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PUBLISHER Jean-François Villard editor@infrastructures.com

CONTRIBUTING EDITOR Rob Holden toronto@infrastructures.com

ADVERTISING SALES Chantal Marquis Mario Robichaud sales@infrastructures.com

TELEPHONE 514-233-1295 613-862-1295 416-795-1295

FAX: 514-528-9932

ADDRESS CORECTIONS Send us your address changes by E-Mail to: subscriptions@infrastructures.com

> MAILING ADDRESS 4330 Saint-Hubert Street Montreal (Quebec) H2J 2W7

INTERNET www.infrastructures.com



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A Brief Word...

Spring is well and truly underway, with a host of meteorological records having been shattered in its wake.

Coinciding with spring is the arrival of budgets from most levels of government, and the forecast is distinctly stormy. Already in Toronto we have seen the clash of cultures pitting the collective lack of cash against the self interest of collective bargaining with little signs of compromise.

The reality of a lack of fiscal resources by government means sacrifices need to be made, and for the construction industry that means the termination or scaling back of capital projects. It also means that the less well represented dimension of infrastructure maintenance is under severe threat.

Those agencies and contractors associated with maintenance lack the voice of the public sector or the influence of their larger new/reconstruction rivals. The annual "pot-hole debate" with all of its public outcry and media attention is an excellent example.

When you "Band-aid" an abrasion eventually they stop sticking or the wound festers into something quite unpleasant.





On the cover:

the small town of Sainte-Catherine-de-la-Jacques-Cartier, a suburb of Quebec City, Quebec, bought an Antonio Carraro multipurpose tractor to maintain the city parks and lawns during the summer, and snow clearing and grooming the cross-country skiing trails during the winter.

This particular machine has been fitted with rubber tracks allowing it to float over deep snow.

ALLISON TRANSMISSION LAUNCHES ALLISON EXCELLENCE PROGRAM

Allison Transmission announced recently that they have launched a national service certification program to ensure Allison customers receive an even greater level of maintenance and repair services for their Allison automatic transmissions.

The Allison Excellence program further enhances Allison's service commitment by implementing key performance metrics for Allison authorized distributors that are designed to provide customers with the fastest, most accurate and cost-effective transmission service.

Allison already requires authorized distributors to have all technicians factorytrained, to utilize Allison-specific equipment and to maintain a comprehensive inventory of only genuine Allison parts. This additional level of Allison Excellence certification will require distributors

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to meet aggressive customer service standards focused on timeliness of repairs, inventory stocking and customer feedback.

"No unauthorized transmission repair shop has the combination of Allison training, equipment and parts to perform maintenance or make needed repairs and return Allison transmissions to proper working condition as accurately, quickly and consistently as does an Allison authorized outlet. Allison Excellence outlets understand that every hour a vehicle is out of service is an hour in which that vehicle is not producing or generating revenue for its owner," said Dennis Breedlove, Allison Transmission director, Global Channel Development and Aftermarket Programs.

Allison Excellence service is available at more than 165 certified service centers with nearly 3,000 factory-trained technicians across the United States and Canada.

"Customers invest in Allison Automatics because of the exceptional productivity, ease of use, low maintenance and long service life they bring to vehicles. Allison Excellence service protects that investment value and reduces the cost of ownership," added Mr. Breedlove.

Source: Allison Transmission

PURE TECHNOLOGIES ANNOUNCES NEW CONTRACT WITH THE CITY OF MONTREAL

Pure Technologies Ltd. announced recently that the City of Montreal has awarded new work to the Company worth up to \$4.9 million over a three year period.

Under the contract, Pure will provide inspection, condition assessment, integrity monitoring and risk analysis services for a portion of the City's high-value and critical water mains which include approximately 40km of prestressed concrete cylinder pipelines. Pure's patented and proprietary technologies to be deployed under the contract will include electromagnetic inspection – using robotic, manned or autonomous inspection tools such as PipeDiver® – and a permanent optical fiber acoustic monitoring system, SoundPrint®AFO.

The potable water distribution network for the City of Montreal supplies over 650 million m³ of potable water on an annual basis. The main distribution network extends over 680 km and is composed of pipes varying in diameters from 400 mm to 2700 mm.

Source: Pure Technologies Ltd.

CARLISLE TO ACQUIRE A LEADING MANUFACTURER OF SINGLE-PLY ROOFING SYSTEMS

Carlisle Companies Incorporated announced recently that it has entered into a definitive agreement to acquire Hertalan Holding B.V., for a purchase price of approximately €38 million (\$50 million). Hertalan is a leading manufacturer of EPDM-based (rubber) roofing membranes and industrial components serving key European markets. The business will operate within Carlisle's Construction Materials (CCM) segment.

Hertalan's products, manufacturing processes and distribution channels strengthen CCM's presence in Europe and complement the company's German-based PDT single-ply roofing business acquired in August, 2011. The niche-oriented market for single-ply roofing and waterproofing membrane solutions within Europe is expanding and the addition of Hertalan's long-standing capabilities in the region provide a solid footing for CCM to grow in the region.

The transaction is subject to customary closing conditions, including obtaining regulatory approval.

Source: Carlisle Companies

RITCHIE BROS. AUCTIONEERS ESTABLISHES NEW UK AUCTION SITE

Ritchie Bros. Auctioneers will conduct its first unreserved public auction at its new regional auction site at Donington Park, United Kingdom, on April 17, 2012.

