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infraStructures

Volume 11 Number 4 April 2006

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A Word From the Publisher

As usual, InfraStructures offers you a content rich in product news and a couple of technical articles that should interest you. There are still a few days left for you to plan for a trip to Paris and the Intermat show. Intermat is the most important show of the industry this year.

You will also find a short report on the World of Asphalt show which was held a couple weeks ago in Orlando, Florida.

In the next issue, we will present you reports from the Atlantic Heavy Equipment Show and Waste Expo that have just ended a couple days ago, as well as Intermat that will take place at the end of April.

Send us your stories and comments. Job stories that feature specialized equipment or some technical challenge are always very interesting to read.

Do not forget to complete the subscription form. This helps us maintain our list as complete and as up to date as possible.

uFace a Villand

Editor/Publisher



On the cover:

Bricon Inc., a general contractor based in Saint-Bruno, uses an Atlas Copco breaker on the concrete road surface at the exit of a tunnel in Valleyfield, south-west of Montreal.

FIBRWRAP CONSTRUCTION COMPLETES FRP BRIDGE STRENGTHENING PROJECT

Fibrwrap Construction, Inc. has announced the successful completion of a large scale bridge strengthening project on the Jamestown - Verrazano bridge in Rhode Island using the Tyfo® SCH Carbon Fiber Fibrwrap® System. The bridge spans 2240 m over the west passage of the Narrangansett Bay connecting the towns of Jamestown and North Kingstown, RI.

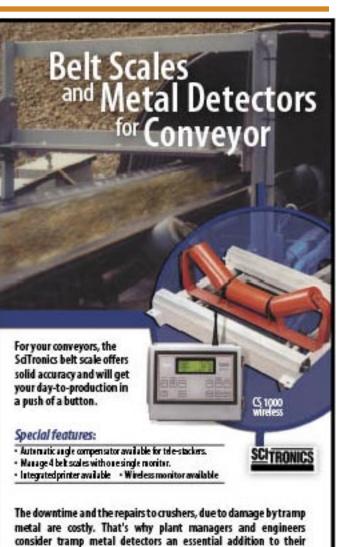
"The Jamestown bridge project presented many difficulties, from access of the interior

and exterior work area to inclement weather conditions. The field crew were especially creative in regard to overcoming these obstacles, which led to a successful completion of this high profile project," said Heath Carr, president, Fibrwrap Construction.

The Verrazano bridge construction is a double cell post-tensioned girder which supports four lanes of traffic on State Highway 138. The bridge was found to be deficient in shear strength in several critical areas located near the existing column bents. Fyfe Company's Tyfo® SCH Carbon Fiber

Fibrwrap® System was specified to provide the additional required shear strength to the bridge structure. The SCH Fibrwrap® System consists of high strength carbon fibers that are combined with an epoxy matrix and bonded to the existing structure to provide additional capacity.

The design for this project called for the FRP System to be installed to the internal and external faces of the concrete girder. This proved challenging as access to the inside of the girder was only available through manholes and the exterior of the bridge

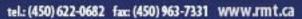


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Product Upgrades and Combinations

Bay Shore Systems has upgraded torque performance in two LoDril® product models and combined two others. The LoDril LM and the LoDril HT will have significant increases in their torque ratings with the LoDril LM going to 18 000 ft-lbs and the LoDril HT to 42 000 ft-lbs. "These two

LoDrils continue to be some of our most popular models. The added torgue will further solidify our competitive advantage and make purchase decisions even easier for our customers," explained John Shepard, Bay Shore Systems

sales manager. "Our technology and manufacturing processes have improved to the point that it makes sense for us and for our customers to make this upgrade now."

In addition to the two product upgrades, Bay Shore Systems will also be combining the features of two other LoDril models into one. The new DH-60 will get an extra boost in torque and will replace the LoDril XHT.

"With the torque now bumped up to 62 000 ft-lbs, the DH-60 will satisfy customer demand in the mid-range of the Bay Shore Systems product line at an attractive price point," added Mr. Shepard. "These product line changes improve our coverage of customer needs across the entire foundation drilling market. Bay Shore Systems has a drilling attachment that fits just about any project a customer might have."

Source: Bay Shore Systems

could be reached only by extensive scaffolding and lifts. The light-weight nature of the Tyfo[®] Systems allowed for easier access by making it possible to carry all of the required materials by hand to the locations needing reinforcement.

Fibrwrap Construction uses advanced composites, or FRPs (Fiber Reinforced Polymers) to add strength and ductility to structures that are in need of upgrade, repair or rehabilitation. Structures include bridges, concrete and wood piers, buildings, pipes and other structures.

Source: Fibrwrap Construction, Inc.

HAULAGE EXCHANGE TAKES ONLINE TRADING TO A NEW LEVEL

UK haulers can improve their profitability, increase the utilization of their fleets and reduce empty running by accessing a 1500 member "virtual" national network. This is thanks to a new Haulage Exchange that was launched recently.

Haulage Exchange has been developed by the experienced team behind Courier Exchange that has become established in six years as the busiest and largest freight marketplace in the UK. In 2005 Courier Exchange reached two significant milestones: 1500 subscribers and 250 000 jobs posted on the site.

These high levels of activity and the development of an online capability to provide haulers with total visibility and complete control of the sub-contract operation from initial order to final invoice, coupled with market demand has led to the creation of the new Haulage Exchange.

Having researched carefully what hauliers need from an online marketplace, Haulage Exchange has the capability to manage subscriber activity from three pallets to full loads. Unlike other electronic exchanges, Haulage Exchange is fully managed with support staff available to help subscribers maximize the benefits of using the site.

