all-new Dodge Sprinter is 50 mm wider and it offers a 280 mm higher interior height.

The Sprinter is available in three vehicle lengths on two new wheelbases of 3665 or 4325 mm – the shorter 3250 mm wheelbase model available in Europe is not offered in Canada – with an extended version available on the long wheelbase model. Sprinter also

option. Providing enormous cargo volume and up to 2,14 m of interior height allows customers to work inside the vehicle in comfort.

GVWR configurations of 3500 and 4600 kg are offered as well as a new higher maximum GVWR of 5000 kg for cargo vans and chassis cabs.

Designed with the body builder in mind, the Dodge Sprinter Chassis Cab features flat frame rails, bolted rear cross-frame member, and fuel-filler neck and nozzle integrated



The new Sprinter is powered by a 3,0 l Mercedes-Benz OM642 DE30 LA turbodiesel V6 and a 5 speed automatic transmission.

The same aluminium-block engine is avail-



boasts three interior-roof height options.

The 2007 Dodge Sprinter takes versatility to an all-new high with the new mega-roof



with the cab, which eliminates the need for re-routing or to build bodies around the fuel-fill system.



able in other DaimlerChrysler vehicles. It is light and smooth. It features a particulate filter to satisfy emission norms.

Enerpac Helps Beijing's "Bird's Nest" to Stand On Its Own Feet

*Roberta Moring, Enerpac BV
Special collaboration*



After two years of construction, the stadium for the 2008 Beijing Olympic Games came to a final and very important phase in its construction – dismantling the temporary support piers from its uniquely designed roof.

When Swiss architects, Herzog & Meuron, presented their stadium design to the Chinese project team, they used the analogy



of a bird's nest. A bird's nest is a Chinese culinary delight, believed to be extremely healthy and a delicacy eaten only on very special occasions. The team applauded the idea and construction began on the new Beijing National Stadium.

During construction, the criss-crossed, interwoven steel "twigs" of the bird's nest roof were supported by 78 temporary steel piers. For additional stability, these huge twigs were welded onto the piers. When the construc-

tion was completed, the twigs needed to be disconnected from the temporary piers and the piers dismantled.

In most western countries, cranes would have been used to support and lift the roof while welders could cut the welds from the 78 temporary piers. However, due to the phenomenal cost of hiring several 800 t cranes for several days, a smarter and less expensive solution needed to be found. Key to the cutting operation was safety, control, stability and cost. Enerpac, known from many complex hydraulic applications around the globe and in particular in China for their hydraulic solutions for moving roofs (NanTong stadium) and moving structures (Shanghai concert hall), was consulted.

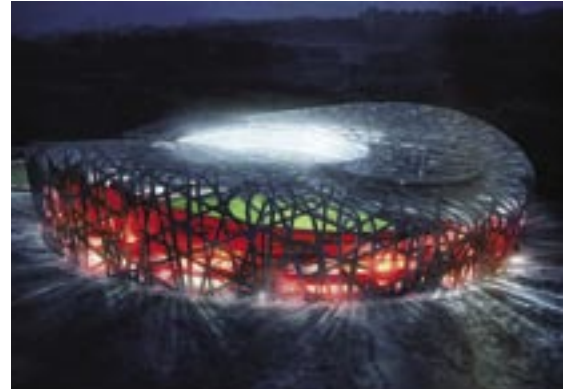
The disconnecting and dismantling process of the temporary piers was accomplished by synchronously stage-lifting the structure from its supports, cutting the welds, and synchronously stage-lowering the structure. This process allowed the removal of the 50 mm thick leveling plates that were used



during construction. Computer controlled hydraulic systems are ideal for these types of applications and Enerpac was awarded the contract because of their expertise with these systems.

The computer controlled hydraulic system consisted of a central computer networked with 10 satellite computers, 156 double-acting cylinders, and 55 custom Enerpac hydraulic pumps. System feedback and control was achieved by integrating multi-functional

valves, load sensors, stroke sensors and shift detecting sensors.



The design of the bird's nest was based on three construction circles; an outer circle, a central circle and an inner circle. Each circle has a specific number of supporting piers, varying from 24 for the outer and central circles and 30 for the inner circle. For load control and accuracy reasons, the 78 support points including their hydraulic systems, were divided into 10 groups, each with its own satellite computer. For the actual stage-lifting and lowering process, each support pier was equipped with two 150 t double-acting



cylinders. At the central computer, all load and stroke data was preprogrammed for a fully controlled lifting and lowering process. During the stage-lowering process, the bird's nest was alternatively supported by the hydraulic cylinders and the leveling plates on the temporary supports.

After successfully disconnecting the 45 000 t steel structure from its temporary support piers, the bird's nest stood on its own "feet" for the first time.



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Appointment

Vermeer Manufacturing Company recently announced its plans to consolidate international activities and create an executive team position dedicated to global initiatives. With this change, **Steve Heap** became senior director of global sales and operations effective December 1, 2006.

Steve Heap began his career with Vermeer in 1996 as South America sales representative. In the past 10 years he has held positions including Latin America district manager, southwest U.S. regional manager and global accounts manager. Most recently, he served as managing director of Vermeer International BV in the Netherlands with operations covering Europe, Africa and the Middle East. In his new role, Mr. Heap will also lead Vermeer activities in Latin America and Asia Pacific in addition to Europe, the Middle East and Africa.

Source: Vermeer Manufacturing Company



Agenda

World of Asphalt Show & Conference

March 19 - 22, 2007
Atlanta, GA USA



ALQ (Quebec Rental Association) Rental Show

March 20 - 21, 2007
St-Hyacinthe, QC Canada

National Heavy Equipment Show 2007

March 22 - 23, 2007
Toronto, ON Canada

ExpoCam

April 12 - 14, 2007
Montreal, QC Canada

12th International Building Fair

April 17 - 21, 2007
Brno, Czech Republic

6th Annual Road Salt Symposium of The Freshwater Society

April 20, 2007
Navarre, MN USA

Bauma + Mining 2007

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MiningWorld Russia 2007

April 24 - 26, 2007
Moscow, Russia

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April 26 - 28, 2007
Montreal, QC Canada

CIM Montreal 2007

April 29 - May 2, 2007
Montreal, QC Canada

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May 1 - 2, 2007
Quebec City, QC Canada

Technical Day - APOM

May 4, 2007
Quebec City, QC Canada

Quartier municipal des affaires UMQ

May 10 - 11, 2007
Quebec City, QC Canada

3rd International Conference on Durability & Field Applications of Fiber Reinforced Polymer Composites for Construction

May 22 - 24, 2007
Québec City, QC Canada

44th Canadian Fleet Maintenance Seminar

May 27 - 30, 2007
Toronto, ON Canada

WasteTech 2007

May 29 - June 1, 2007
Moscow, Russia

2007 Municipal Trade Show - AORS

June 6 - 7, 2007
Fergus, ON Canada

Hillhead 2007

June 26 - 28, 2007
Buxton, Derbyshire, United Kingdom

LubricationWorld/Predictive Maintenance Technology Conference

September 11 - 13, 2007
Las Vegas, NV USA

Technical Day - APOM

September 14, 2007
Sherbrooke, QC Canada

MINExpo® 2008

September 22 - 24, 2007
Las Vegas, NV USA

ICUEE 2007

October 16 - 18, 2007
Louisville, KY USA



CONEXPO Asia show

December 4-7, 2007
Guangzhou, China



28th International Irrigation Show

December 9 - 11, 2007
San Diego, CA USA

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