"Twenty-five years ago we conducted our first European auction in Liverpool and have since seen a growing participation of buyers and sellers from the UK and Ireland at our auction sites around the world," said Guylain Turgeon, managing director EMEA, Ritchie Bros. Auctioneers. "Over the years, we have continued to innovate to enhance our auction method, making it easier for people to exchange industrial and agricultural equipment. With live online and on-site bidding, the equipment seller is now closer than ever to the global market. We are excited to be opening our new auction site to further enhance our services for our UK customers."

Today, Ritchie Bros. has 43 auction sites around the world, including six sites in Europe, where industrial auctions are frequently held. Ritchie Bros.'s auctions are open to the public and registering to bid is free. The auctions are unreserved, which means every item is sold on auction day to the highest bidder without minimum bids or reserve prices.

Source: Ritchie Bros. Auctioneers

ROTOBEC IS ONE OF "CANADA'S 50 BEST MANAGED COMPANIES FOR 2011"

"I am honored that Rotobec is recognized as one of the 50 Best Managed Companies in Canada. This tribute is a reflection of the extraordinary commitment of our people and of the trust expressed by our customers," says Robert Bouchard, president, Rotobec Inc.

Rotobec maximizes its efforts to meet the requirements of its customers. Rotobec offers products designed and built to their customers' needs and demonstrates great innovation and flexibility in serving various industries. Continuous improvement processes, coupled with cutting-edge



technologies, increase operation efficiency, enabling our customers to acquire high quality products at competitive prices.

Rotobec generates more than twothirds of its revenue in more than twenty

Source: Rotobec Inc.

countries.

GRINDING & DRILLING EQUIPMENT, INC., JOINS MORBARK NETWORK

Morbark, Inc. is pleased to announce it has signed a contract making Grinding & Drilling Equipment, Inc., its exclusive tree care products dealer for southern Ontario.

Grinding & Drilling Equipment, a new company selling environmental waste reduction and horizontal directional drilling equipment, is based in Desboro, Ontario, and will handle sales of Morbark's hand-fed brush chippers and stump grinders, as well as parts and service for Morbark customers in Ontario south of the 46th parallel. James Urquhart, Grinding & Drilling Equipment president, started the company after working for 15 years in the industry.

"We are pleased to add Grinding & Drilling Equipment to our dealer network," said Casey Gross, Morbark Tree Care Products sales manager. "Mr. Urquhart's industry experience and product knowledge, as well as Grinding & Drilling's focus on tree care and environmental waste reduction products, will give our customers highquality and personalized service."

"I am excited to partner with Morbark," said Mr. Urquhart. "I feel that our success depends on our customers' success, and Morbark's equipment offers so much more than the competition to help our customers succeed."

Morbark, Inc. is a manufacturer of tree care, forestry, sawmill, and wood recycling equipment. The company is based in Winn, Michigan.

Source: Morbark, Inc.

PALFINGER AG SIGNS TWO JOINT VEN-TURES WITH SANY HEAVY INDUSTRY

PALFINGER AG and Sany Heavy Industry Co.,Ltd entered into an agreement on the establishment of two joint venture companies in which both parties will each hold 50% of the shares. Sany Palfinger will primarily produce and sell PALFINGER products in Changsha for the Chinese market; Palfinger Sany, with its registered office in Salzburg, Austria, will distribute the mobile cranes produced by Sany in the global market outside China. The establishment of the two joint ventures is subject to the approval of the authorities.

Sany Palfinger SPV Equipment Ltd. in Changsha, China, will develop and produce truck-mounted knuckle boom cranes and telescopic cranes on the basis of the technologies of PALFINGER and Sany for the Chinese market. The medium-term target is a market share of 30%. Sany Palfinger SPV Equipment Ltd. will establish a new plant near Sany's facilities, with production capacities for 10,000 cranes. At the same time, a dense sales and service network will be set up in China. First, ten standard crane models will be produced in series for the Chinese market. In a second step, other PALFINGER products, such as container handling systems, tail lifts and access platforms should be included in the production and sales portfolio. The company will start operations in 2012 and will have reached full operational effectiveness by 2013.

Palfinger Sany International Mobile Cranes Sales GmbH is being established as an international sales and service company, having its registered seat in Salzburg and exclusively distributing Sany's mobile cranes in Europe and CIS. Furthermore, for the Americas, the development of a truck-mounted stiff boom crane is planned. The company will start operations without delay and will have reached full operational effectiveness by the end of the year.

Both companies will be subject to the

Austrian Code of Corporate Governance and will prepare their financial statements in accordance with IFRS and Chinese GAAP, respectively.

Source: PALFINGER AG

AECON/SNC-LAVALIN JOINT VENTURE SIGNS MAJOR CONTRACT FOR DARLING-TON REFURBISHMENT PROJECT

Aecon Group Inc. announced recently that a joint venture between Aecon Industrial and SNC-Lavalin has been awarded a major contract by Ontario Power Generation (OPG) to carry out the Definition Phase for the Darlington Retube and Feeder Replacement (RFR) Project.

The overall RFR Project consists of two phases - a Definition Phase from 2012 to 2016 and an Execution Phase from 2016 to 2023. The Definition Phase includes the construction of a full-scale reactor mock-up to simulate key elements of the refurbishment work, and the development, procurement and testing of specialized tooling required for the Project. It further includes the development of a detailed scope, schedule and budget for the Execution Phase, as well as procurement of reactor components for the first unit to be refurbished.