The dedicated support team also maintains the quality of the Haulage Exchange subscribers through strict accreditation, checking of 'O' Licences, goods in transit and other insurance, cover proof of identity and trade references. In addition subscribers 'score' each other across a number of operational benchmarks including on time deliveries, payment record, quality and accuracy of 'paperwork'. This 'self policing' aspect of Haulage Exchange gives it additional strength. Hauliers can join the Haulage Exchange by paying a small monthly subscription of around £60 (\$120) a month to give them access to the thousands of jobs on offer by other operators. Haulage Exchange provides the marketplace but does not get involved in the 'deal'. This remains the domain of the two parties involved in the sub-contract operation. This 'neutrality and independence' of Haulage Exchange is another key differentiator from other types of online exchanges. Haulage Exchange is a trading division of Transport Exchange Group Ltd, which specializes in the development & operation of real time collaborative trading platforms & associated services for the European transport industry. Transport Exchange Group is a member of the "Fret Alliance", Europe's largest network of professional freight exchanges.

Source: Transport Exchange Group www.transportexchange.co.uk



www.grouperpmtech.com

RITCHIE BROS. AUCTIONEERS HOLDS ITS LARGEST UNRESERVED INDUSTRIAL AUCTION

Ritchie Bros. Auctioneers Incorporated the world's largest industrial auctioneer, announced that it recently conducted its largest auction in company history.

Last February, the company held an unreserved 5-day auction in Orlando, Florida, generating gross auction sales of more than US\$113 million. The previous record held by the company was US\$79 million.

"A successful auction like this, together with our strong sale in Phoenix earlier in the month, certainly sends a very positive signal to the equipment market," said Gary Seybold, Ritchie Bros. Florida regional manager. "The size of the auction reflects the momentum we have been enjoying at our auction sites around the world. More and more equipment owners are participating in our unreserved auctions because they want access to the global marketplace."

The auction included over 135 wheel loaders, 120 loader backhoes, 200 crawler tractors, 210 hydraulic excavators and 72 articulated dump trucks. Day 5 was strictly a truck and trailer auction day, with over 700 trucks and trailers being sold.

Mr. Seybold added: "Our team worked non-stop in the weeks leading up to the auction, enabling us to put on a first-class auction for our customers. We painted over

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PowerTech Plus Engine Earns Tier 3 Certification

John Deere Power Systems recently announced that the PowerTech Plus™ 13.5 I engine has been Tier 3 certified by the Environ-

mental Protection Agency (EPA) The 13.5 I engine is the fourth model in the John Deere line to receive Tier 3 certification, joining the PowerTech Plus 4.5 I, 6.8 I, and 9.0 I engines.

"With all four engines in the PowerTech Plus family now certified, we are well prepared to offer environmentally friendly engines for John Deere and OEM applications that do not compromise on performance," said Mike Weinert, director of engine engineering for

John Deere Power Systems. "This is another example of our commitment to meeting stringent EPA emission compliance now and in the future."

The 13.5 I engine features a power range of 350 hp – 600 hp and employs the same proven technologies as the other engines in the PowerTech Plus family, particularly the engine electronics, cooled exhaust gas recirculation (EGR) and the variable geometry turbocharger (VGT). "These technologies are the key to our ability to meet emissions requirements and still live up to our customers' power expectations," said Paul Post, engineering manager of 13.5 I product development for John Deere Power Systems. Limited production quantities of the PowerTech Plus[™] 13.5 I engine began shipping to OEMs in November 2005.

Tier 3 regulations for 175 hp – 750 hp engines began taking effect in January 2006 and are aimed specifically at reducing oxides of nitrogen (NOx) in non-road applications. A major challenge for engine manufacturers is that technologies used for reducing NOx tend to increase particulate matter, have a negative impact on engine performance, and increases fuel consumption. However, John Deere Power Systems has met that challenge with advanced engine electronics, cooled EGR and the VGT.

Source: John Deere Power Systems

300 items and cleaned another 500 items in the refurbishing facilities at our auction site. We recently expanded our yard and it was completely full. We had the largest crowd we have ever seen in Orlando. This auction represents an excellent start to the year for Ritchie Bros. As for our team in Florida, we are already looking forward to our next sale in May."

In addition to being the Company's largest-ever auction, the Orlando sale also set new records for internet business. A record 1306 people registered to use the Company's rbauctionBid-Live service, which allows interested bidders to participate in the auction over the internet, live and in real-time. 580 items were purchased online, accounting for over US\$19 million worth of trucks and equipment items. The internet participants were buyers or runner-up bidders on 27% of the lots available for online bidding.

There are currently over 37 000 truck and equipment items featured in more than 40 unreserved industrial and 100 agricultural auctions in the upcoming Ritchie Bros. auction calendar. Details on all upcoming Ritchie Bros. auctions, including equipment that will be sold, are available on www.rbauction.com.

Source: Ritchie Bros.

HINES CORPORATION ACQUIRES THE KIMBLE GROUP OF COMPANIES

Effective as of January 13, 2006, Hines Corporation has purchased Kimble Mixer Company, Kimble Fabricating Company, and Kimble Chassis Company of New Philadelphia, Ohio.

Kimble Mixer Company began manufacturing state-of-the-art, rear discharge concrete mixer trucks in 1995. Kimble Chassis manufactures high quality speciality truck chassis.

Mark Hefty, executive vice president of Hines Corporation will oversee and direct the Kimble group companies. This is in addition to his position as president of Plymouth Industries, another Hines Corporation company group. Plymouth Industries includes Garlock Roofing Equipment and Cimline Incorporated and is located near Minneapolis, Minnesota.

Garlock Roofing Equipment is the largest manufacturer of professional roofing equipment and has distributors throughout the USA, Canada and elsewhere in the world.

Cimline Incorporated is a leader in the innovation of cracksealing and road maintenance technologies. With a full line of asphalt melters and ancilliary equipment, Cimline is represented by a strong network of established pavement repair specialists in North America.

Source: Hines Corporation

HEIL ENVIRONMENTAL TRUCK EQUIPMENT GROUP NAMED MVP BY NATIONAL TRUCK EQUIPMENT ASSOCIATION

The Heil Environmental Truck Equipment Group has achieved Member Verification Program (MVP) status through the National Truck Equipment Association (NTEA). Fewer than 200 of the NTEA's nearly 1600 member companies have received MVP status since the program was initiated in May 2005. The program recognizes companies that have good business practices and procedures in place.