The total value of the Definition Phase is estimated at over \$600 million. The value of the Execution Phase will be determined once the Definition Phase is completed. Source: Aecon Group Inc.

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Plants Against Oil, the World's Largest Commercial Reed Bed Water Treatment Plant in Oman

Margit Bauer, BAUER Water GmbH Special Collaboration



The former FWS Filter und Wassertechnik GmbH, a wholly owned subsidiary of the BAUER Group, has been trading under the new name of BAUER Water GmbH for a year. FWS had already been operating as an equipment manufacturer in the field of water treatment since 2004, and last year, Following this, one of their project, the innovative reed bed treatment plant in the Sultanate of Oman on the Arabian Peninsula won in the category "Industrial Water Project of the Year" at the 2011 the Global Water Awards.

PURIFICATION OF OIL-POLLUTED WATER?

In environmental terms, there can hardly be a more urgent problem waiting to be solved. As soon as the term "oil production" is heard, one automatically thinks of the Gulf of Mexico and the disturbing scenes of the enormous oil slick choking flora and fauna alike. In this scenario, oil and water appear to be so irreconcilably linked that one would find it inconceivable for oil and water to be separated by vegatation alone.

This pioneering development is being realized at a water treatment project in the Sultanate of Oman on the Arabic peninsula. Here, the German construction In the Nimr oil field, in Oman, only a tenth of production is pure crude oil. Around 250,000 m³ of contaminated water are generated daily. To date, the oil-polluted water is simply reinjected into



the reservoir, which requires an enormous amount of energy and significant financial resources. For a long time, the well operator has been thinking about how the produced water can in future be treated in an environmentally friendly and energyefficient way. At first glance, the solution



the company has been renamed in the context of the strategic development of the BAUER Group's Environment division.

The objective is to establish BAUER Water even more firmly in the drinking water sector and in the field of industrial water purification, to continue the expansion of its international business and to benefit from growth in this market. and equipment company Bauer deployed a purely biological technique for the treatment of oil-polluted water on a large scale. Simple reed plants are used for the purification of process water from the oil production. It is a little known fact that oil rarely wells up to the surface by itself. As soon as the pressure

inside a newly opened up reservoir declines, water is injected that will then eject the oil to the surface at another location. At

current oil price levels, even water contents of up to a whopping 90% are considered to be economical. The vast quantities of oil-polluted water generated in this process can easily be imagined.



I. to r.: Simon Karam (Sarooj Construction Company), Kofi Annan, Dr. Roman Breuer (BAUER Umwelt GmbH), Wolf-Dieter Rausch (BAUER Nimr LCC), Badar Al Sharji (Petroleum Development Oman), Joachim Huth (BAUER Water GmbH) and Peter Hingott (Bauer Resources Environment Division). (Picture by courtesy of Global Water Intelligence)

does not appear to be spectacular – a reed bed treatment plant using locally grown reed plants. Over the past 10 years, the oil field developer has piloted the treatment of produced water by reed beds and tested the reeds' tolerance to polluted water - a real acid test for the plants. Surprisingly, however, the reed plants survive the poisonous cocktail almost unscathed.

A local subsidiary of the Bauer Group who's business activities in the "Resources" sector are continuing to grow significantly since its formation in 2007 has been appointed to develop the reed bed technology, based on the pilot project, in such a way that the entire volume of produced water is treated. The contract has been awarded as a Design, Build, Own, Operate and Transfer (DBOOT) contract. This means that after completion of the reed bed treatment plant, Bauer Nimr LLC will also operate and maintain the plant for a period of twenty years - the overall contract value for the entire duration totals around \$174 million.

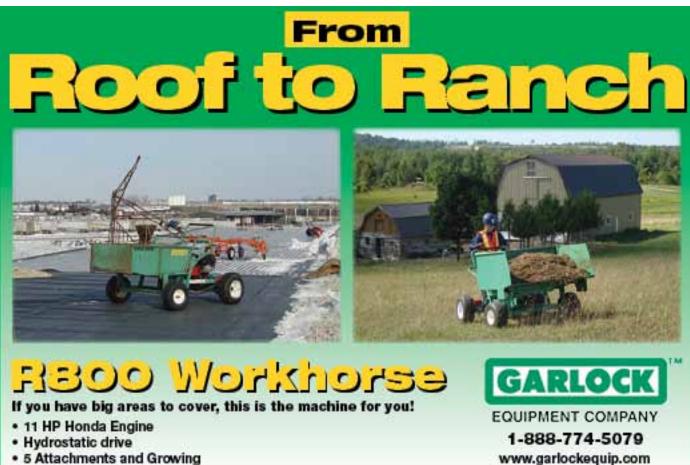
Based on the four-stage pilot plant, Bauer's environmental engineer, Dr. Roman Breuer, and his team developed a suitable concept for a large-scale plant. The treatment plant is now also capable of removing any dissolved and residual organic matter in the water. What remains is clean



water, which can also be used for agricultural irrigation purposes. But that is not all: the treatment process also produces biomass that can be used as a source of energy, for example, generating electricity. A further valuable by-product is salt that is produced in evaporation ponds and can be used by industry.

The largest commercial reed bed water treatment plant in the world will save not only an enormous amount of energy and real money in years to come, but of course also CO2. Reeds grow almost anywhere

and the energy consumption for the effluent is almost zero. As a result, the project is ground-breaking for the management of production water in the oil industry, which is primarily located in desert areas, and of course many other applications. Reed bed treatment plants can be applied to the treatment of domestic effluent of entire towns. The small states and emirates of the Middle East, in particular, are already investing in innovative products and techniques in the area of ecology - they are preparing for the period after the oil has



run out. sealants, synthetic materials were rejected in favor of a natural product. The surrounding desert areas were searched for suitable rocks until an appropriate sealant mixture was found. Soon, the first reed plants will be growing in the uppermost soil layer – initially around 1.2 million plants.

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Elliott Equipment Company Adds New Greer Insight LMI to BoomTruck Line

Elliott Equipment Company has begun installing the new full-color Greer Insight Load Moment Indicator (LMI) system on select BoomTruck models, ranging from 9 to 45 t capacity, starting in early 2012.

The Greer Insight LMI, unveiled at CONEXPO-CON/AGG 2011, is said by the manufacturer to be, "the industry's only electronic monitoring displays to offer feature-rich capabilities, multiple screens, multiple language options and metric conversions at the click of a button." Its waterproof and rugged design is built for clear visibility and full functionality in temperatures as low as -40°F.



Elliott customers will benefit from the new full color display, improved sunlight visibility and easy setup. Crane operators can view an image of the crane on a screen that shows rated capacity, actual load weight on the line, radius of the load, boom angle, boom length, working area, and much more. The LMI will also retain all programmed settings after shutdown, eliminating the requirement to recalibrate the LMI during each startup. Furthermore, the Greer Insight was developed specifically for BoomTrucks, making it an excellent fit for Elliott's niche customizable BoomTruck line.

Source: Elliott Equipment Company

The Right Crane Solutions to Get the Job Done

We Energies, an electric and natural gas utility located in Wisconsin, knows that Dawes Rigging & Crane Rental, as a member of the ALL Erection & Crane Rental Family of Companies, offers the professional expertise that comes with owning one of North America's largest and most modern fleets of cranes. In 2008, We Energies began construction on a new air quality control system, scheduled to be completed later this year. As a contractor, Dawes was able to provide as many as 20 cranes at one time.

Dawes' cranes were on-site from the outset doing everything from steel erection to placing new ductwork and chimney components. The Manitowoc 18000 crawler crane with an added MAX-ER[®] was key to saving money on the project, increasing the crane's base capacity to do the required work while reducing cost. Originally, project engineers handling the job wanted to hire a Manitowoc 888 crawler with a RINGER[®] attachment to set the ductwork across a bluff on the shore of Lake Michigan, where the power plant is located. Adding a ringer attachment and pedestals to a crane distributes the load over a larger area and can increase the lifting capacity dramatically. But the cost and time delay can be dramatic, too. The large ringer attachment must be transported onto the

job site, and a foundation must be built to support the ringer's pedestals.

Meeting on the We Energies site with the engineers, Dawes formulated a plan using their Manitowoc 18000 that was already on the site. By adding a MAX-ER attachment and reconfiguring the boom, the customer could save hundreds of thousands of dollars in rental fees alone. The MAX-ER is a cost-effective way to increase the 18000's base capacity, eliminating the time and expense of transporting and setting up a larger crane or, in this case, the 888 crane with a ringer. The engineers fortified the road along the work area to support the



18000, and everything worked as planned.

Dawes also came through when a 272 t Manitowoc 2250 crawler with luffing jib had to be erected on the side of a bluff between two groups of major power lines coming into the facility. The crane had to be built down below the bluff and brought up the hill separately from the boom so as to avoid the power lines. The luffing jib was then pinned to the boom from an adjacent parking area. Expert logistics and safety planning ensured a success.

Source: ALL Erection & Crane Rental Corp.

Manitowoc 7000 Works on Mississippi River Bridge Project

A Manitowoc 7000 is taking center stage on the construction of a cable-stayed bridge in St. Louis, Missouri, that will span the Mississippi River. The 317 t capacity crane is being used to construct two towers that will support the bridge.

The Manitowoc 7000 is pedestal-mounted on a 28 m x 60 m barge. It is being used to lift preassembled rebar cages into place. These cages will form the base for the two 124 m towers that will support the bridge. The crane will perform over 70 rebar cage lifts, weighing from 20,4 t to over 45 t.

The crane is currently configured with 99 m of main boom and a 18,3 m jib. As the project progresses, the crane will be reconfigured with 122 m of main boom and 18,3 m of jib to provide a tip height of 140 m.

Massman Construction of Kansas City owns and operates the Manitowoc 7000. Massman is the lead contractor in a joint venture, which includes Traylor Brothers of Evansville, Ind., and Alberici Constructors of St. Louis.

Dale Helmig, project manager for Massman Construction, says that having a largecapacity crane available will help them stay on schedule throughout the construction process.

"The Manitowoc 7000 saves us time," he says. "There would be no way we could meet the schedule without preassembling these rebar cages."

After the towers are complete, the Manitowoc 7000 will be used in conjunction with other Manitowoc crawler cranes on the project to lift the field sections into place for the bridge span. These sections measure 15,2 m long x 28,6 m wide and weigh 90,7 t.

Other Manitowoc crawlers on the project include two Mani-

towoc 2250s, a Manitowoc 4100W and a Manitowoc 4000W.