Michael Johnson, general manager, Heil Truck Equipment Group, says the MVP designation can help customers decide which companies to do business with because



qualifying companies have demonstrated their capabilities as well as their commitment to customers and employees. "MVP companies operate at a higher standard," he says. "While other companies may be content to 'get by,' at Heil we want to continually exceed our customers' greatest expectations."

Source: The Heil Environmental Truck Equipment Group

SCRAP AND MATERIAL HANDLER SAFETY MANUAL NOW AVAILABLE FROM AEM

A 48-page safety manual for those who own, rent, operate or maintain scrap and material handlers is now available from the Association of Equipment Manufacturers.

The AEM manual contains basic safety "do's and don'ts" for typical work situations and is clearly written with many illustrations for easy readability. It covers general safety precautions, start-up and shutdown



guidelines, and procedures for safe machine operation and maintenance.

The manual is designed for use with scrap and material handlers in general, and thus is suitable for all types of makes and models of the machines. It is intended to supplement, not replace, safety codes, laws, rules and regulations or manufacturer operating manuals.

AEM safety-oriented manuals and videos are developed by volunteer executives from association member companies. The materials are distributed to manufacturers, contractors, dealers, engineers, machine operators, government officials, public works agencies, labor unions, architects, educators and others with an interest in the subject matter.

Source: Association of Equipment Manufacturers

VOLVO BECOMES MAJOR SHAREHOLDER IN NISSAN DIESEL

AB Volvo has acquired 40 million common shares, corresponding to 13% of the shares, in the Japanese truck manufacturer Nissan Diesel from Nissan Motor, with an option to acquire the remaining 6% of the shares from Nissan Motor within four years. The purchase price is approximately SEK 1.5 billion (\$225 million).

The transaction strengthens Volvo's Asian strategy and is intended to provide Volvo with access to Nissan Diesel's dealer and service network in Japan and Southeast Asia, and create a possibility for further industrial cooperation with Nissan Diesel in such areas as engines and transmissions.

Volvo and Nissan Motor are also going to assess the possibilities for cooperation in the commercial vehicle business in China together with Dongfeng Motor Co., Ltd.

Nissan Diesel is Japan's fourth largest manufacturer of heavy and medium-heavy trucks, with an annual production of slightly less than 40 000 trucks in 2005. More than 90% of Nissan Diesel's sales are made through its own dealers and Nissan Diesel has a well-established dealer and service network in Japan, as well as in the rest of Southeast Asia.

Source: AB Volvo



YeloRoll Conveyor Rollers Beat Winter Blues

The demands on conveying systems multiply dramatically during the winter season, especially in those climates where snow and ice are the norm. Conventional conveyor rolls are made of steel, which causes numerous problems when the snow flies.

Steel is a conductor. So temperatures on the outside of a steel can roll are transferred inside. Any moisture that builds up inside a steel roller can cause some serious damage to the roll, especially in the winter months.

Back on the outside, steel is easily etched by chemicals and scratched by wayward aggregate. These surface blemishes are a home for water and freezing temperatures and hitchhiking aggregate that sticks to the can surface, causing wear and tear to the belt itself.

Innoveyor, Inc. now offers a line of titanium-enriched PVC (polyvinylchloride) idler drums. These heavy-duty, lightweight rolls, branded YeloRoll[®] due to it's color, offer a number of features and benefits over any other roll on the market today, especially during the winter months when conventional steel can rolls can bring down a production line with every dip in the ambient temperature.

YeloRoll exceeds CEMA D standards. In snow and ice, this unique roller design prevents build-up that will damage the belt, slow productivity and eventually bring production to a halt.



Its smooth, non-porous surface rejects the graining and abrasion of steel can rolls. And it will not rust or corrode.

These same issues are avoided year-round with the YeloRoll, which also rejects caustic and corrosive materials being transported by the belt. YeloRoll maintains a smooth, nonstick surface that also prevents belt misalignment in any weather condition, and offers a longer shell life. The heart of the working end of all YeloRoll rolls is a high-quality, double-sealed, selflubricating ball bearing system. Unlike the taper bearings used in conventional steel can rolls, this runs smoother, cooler and quieter. Its carbon-fiber Combi-Cap[™] aids in reducing noise as well as the shock and vibration encountered in steel can systems.

Unlike steel can systems, YeloRoll's unique t-PVC shells are insulators, protecting against the transfer of heat and cold and thus condensation at the inner-working components while at the same time, reducing and actually preventing the risk of fire.

These same inner components are kept clean and dry through the use of YeloRoll's Combi-Cap system that protects the shaft ends. Its triple labyrinth seals keep dirt and other debris away from the roll and its critical inside components.

Technician-friendly, even more so during the cold winter months, YeloRolls weigh 60% less than their same-sized steel can behemoths.

Source: Innoveyor, Inc.

"Olympic-Sized" Heavy Equipment Show Continues to Grow

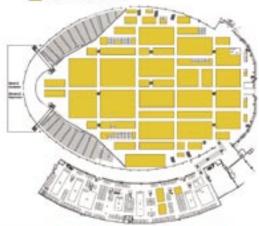
The much anticipated Expo Grands Travaux show just got bigger. Released in August 2005, booths in what will certainly be a huge event for the heavy construction and road building sectors sold quickly to the point where the Show Manager has been forced to expand the floor space. "What a fantastic problem to have," enthused Show Manager Mark Cusack, "we knew the demand was there, we just didn't expect it to be to this extent." However, Mr. Cusack is not fazed by the overwhelming response. "We chose the Olympic Stadium for a variety of reasons such as the fact it is so easy to access, it has ample on-site parking and the fact that it has lots of potential exhibit space."