One of the 2250s, configured with 76,2 m of main boom, is being used to pour concrete on one side of the river while the 4100W is pouring concrete on the other side of the river.

The other 2250 is configured with a 64 m main boom and is being used as a support crane on the project.



The \$229 million Mississippi River Bridge project is a new four-lane bridge crossing the Mississippi River connecting downtown St. Louis and southwestern Illinois that, when complete, will be part of Interstate 70. With a 457 m main span, it will be the third-largest cable-stayed bridge in the United States. The bridge will be open to traffic in 2014.

Source: Manitowoc Company, Inc.

35 Liebherr Tower Cranes in Sochi for the Winter Olympics

Liebherr tower cranes are setting the scene on the skyline in the Russian town of Sochi, venue for the 2014 Winter Olympics. The yellow Liebherr tower cranes make an impressive sight, hard at work on a whole range of sports facilities and infrastructure projects.

The construction projects involving the Olympic Village, with the Central Stadium, the Skating Stadium, the Ice Hockey Arena, and the Media Centre are all predominantly being carried out using Liebherr tower cranes. Liebherr-Russia OOO has leased Liebherr top-slewing cranes from the Series EC-H and EC-B to a number of construction companies.

The infrastructure projects such as the railway station, a shopping center, and the building of a bridge over the River Mzimta are all also being undertaken with Liebherr tower cranes.



Two Liebherr tower cranes from the EC-H series are working on the construction of the railway bridge over the Mzimta. The top-slewing units can achieve freestanding heights under hook of close on 85 m. The 550 EC-H 40 Litronic and the 200 ECH 10 FR.tronic are mounted on reinforced 500 HC towers, in order to guarantee stability in this region which is prone to the threat of earthquakes.

The bridge carries both road and rail traffic from Sochi over the River Mzimta to the venue location for the Olympic skiing events.

Source: Liebherr

INTER 10 booth E6 A 042

200-Meter High at the Corgo Viaduct

CAET XXI, a temporary consortium formed by the Portuguese construction companies Soares da Costa, RRC (Ramalho Rosa Cobetar) and the Spanish FCC, is presently building a viaduct over the Corgo river, in the Portuguese town of Vila Real, with the collaboration of two longest and highest in Portugal, is part of the Transmontana Highway, which will soon link the city of Oporto to the Spanish border.

The Corgo Viaduct, with a length of 2,795 m, a height from the bottom of the valley of 230 m, and a main span of 300 m,



Linden Comansa tower cranes hired to Ibergru, Linden Comansa's official dealer in the country. This viaduct, one of the will run over three roads and one railway line. Pillars number 18 and 19, the highest of the whole structure, are being built by two Linden Comansa Flat-Top tower cranes, model 21 LC 400, with maximum load capacity of 18 t, and erected with jib lengths of 70 m, allowing them to load up to 5,000 kg at the jib-end.

The cranes are currently erected with a height under hook of 168 m, but both of

them will soon reach an impressive height of 207 m. The jacking-up of the cranes from the initial height (69.2 m) has been



performed by Ibergru, using a hydraulic cage J4-1 in three phases (up to 101 m, 132 m and 168 m) and, in a few weeks, the last jacking-up will be carried out to reach its final height of 207 m.

In order to ensure the stability of the cranes at such height, each one holds four ties to the pillar, at heights of 50 m, 81 m, 113 m and 156 m respectively, and

First Certified Small Wind Turbine in America

Bergey Windpower announced recently that its best-selling BWC Excel 10 wind turbine is the first to receive full certification to the new "AWEA Small Wind Turbine Performance and Safety Standard". "This new standard is the most significant milestone in the history of the small wind industry because it provides, for the first time, third-party verification of real world performance and a highly technical review of a turbine's strength and safety," said Mike Bergey, president of Bergey Windpower and the 2011 president of the Distributed Wind Energy Association. "This is huge for consumers because it addresses the 'hucksters and hype' problem in the small wind marketplace. We are very proud to be the first to achieve this gamechanging certification."

The Bergey Excel 10 is a 7 m diameter horizontal-axis turbine designed to provide the annual energy requirements for homes, farms, and small businesses. More than 2,000 Excel turbines have been installed in more than 50 countries. It has only three moving parts, requires no annual maintenance, and was the first small wind turbine to carry a 10-year warranty. Excel owners include hundreds of homeowners and farmers, schools, museums, state and federal parks, all branches of the U.S. military, and major corporations.

The AWEA standard was developed over a five year period by a committee of over 30 individuals drawn from industry, research organizations, universities, retailers, and users. The U.S. standard, which references a number of existing international (IEC) standards, has been adopted in Canada and, with some minor changes, in the UK.

Certification of the Excel 10 turbine was granted by the Small Wind Certification Council (SWCC), an independent organization funded by several states and the U.S. Department of Energy.

Bergey Windpower introduced a new 5 kW turbine last September and it is currently undergoing certification testing at the Alternative Energy Institute in Canyon, Texas. Bergey expects the Excel 5 to be certified by the SWCC early in 2012. Their



10 kW turbine is also undergoing certification in the UK, which will make it eligible for the substantial feed-in-tariffs provided by the British government. Bergey expects its UK certification to be granted within weeks.

Source: Bergey Windpower

with a length from the crane's mast to the viaduct's pillar of up to 10 m.