As a result of the high demand, a new floor plan has been drawn including an area just a few steps away from the main floor know as the "Grandes Hauteurs". "We have been working at placing everyone we possibly can on the main floor but it has become abundantly clear that we need to move to the Grandes Hauteurs to accommodate demand." According to Mr. Cusack, the major players in the heavy equipment industry have taken huge amounts of space to display their complete lines. What that means to visitors is that whether their operation is large, medium or small, they will find exactly what they are looking for at this show. "This show will have something for everyone", he says, "whether you are a large municipal buyer, contractor or a small operation with only one or two machines, you will find what you are looking for at Expo Grands Travaux."

Expo Grands Travaux is proud to be endorsed by the Quebec Road builders Association, the Canadian Association of Equipment Dealers as

well as a number of leading publications. This new venture is managed by well-known trade show managers, Master Promotions Ltd, who are the successful producers of such shows as: the National Heavy Equipment Show (Toronto); the Heavy Construction Show

= VENDU / SOLD



WWW.EXPOGRANDSTRAVAUX.CA

(Abbotsford); the Atlantic Heavy Equipment Show (Moncton) and LOGFOR (Quebec). Source: Master Promotions Ltd.

Digital Hydraulics Help To Position Railway Bridge



Local conditions sometimes make it impossible to build a bridge on-site. In those cases, the bridge must be built up on an adjacent site or bank and then moved to the final position.

This is what happened in the Brussels Schaerbeke, where a steel railway bridge

with a length of 140 m and a weight of over 1600 t had to be slid across a number of already existing tracks. Enerpac was asked to hydraulically monitor the movement and the forces that occurred during the movement with its digital 'Synchro-

nous Lifting System' and to make corrections if necessary.

The new railway bridge in Brussels was built by order of the Belgian railways by Victor Buyck Steel Construction, a large internationally operating Belgian steel construction company. The bridge was supplied in parts and assembled on one side of the newly built railway viaduct. Because of the intensive use of the railways over which the bridge had to be placed and the fact that the railway traffic had to be stopped during the movement, the builder was given only 48 hours to move the bridge to its proper place. to guide the movement of the railway bridge with its 'Synchronous Lifting System' that had already proven itself all over the world.

PLATFORM WAGONS AND STRAND-JACKS

COMPLEX COMBINED ACTION OF FORCES

A steel construction may be called rigid and inflexible, but this is absolutely not true. Especially not in case of a steel railway bridge of this length and weight. Enormous forces are developed during the movement. Under the influence of these forces the steel construction and in particular the superstructure are subject to high, changing tensions and will certainly bend.

In order to have the combined action of forces develop evenly during the movement of the railway bridge and to prevent these tensions from becoming too high, the occurring pulling and pushing forces had to be measured and reduced if required. Additionally, the vertical position of the bridge had to



For the first phase of the movement a series of hydraulically controlled, multi-axle platform wagons (supertransporters) were used on both sides beneath the bridge as rearmost support points. For the second phase – the wagons could only reach a certain point – use was made of a hydraulic pulling system with 'Strand-Jacks', cable



be monitored, of course.

Manual monitoring and correction of the movement is too inaccurate in these cases. To much variation at the different points of support results in unacceptable tensions that may affect the construction. Besides, manual monitoring and correction takes much time and the builders did not have much time. Therefore Enerpac was asked



strands that pull the bridge meter by meter over the remaining distance. Apart from that a hydraulic retracting and braking system was provided, because the railway bridge had to be launched under a downward slope with a level difference of 2 m.

Eight temporary steel pillars were built to support the viaduct parts during the movement. Each pillar had been provided with a so-called 'draw beam', a pivoting steel cross with heavy springs to compensate the force, the angular displacement and the bending of the lower beam of the bridge. Beneath each 'draw beam' two hydraulic cylinders were mounted. The primary function of these cylinders was to keep the construction at the correct height. In order to reduce the resistance as much as possible during the movement Teflon gliding plates were applied between the 'draw beam' and the lower beam.

Additionally, a launching nose (beak) was provided on the front side of the bridge for a safer distribution of the forces and to limit the bends and tensions during the movement.

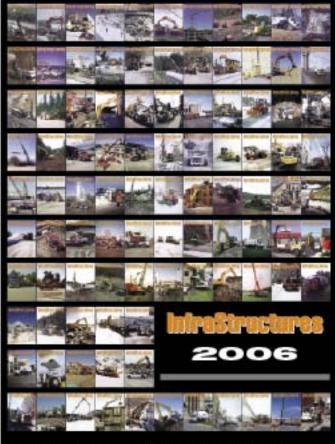
FORCES UNDER CONTROL

Victor Buyck Steel Construction accurately calculated the forces and tensions that could occur at each support point during the movement beforehand. In order to be able to control this complex combination of forces and to correct it if necessary, Enerpac installed a monitoring system especially built for this. This system consisted of a total of 32 measuring points (28 of which were used)



on an equal number of hydraulic cylinders, a central pomp unit with a pressure of 700 bar, plc-control and a computer system showing all movements and forces. Project leader J.P. Vrombaut of Victor Buyck Steel Construction was very satisfied during the implementation already. "Also thanks to Enerpac things are going much faster than we expected," he said. Both the hydraulics and the electronics of the system were designed and developed by a team of experts in the 'Enerpac Center of Excellence' in Spain. Enerpac itself hired out the equipment to the client, in accordance with the policy pursued with respect to such large projects. The installation and implementation were taken care of by the so-called Heavy Lift Team, experienced Enerpac





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experts from Great-Britain. The total project period – installation phase, test phase, implementation and completion - covered two weeks.

SYNCHRONOUS LIFTING SYSTEM: DIGITAL HYDRAULICS

The integrated and automatic 'Syn-

chronous Lifting System' of Enerpac is a combination of hydraulics with digital monitoring and control. No matter whether a bridge or a large building is concerned, this system offers an extremely effective method for both vertical

and horizontal movement and positioning.