The project of tie frames has also been executed by Ibergru. According to the company's technical director, António Fonseca, its installation has demanded a strong coordination with the works in progress: "The metal sheets for the ties were set on each pillar by night and during the sliding of the formwork, allowing the sheets to be placed in merely 3 hours."

Beside the common works of this type of jobsite (hoisting of concrete and iron), the cranes have lifted and assembled the framework trolleys, and are also assisting the assemblage of the suspension cables of the bridge. The tasks comprised by the assembly and disassembly of the supporting platforms located around the pillars due to their position, both large weight and dimensions, were especially complicated to perform.

"The 21 LC 400 tower cranes are matching the high requirements of this type of project, presenting minimal downtime periods while executing simultaneous tasks such as the segments of the deck,



the mast and the suspension system and working 24 hours a day while constructing the pillars with sliding formwork," says Luis Nogueiro, project director.

José Manuel Rio, production director, and Davide Borges, technical department, consider that the usage of these cranes allowed to minimize the number of the risky activities inherent to work at such heights – many heavy large-dimensioned structures have been preassembled on the ground, and then lifted up to the deck level so to avoid assembly works on the top of the pillars.

The cranes started to work on the construction of the viaduct in October 2010, which is planned to be concluded by October 2012. Ibergru has not only rented the cranes, but also contributed with its solid experience in large projects and technical consulting, in order to guarantee that the construction works are completed under the best conditions of both efficiency and safety.

Source: Construcciones Metálicas Comansa S.A.

Kyocera Solar Modules Deliver Reliable Performance After More Than 25 Years in the Field

In recent years the solar energy market has seen extensive growth and undergone massive change. With so much fluctuation in the market landscape it becomes increasingly difficult for end-users to know where they can place their trust; particularly concerning a major purchase like solar energy which requires a long-term return on investment. Kyocera Corporation has been a pioneer in solar energy technology for more than 35 years, and is known for the outstanding quality of its solar modules. Furthermore, the company boasts a number of real-life installations that have been consistently producing electricity for more than 25 years. These installations provide evidence of the exemplary reliability of Kyocera modules - a track record of both Kyocera's commitment to the market and its reliable product life.

Two aspects of major importance for any solar module are energy conversion efficiency and product life. A pioneer in multicrystalline silicon solar cell manufacturing technology with one of the highest conversion efficiency rates in the industry, Kyocera has a longer track record than the vast majority of market players.

In the U.S., nearly all solar module manufacturers offer a product warranty of 20 years or more, but very few have been in business that long. When

end-users are considering implementing solar energy at their home or business, it is important to factor in whether the product will indeed last as long as promised, and if the company offering the warranty will still be around to honor it. With long-term



field results to stand on and over 35 years of solar research, development and manufacturing, Kyocera's track record provides end-users with confidence on both accounts.

Source: Kyocera Solar

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Sennebogen Accelerates Turnaround, Reduces Costs at the Port of Charleston

After commissioning a new 168 t Sennebogen scrap handler at the Kinder Morgan Energy Partners barge facility in the Port of Charleston, Southe Carolina, the truck fleet use was reduced by 25% while still keeping pace with customers' demand for material.

Faster turnaround for Kinder Morgan's fleet of 90 t haulers and reducing the impact of rising fuel costs were the main points when Sennebogen approached Kinder Morgan with the concept of the 880 R-HD material handler three years ago. "We move between 1.5 and 3.5 million t of material out of port here every year," says Terminal manager Daryle Wall. "The volumes of our facilities in this area have provided us with experience using every kind of material handler, crane or excavator you can name. We were already looking for an alternative in 2007, when Sennebogen came to us with their idea for the largest electric drive scrap handler in the country. We saw that we had as good a location as you'd want for this type of machine, so we decided to work with Sennebogen on the project."

Constantino Lannes, president of Sennebogen LLC, welcomed Mr. Wall's interest in the project. "It took a leap of faith for Kinder Morgan to step up to the 880 R-HD," he says, "but their application here and their experience with our equipment made them the ideal partner. Sennebogen led the adoption of electric drive material handlers in America. No one had produced an electrically powered unit as large as this, so we needed a test bed to prove the engineering."

The 880 R-HD would be a prototype, and it would take time to build and refine the new machine. "We knew we were the guinea pigs. We didn't know if it would work, but we wanted to try because of the future savings which, with the way fuel costs have gone up, turned out to be a pretty good decision," said Mr. Wall. Since the new machine went into operation, diesel deliveries are down more that 20%, saving the facility significant costs on a monthly basis.

MORE THROUGHPUT WITH A SMALLER BITE

At Kinder Morgan's Berkeley Operations, a fleet of haul trucks carry up to 107 m³ per



load from the dock to nearby stockpiles. At dockside, the unloading facility had been using rope cranes fitted with 16.8 m³ grapples. The grapple on the 880 R-HD machine is half the size, with just a 7.7 m³ capacity, but it keeps the trucks cycling faster, with larger loads. "Our other cranes are big and run much slower for the job," says Mr. Wall. "They couldn't accurately fill up the corners of the truck like you can with the smaller grapple. The trucks are moving more towards their capacity at 107 m³ than the 85 to 92 m³ we were getting. The 880 R-HD can also run two complete loading cycles per minute into the trucks, against just one cycle with

Mack Manufacturing Self-Contained Orange Peel Grab

Mack Manufacturing developed the original five-tine orange peel grab to help scrap handlers and steel processors to hold and retain larger loads more efficiently. Specifically designed for electric overhead cranes moving scrap in steel mills, the OPSISCH-350-5 grapple is a completely selfcontained electric drive unit, ready for operation with a large 3.5 yard capacity.