The total system is built in such a way, that the different measuring points and cylinders are stable and do not influence each other and it checks the measuring way and force. For this the control system receives electronic signals from the movement sensors and the pressure in the cylinders is also electronically transmitted through sensors.

The computer continuously calculates the force on each cylinder using pressure sensors. The system checks the position

and movements of the individual cylinders

and controls pump and valves if necessary

to keep the forces at the correct value. In

this way each point of the object is moved

automatically and fully synchronically and positioned with millimeter accuracy.

When the force is outside a set value, the pressure is 'adjusted'. Here the speed of the computer is used to quickly send short pulses to the hydraulic valves. The result of this is that the individual cylinder movements can be many times smaller than with manual



operation. At the moment that a cylinder movement is outside the tolerance, a warning signal is sent and the entire movement is stopped manually or automatically.

Eastrock Presents the RocKracker

Eastrock Inc. is proud to introduces the revolutionary RocKracker, a new environment-friendly rock breaking technology.

RocKracker breaks hard rock and concrete by burning propellant to generate high pressure gas at the bottom of a drill hole, causing the surrounding rock to fracture.

The RocKracker system is commonly used in conjunction with a hydraulic breaker in order to maximize yield and productivity. The breaker can easily exploit the cra

induced in the rock.

However, the RocKracker is much safer to transport, store and use than regular explosives. The 1.4S hazard class of dangerous goods assigned to RocKracker allows it to be stored without stringent regulations applying.

Source: Eastrock Inc., 1-877-737-3963

Astec Inc. Wins National Recognition for Company Web Site

The National Asphalt Pavement Association (NAPA) announced that Astec Inc. of Chattanooga, Tennessee, has been named the winner in the associate member category of NAPA's Outstanding Web Site competition. The company received the award on January 24, 2006, at the association's 51st Annual Convention, "Ride the Pavement," in Hollywood, Florida.

The award recognizes Web site designs that promote the use of hot-mix asphalt (HMA) and the HMA industry.

Astec Inc. has been online since 1998 but updated its Web site, www.astecinc. com, in 2005. The new site provides a wealth of information for visitors, starting with background on the company and the many types of equipment and services it offers. It features useful links for customers (to permitting agencies, weather,

traffic, and more), departmental contact



names, corporate information for Astec stockholders, and employment opportunities for job seekers.

The company promotes its Web site in its print ads, directing audiences to find more detailed information about its products online.

Source: The National Asphalt Pavement Association



Elastomeric Reflective Roof Coatings Waterproof Roofs and Reflect UV Radiation

Henry Company has introduced a premium white roof coating that protects roofs with a weather proof moisture membrane, extraordinarily high solar/UV reflectivity (91%), exceptional peel strength and superior longevity.

Available as Henry[®] HE286 (HE587 at the Home Depot), this exceptional roof coating cures into a permeable roofing membrane that prevents liquid infiltration, while allowing moisture vapor to vent from the underlying substrate. In addition to resisting ponding water, the elastomeric roof coating expands and contracts during weather cycles without cracking and can be applied to new roofs in a single coat even without a base primer.

Henry[®] HE286 (and HE587) is designed to reduce interior building temperatures, and save owners money by reducing energy costs. The product is currently available at Arizona roofing wholesale distributors, hardware stores and home centers. If lowering building energy consumption costs, prolonging the life of the roof, and re-

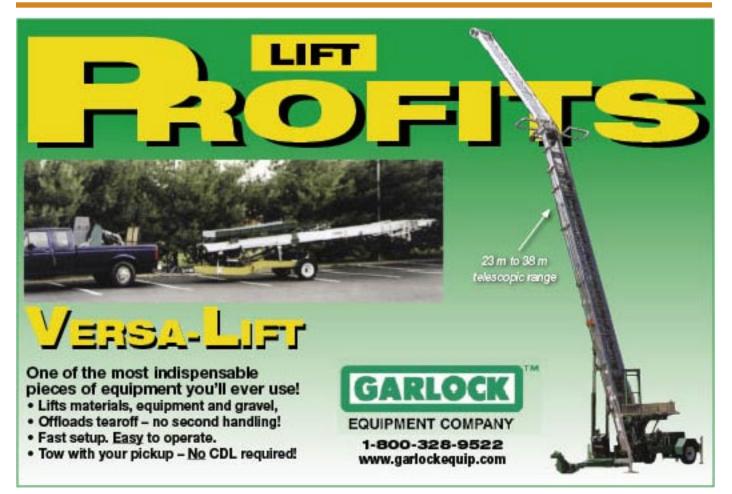
Council Product, Energy Star Rated, UL Classified and Fire Rated.



ducing air conditioning costs meet with your approval, then reach for Henry[®] HE280DC.

This new premium quality, easy to apply reflective roof coating features Miami Dade County Code Certification, and meets California Energy Commission Requirements, as well as LEED Requirements for Credit 7.2 Cool Roofs. HE280DC is a Cool Roof Rating Henry[®] HE280DC is a brilliant white, water-based acrylic latex roof coating that is highly resistant to discoloration, mildew, and dis-bonding. The product has a 10-year manufacturer's warranty, can be used on numerous types of commercial and residential roofing surfaces.

Source: Henry Company



Power Station Construction in Canada's Wilderness



The ongoing energy development of Hydro-Québec is part of a \$2 billion project undertaken by SEBJ (Société d'énergie de la Baie James). For Hydro-Québec, SEBJ has been instrumental in the development of a very rich hydroelectric area via numerous power stations installed since the 1970s. The new Eastmain-1 hydroelectric power plant – located on the Eastmain River near James Bay – is designed to generate 480 MW of electric power for Hydro-Québec. This was preceded by extensive negotiations with the Cree Indian clans resident in the region.

The enormous project includes a powerhouse, a main dam across the Eastmain River, the spillway on the right bank of the river, and 33 dikes for reservoir closure. The construction of the project's complex was broken down into five major contracts, awarded independently via open public bids.

The largest of all structures being built is the 50 m tall, 125 m long and 55 m wide powerhouse – where three huge turbines will generate the power. This surface powerhouse, built into a rocky hill, is on the left bank of the Eastmain River. By the time the water exits through the tailrace, it will have dropped over 60 m from the water intake. This head, combined with the flow, develops kinetic energy that causes the turbines and generators to turn, producing electricity.

In particular, the major \$108 million powerhouse, penstocks, and water intake project were started in the spring of 2004 under the direction of Canadian contractor Aecon-Hochtief JV. The Aecon Group is one of Canada's largest publicly traded construction companies, and the group is 49%-owned by German construction giant Hochtief. Upon completion in early 2006, the reputable general contractor will have pumped over 46 000 m³ of concrete. This amounts to about two-thirds of the total 68 000 m³ needed for the entire project.

AGGREGATES OF GRANITE, A LITTLE WATER AND LOW CEMENT CONTENT

In order to guarantee the most economic concrete placement possible, in addition to efficient concrete manufacture, the site management is absolutely dependent on reliable machine equipment. Project manager Ken Chryssolor of Aecon-Hochtief said, "For over 30 years, I've worked on huge jobs within James Bay so I know how difficult the abrasive granite mix is to pump. As we needed high performance equipment that could

handle the tough aggregate mix, we're depending on all Putzmeister products."

Instead of typical 125 mm pipe, 150 mm diameter was needed throughout the delivery system in handling the extremely harsh concrete mix supplied by the on-site batch plant. The brutal mix comprises crushed granite at 38 mm wide yet an inconceivable 100 mm long. Due to the abrasive mix, high pressures, and

distances involved, Putzmeister ZX pipes and couplings are also being used. In addition, with generally lower water/cement values, the concrete for many constructional elements have hardly any free water and the cement content is often significantly reduced in order to reduce the hydration heat.



CONCRETE MIXING TROUGH AS AN AD-DITIONAL "BUFFER"

Of the two trailer pumps, one serves as the main production unit being fed via a surge hopper directly flanged to the pump's hopper. The jumbo trough with a concrete capacity of 5 m³ allows a quick and full discharge of the



mixer trucks into its large capacity hopper. The buffer function of the mixing trough means it is also possible to continuously supply the main pump (max. output 95 m³/h) with concrete.

The second trailer pump serves as backup

because cold joints are absolutely forbidden or the powerhouse would be structurally deficient. Consequently, in case of an equipment malfunction, the second pump can finish a pour.

Mr. Chryssolor said, "We basically have to almost duplicate equipment needs because of our remote location 15 hours away from Montreal. With 600 men on a job, we can't afford down time. Fortunately, no major problems have resulted to-date, and the equipment has performed to our demanding expectations."

From April to November 2004, concrete work for the powerhouse took place. Two 24 m tall placing boom towers were anchored with bolts and had to be precisely mounted in specified locations so no cold joints would interfere with the flow of water upon project completion.

The two placing booms first provided full coverage to place concrete for both the walls of the huge turbines and the powerhouse structure itself.

In November, the two towers were moved to handle the intake structure. This time, they were supported by 4.5 m x 4.5 m x 1.2 m high poured concrete mats, and the placing booms still provided ample reach to all concrete placing areas.

Especially noteworthy is the placing boom's Multi-Z boom configuration, which proved exceptionally maneuverable in working under the low roof of a temporary overhead steel structure. The structure was specially built so construction could continue during the frigid winter months.

Aecon-Hochtief is also handling the horizontal concrete work for the penstocks. The three enormous penstocks are concrete-lined conduits excavated in the rock to channel water from the reservoir to the powerhouse turbines and are designed to maximize the head (drop in level).

During a peak period in summer 2004, nearly 2400 workers were housed in dormitories. Work is carried out in alternating shifts, each lasting 42 days. There are then ten days free. Similar to a mini-town, the site offers a variety of services such as cafeteria, hair salon, convenience store, post office and library along with indoor and outdoor recreational facilities. Once the project is complete, the approximate 1,3 km² workcamp will be dismantled and transported to another job site.

Besides building the concrete intensive powerhouse, other construction projects

on site are also utilizing various Putzmeister models. This includes a electric-powered trailer pump being used by Norascon-Hebert S.E.N.C. joint venture, two companies well established in Québec. The unit is competently placing concrete for all incline work associated with the penstocks.

In addition, a belt conveyor was utilized for placing concrete on the main dam across the Eastmain River. The contractor, Hamel Construction took full advantage of the conveyor's special functionality to place unusually tough mixes and other aggregates such as sand, gravel and rock with ease.

For construction of the numerous dams, various trailer-mounted pump models were utilized for shotcreting by Norascon-Hebert and also by Construction Injection E.D.M. Inc., who were sub-contracted by La Compagnie de Constuction et de Développement Crie Ltée in Montreal. In addition, a diesel-powered rotor/stator pump handled injection grouting for EBC Inc..

Even the Dynajet high-pressure cleaners were on-site working six months for Neilson

Inc. of Québec City. Next to the dam, two Type 500 models sprayed water at high 500 bar pressures to thoroughly clean selective areas of rock before concrete placement was possible.

As of spring 2005, the entire Eastmain-1 project was 66% complete. Plans are for the facility to be operational by late 2006.

SELF-CONFIDENT FIRST NATIONS PEOPLES

The Cree people are now one of the largest First Nations groups in North America. Their settlement area stretches from the Rocky Mountains to the Atlantic coast, in the north of the United States and in the south of Canada. The Cree people speak the Algonquin language and have their own written language.

After years of dispute over the dam project in their Reserve at James Bay, several clans of the Canadian Cree Indians, such as the Mistissini, the Nemaska and the Waskganish, agreed to a negotiation compromise between the provincial government of Québec and their chieftains in February 2002, after an agreement was reached among the clan



members in the nine villages of the Reserve.