The grapple's heat-treated alloy steel construction combines



light weight for high efficiency and lift capacity with rugged strength, including heattreated steel pins and shafts sized to ensure maximum service life. All Mack grapples and buckets are fabricated with T1 steel, a heat-treated alloy with twice the structural strength of standard mild steel and able to withstand three times as much pressure before bending. All service components feature recognized national brands, including Mack's own heavy-duty hydraulic cylinders, custom engineered and manufactured in-house.

Mack recommends these grapples for use on all types of derricks and overhead cranes. These orange peel grabs are available with or without hydraulic rotation in sizes from 1.0 to 12 cubic yards.

Source: Mack Manufacturing

the old machine. The turnaround for our trucks is faster, so we're unloading the barges faster and doing a better job for our customer."

The crawler-mounted material handler simplifies the unloading operation further by being able to traverse the length of the dock under its own power. A powered tether line allows the machine a 120 m range of movement to position itself for unloading either of two barges at the dock. With this mobility, there is no need to winch the barges into place under the crane.

ELECTRIC IS SIMPLER

Along with the fuel savings, Daryle Wall says that switching to electric drive saves other operating costs as well. "We don't have to worry about oils, lubricants or engine rebuild costs," He continues. "With a diesel engine, you have the possibility of overheating, which is completely eliminated with the electric motor. The electric motor is a much better solution, causing less downtime. Electric is simpler, much more reliable, much more 'accurate' so it eliminates overheating. And it's quieter, so it's even better for the operators."

Mr. Wall notes that the Sennebogen cab was also welcomed by his operators. "With the cab extended up and out, the operators are able to view the entire barge at once. We have operators asking to transfer down here for that job!"

COMMITMENT PAYS OFF

Having taken a risk to collaborate with Sennebogen on commissioning America's first 880 R-HD, Daryle Wall says the new machine has more than met expectations. "I can't give enough credit to the Sennebogen service team, Jim Westlake and Bob Marean. They worked through all the 'interesting' challenges that came up along the way – there're no better guys out there. Being so new, there weren't a lot of mechanics anywhere trained on this, but they and our dealer's mechanics have been great about coming out and working alongside our mechanics. And, they're continuing to stay in touch, monitor the machine's use and servicing, along with talking to our operators."

"We all committed to this project and it has taken us out further than we ever dreamed," he concludes.

Source: Sennebogen LLC

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Cedarwell Excavating Finds Ways to Keep Growing

Thanks to an enthusiastic, always looking- for-an-opportunity owner, Cedarwell Excavating Ltd. is continuing to find new ways to grow, despite a somewhat sluggish economy.

"Years ago we started with a single Hitachi EX100," states Jorg Weller, owner, "providing custom excavations to area

contractors and farmers. We kept getting asked by different people around town to do one project after another."

Headquartered in Hanover,

Ontario, the company was situated at the far northwestern edge of metropolitan Toronto and was able to profit from the city's fantastic growth and expansion of the 1990s. As a result, Cedarwell found opportunities providing site-development work for developers and building pads for commercial buildings, as well as doing the odd farm-drainage job.

"I did well during those boom times, for sure," says Mr. Weller. "The excavating business was good, and my first choice of led to Cedarwell becoming involved in trucking as well as their own aggregate pits. "It became a natural to have more and more of my own trucks for hauling dirt in and out of the building pads and development sites. And then, of course, the sites needed gravel. Fortunately, there is good rock in the Hanover area," he adds.



a Hitachi excavator turned out to be a good one. It never let me down. So, I bought more."

The commercial-development business



The company bought and leased multiple pit locations, bought a mobile crusher, and went to work providing for the needs of their customers. "We bought

New EDGE[®] Tree Puller/Grabbing Tool

CEAttachments, Inc. announces the addition of all new EDGE Tree Puller/Grabbing Tool attachment for skid steer loaders.



The new standard-flow EDGE Tree Puller/ Grabbing Tool attachment is designed for tough landscaping, construction and agricultural applications.

Source: CEAttachments, Inc.

Advanced Electrohydraulic System Help Improve Reliability of Diesel Hydraulic Grabs

Eaton Corporation recently announced that Page Macrae Engineering of Mount Maunganui, New Zealand, Australasia's leading manufacturer of ship cargo handling equipment, has selected Eaton components to help improve reliability, as well as operation and safety, of the grab-control system of its Diesel Hydraulic Series grabs.

Operated via remote control by a ship's crane operator, the grabs discharge bulk material from a ship's hold with the aid of an Eaton $F(x)^{TM}$ electrohydraulic system featuring a mobile control valve, piston pump, controller, screw-in cartridge valves hose and fitti



Page Macrae Engineering grabbed a top award for their bulk grabs at the Australian Bulk Handling Awards in 2010.

The cargo handling division's, PM Grabs, was voted the winner in the tightly contested Innovative Technology category at the annual event. Page Macrae Engineering's general manager, Mike Lehan, is pictured with the prestigious award.

screw-in cartridge valves, hose and fittings, and filtration products.

Eaton's total system package and seamless component supply were instrumental in the business win, along with the capability of the Eaton integrated control/hydraulic system package to facilitate a two-stage, bucket-opening process that reduces losses in windy conditions and enables the engine to slide out quickly for maintenance and repairs.