According to this agreement, the Cree people will receive a total of \$3,4 billion over a period of 50 years as compensation for the construction of dams at the Eastmain and Ruppert Rivers, and as compensation for the flooded areas. The Cree people want to use the money to develop the economy, the infrastructure and living space. The negoti-



ated compromise was strongly disputed, especially among the younger members of the clans.

Today, there are around 1 million "First Nations" or "Inuit" people. They are believed to have reached the country via a land bridge from Siberia to Alaska. The first contact between Europeans and the First Nations people occurred around 1000 years ago when Vikings settled predominantly in Newfoundland. Due to its rich supply of oil and gas, Canada is today one of the leading energy exporters in the world. However, huge amounts are spent on using natural energy resources in their own country.

Intermat 2006, An Event Not To Be Missed. In Paris, April 24 - 29



MTG has developed a tooth-adapter fitting system that offers benefits in optimizing the productivity of excavators from 67 to 403 t and front shovel from 62 to 335 t.

The Starmet system is designed to provide optimal strength for mining applications. The teeth use the most efficient design on the market. The adapters are designed to last longer, reducing maintenance time and costs.



The theeth are held in place with new MTGtwist hammerless retainer solution. The system is designed to work without adapter mechanical protection, but does offer the possibility of adding one for high abrasion or high impact applications.

MTG

Hall 6 Stand P076

At Intermat 2006, visitors will be queuing at the **Sears Manufacturing** stand to take a

free ride on a travel simulator to experience the effectiveness of the company's latest innovation – the virtual elimination of vertical vibrations to the driver.



The Vibration Elimination System VES® Active Seat System is the first air suspension seat that combines Electro-hydraulic technology, with a low natural frequency Airide® air spring system, coupled to the unique integrated Vibration Control System VCS® with DUO® damping for both horizontal and lateral isolator.

Sears Manufacturing Co. (Europe) Limited Hall 5A Stand F038

Manitowoc Crane Group will display 11 products including Grove mobile cranes, Manitowoc crawler cranes, and Potain tower cranes. Seven of these products are new or making their first appearance at a trade show in Europe. There will also be displays from Manitowoc Crane CARE and CraneCREDIT; Manitowoc Crane Group's customer service and financing business units.



Among the new products on show at Intermat are the Grove GMK5220 all-terrain (called the GMK5275 in the US) and the Grove GMK4080-1 all-terrain (called the GMK4100 in the US). From Potain, new cranes include the Igo 11 and Igo 22 selferecting models. Manitowoc will display the Model 16000 crawler crane at Intermat, the first time Manitowoc has exhibited the 16000 outside the US.

Manitowoc Crane Group Exterior E6 Stand B060

OLAER offers a range of air/oil, tubular water/oil and plate water/oil coolers for use with mobile equipment (cranes, bulldozers,

trucks, lifting devices, etc.) The Oiltech LDC cooler range has been expanded by the LDC 20 with DC motor. The LDC 20 completes the range comprising the LDC 16, 23 and 28.



Thanks to

its compact construction, lightness and low noise, this air/oil cooler is ideal for the mobile equipment sector. It is equipped with a 12VDC or 24VDC motor. This cooler was developed for use with medium-power applications with low load losses. Its maximum cooling capacity is 34 kW at delta = 40°C. An optimal thermostat allows regulation of the oil temperature in the system.

OLAER

Hall 5B Stand H030

Other stands of interest		
Accessoires GeoRocFor	5A	J154
Axiomatic Technologies	5A	D081
Black Cat Blades	5A	H030
Breaker Technology CME	5B	C011
Famic Technologies	5A	G036
Flexxaire Manufacturing	5A	K041
Fordia	5A	J152
Geroquip	5A	D027
Magic Screed	4	G001bis
Ritchie Bros. Auctioneers	6	C010
Omnex Control Systems	5A	K056
RCP	5A	L055

Appointments

James H. Roberts, senior vice president of Granite Construction Inc., Watsonville, California, has been elected Chairman of the Board of the National Asphalt Pavement Association for 2006. Mr. Roberts was installed in office during NAPA's 51st Annual Convention in Hollywood, Florida.



Other national officers serving with Mr. Roberts for 2006 include Ronald M. White, Superior Paving Corp., Gaines-

ville, Virginia; first vice chairman; G.M. "Mac" Badgett, Vulcan Materials Co., Birmingham, Alabama, second vice chairman; James E. Weeks, Barrett Paving Materials Inc., Cincinnati, Ohio, third vice chairman; Blaine M. Johnson, Midwest Asphalt Corporation, Hopkins, Minnesota, secretary; and Thomas W. Hill, Oldcastle Materials Inc., Washington, DC, treasurer.

Mr. Roberts's NAPA activities include being a member of the Executive Committee since 2001. He has served on numerous committees and task forces, including the Legislative Committee, the Membership Steering Committee, the NAPA Research and Education Foundation (NAPAREF) Board of Trustees, the Marketing Field Implementation Task Force, and the NAPA/NAPAREF Smithsonian America on the Move Committee.

Source: National Asphalt Pavement Association

Terex Corporation has announced that **Hyeryun Lee Park** has joined the Company in the newly created position of president, Terex Asia. Ms Lee Park will work closely with Terex's operating segments to accelerate the Company's growth in Asia. She will divide her time between offices in Beijing and in Chicago.

Prior to joining Terex, Ms Lee Park was most recently president and owner of Midas Alliance Group, a consulting company with approximately 60 consultants with offices in Chicago, Seoul, and Washington, D.C. Midas Alliance primarily advised western companies on Asian business development. Prior to that, she was publisher of Construction Equipment and Construction Equipment Latin America for Cahners Publishing. She began her career with Samsung Construction Equipment America, and was responsible for overseeing Samsung's entry into the US market.

Manitowoc Crane Group announces that Roland Hammer has joined the company as director of strategic accounts. Mr. Hammer will handle specific accounts in the Americas across the complete range of Manitowoc Crane Group products, comprising Grove mobile cranes, Manitowoc crawler cranes, National boom trucks, and Potain tower cranes.

Hammer reports to David Birkhauser, senior vice president of sales for the Americas, and operates through the Manitowoc Crane Group – Shady Grove facility in Pennsylvania. Mr. Birkhauser said Hammer's appointment is significant for Manitowoc Crane Group.

Source: The Manitowoc Company, Inc.

Mack First To Offer Stability Protection For Concrete Customers

Building on its leadership position in the heavy-duty vocational truck market, Mack Trucks, Inc. now offers a new first-of-its-kind stability system – Mack Road Stability Advantage by Bendix (Mack RSA) – for concrete customers. Designed to reduce incident potential and enhance

profitability, the full electronic stability system is now

now available for mixer applications on the Mack Granite model.



"We're very proud to be the first heavy-duty truck manufacturer to offer this technology to vocational customers," said Steve Ginter, Mack

vocational products marketing manager. "Concrete customer demand for stability protection is strong because mixers, in general,



are recognized to have a high center of gravity and carry dynamic loads."

Mack RSA uses the existing ABS wheel speed sensors, along with steering, yaw and lateral acceleration inputs, to deactivate the throttle and selectively apply the brakes in sharp curves, sudden lane changes, or obstacle avoidance maneuvers, reducing the potential of a rollover.

In conjunction with Bendix Commercial Vehicle Systems, Mack began offering full electronic stability technology on its highway vehicles late last year.

"Engineering this technology for tractors is more straight-forward," said Tom Kelly, Mack vice president of marketing. "But as a leader in the heavy-duty vocational truck market, we're committed to getting this technology in the hands of mixer and dump customers as soon as possible. We targeted mixers initially per customer demand. But we're working very hard with our partner Bendix on other vocational applications as well, to make the technology available across the board in the very near future."

Source: Mack Trucks, Inc.

Bayne's Updated Web Site Makes Finding the Right Cart Tipper Easier

Bayne Premium Lift Systems, manufacturer of the refuse industry's mostrequested hydraulic cart lifters, has updated its Web site, to make it easier for

users to get the information they need quickly.

"We know that the refuse industry never sleeps," says Carmen Smothers, marketing manager. "We've updated the Bayne Web site to make it more of an easy-to-use resource that our customers can access at any time to get the information they need to maximize their productivity."



Source: Bayne Premium Lift Systems, www.baynethinline.com



Agenda

TRUCK WORLD 2006 April 20 - 22, 2006 Toronto, ON Canada

2006 North American Truck Show April 20 - April 22, 2006 Boston, MA USA

Intermat 2006 April 24 - 29, 2006 Paris, France



11th International Building Fair April 25 - 29, 2006 Brno, Czech Republic

APWA North American Snow Conference April 30 - May 3, 2006 Peoria, IL USA

CONEXPO ASIA May 16 - 19, 2006 Beijing, China

Expomin 2006, May 23 - 27, 2006 Santiago, Chile

43rd Canadian Fleet Maintenance Seminar May 28 - 31, 2006 Toronto, ON Canada

10th International Conference on Asphalt Pavement August 12-17, 2006 Quebec City, QC Canada

7th International Conference on Short and Medium Span Bridges

August 23 - 25, 2006 Montreal, QC Canada

SIVIC - International Industrial Vehicle & Body Trade Show August 29 - September 1, 2006 Saint-Jean-sur-Richelieu, QC Canada

EXPO Grands Travaux 2006 September 22 - 23, 2006 Montreal, QC Canada



INTEROUTE 2006 October 24 - 26, 2006 Rennes, France

North American Quarry & Recycling Show October 26 - 28, 2006 Atlanta, GA USA

24th International NO-DIG 2006 October 29 - November 2, 2006 Brisbane, QLD Australia

Bauma China 2006 November 14 - 17, 2006 Shanghai, China

World of Asphalt Show & Conference March 19 - 22 mars 2007 Atlanta, GA USA

National Heavy Equipment Show 2007 March 22 - 23, 2007 Toronto, ON Canada

Bauma 2007 April 23 - 29, 2007 Munich, Germany

Salon CAM-Logique April 26 - 28, 2007 Montreal, QC Canada





43rd Canadian Fleet Maintenance Seminar

519-886-6265

SUNDAY, MAY 28 2ThAnnual C.F.M.S. Golf Tournament

"Welcome Reception" Host: Mack Canada Inc.

MONDAY, MAY 29 New Products for 2006

The 2007 Emission Engines Specification Reviewed by Industry Manufacturers

Hands On Training Carlisle Motion Telflex – ProHeat Sternco LP MD Alignment Roadranger SKF CPL A.L.S. Vogel Howard Martin Co.

Corrosion Maintenance and Prevention Care

Auxiliary Heating/Cooling Systems to Eliminate Idling

TUESDAY, MAY 30 Load Securement

Tire Management

Obtaining Proper Aftermarket Parts and Services

WEDNESDAY, MAY 31 Concurrent Panels Municipality - Medium Duty Concrete and Construction Bulk Trailers and Carriers Safety in Line Haul Operations

Back to the Future Two Thousand and Twenty-Five

Medium Duty Trucks Maximum Duty Performance

OUTSIDE TRUCK DISPLAY VEHICLES & EQUIPMENT ON VIEW FOR THE TRUCKING INDUSTRY May 28 - 31, 2006 DoubleTree International Plaza Hotel Toronto, Ontario

- Second Annual C.F.M.S. Golf Tournament
- Annual Volvo Canadian Fleet Maintenance Manager of the Year Award
- The ChevronTexaco Diesel Technician Award

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Register online NOW and join us May 28 to 31, 2006. I look forward to your attendance at one of the best Reet Maintenance events in North America.

Yours sincerely, Rod Henderson, General Manager, Canadian Reet Maintenance Seminar www.cfmsonline.com





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