Source: Eaton Corporation

a Hitachi EX750 to dig in the pit, supported by a ZX450," Mr. Weller says.

THEN THE MARKET SLOWED.

"We had to batten down the hatches a bit," explains Mr. Weller. "We reorganized our finances and started to look around where the action might be next."

And the new action players? Ontario's provincial government and its municipalities.

Municipal work has always been around and a part of Cedarwell's business. But by sheer determination and very close bidding, Jorg Weller continues to keep his crews and equipment busy.

"Infrastructure work is now providing about 80% of our volume," notes Mr. Weller. "We are aggressively bidding complete packages of new utility lines, new curbing and sidewalks, and new paving. We're usually the prime contractor and then team with one of our aggregate customers like Miller Paving. We do the dirt work, install the new utilities, and provide the select material for both the new utility lines and the paving. Miller provides the paving expertise, equipment, and labor."



As the commercial-development side of the excavating business comes back to life, the current work Cedarwell is doing for municipalities should provide an opportunity for him to grow even more. Thanks to the tougher times, Jorg Weller learned how to be a stronger, more efficient contractor capable of making money on toughly won government contracts.

AND HIS HITACHI FLEET?

"We currently have five ZX200s, and one apiece of the 35, 50, 135, 350, 450 and 750 Hitachi excavators. Eleven total," notes Mr. Weller. "I like the Hitachi excavators. We have been happy with the production and especially the fuel economy. They are quite dependable."

Source: Hitachi



Tiger Corporation and Progressive Turf Equipment (PTE) recently announced a new distribution agreement. Under the terms of the agreement, Tiger Corporation has been appointed the exclusive distributer of the PTE SLOPE-PRO™ fully remotecontrolled, zero turn, tracked mower for Canada, Mexico and the United States. It will be marketed by Tiger Corporation as the Tiger Prowler™.

With a 132 cm wide rotary cut, PTE rates the Slope-Pro for operation on side slopes up 50° and with a working range of up to 90 m for the remote control.

Source: Tiger Corporation Progressive Turf Equipment

Holcim Sustainable Concrete Toboggan Prize Goes to Ryerson University!

Racing a 136 kg sled made of concrete down a snow covered hill? Leave it to Canadian engineering students to make it reality! The Greater Northern Concrete Toboggan Race (GNCTR), a Canadian tradition where hundreds of engineering students build and race concrete toboggans, recently concluded its 38th year in Calgary, Alberta. Further to being a title sponsor for the event, Holcim Canada challenged students to build their toboggans in a sustainable manner by offering the Holcim Canada Sustainable Concrete Toboggan Prize. The entries were evaluated by looking at criteria such as the use of recycled materials, sourcing local materials, after use of the sled and more. Ryerson University won the main race as well as Holcim Canada's prize for building the most sustainable concrete toboggan.

Congratulations team Ryerson! Source: Holcim Canada Inc.





Dufferin Construction Selects G&Z Spread for Canada's Longest Runway

To build what will be the longest airport runway in Canada, Dufferin Construction Company, a division of Holcim (Canada) Inc. recently purchased a three-machine spread of concrete paving equipment from Guntert & Zimmerman. Ontario-based Dufferin Construction, which already owns two other G&Z pavers, bought an S1500 fourtrack paver, a PS 1200 placer, and an S1500 texture cure machine for this project.

The big project is at Calgary Interna-

have two construction seasons – 2012 and 2013 – to complete the work, which is scheduled to wrap up by May 2014.

The challenge of the project, says project superintendent Mike Cristinziano, is to place and pave the sheer volume of aggregates and concrete required. "You need to take into consideration that our construction season up here in Calgary is not as long as in other parts of the country," says Mr. Cristinziano. "Depending on

60 m wide;

- apron area measuring 145,000 m²;
- two taxiways, each 3,800 m long by 25 m wide;
- · six high-speed taxiways;
- base aggregate, 1.5 million t;
- cement-stabilized base, 200,000 m³.
 It is possible that construction will run

around the clock, and seven days a week, in order to finish on time, says John Zavarella, superintendent of concrete plants



tional Airport in Alberta, where Dufferin's contract calls for more than 1 million m² of new concrete surface. Construction has already started. Dufferin essentially will

the weather, our season runs from May or June until October, and that's it."

The company's contract includes:

• a new runway that is 4,300 m long by



and equipment for Dufferin. Both he and Mike Cristinziano say working hours will depend on how things go and how well the weather cooperates.

24/7 Emergency Service and On-Site Repairs to Reduce Equipment Downtime

Besides handling complete remanufacturing of equipment, Eriez' 5-Star Service[®] also provides maintenance service and overall repair work on magnetic, vibratory and inspection processing machinery. "Our dedicated and experienced team of professionals is available 24/7 to evaluate your equipment service requirements and determine the best course of action to eliminate production downtime," says Dave Hansen, customer service manager.

The Eriez 5-Star Service Center, located in Pennsylvania, is equipped to inspect and repair an assortment of equipment, including magnetic separators, feeders, conveyors, screeners and classifiers, metal detection and x-ray inspection equipment, eddy current separators, lifting magnets, magnetic coolant cleaners, magnetic belt conveyors, and magnetic chip and parts conveyors. Eriez also has service technicians available for in-house repairs and routine maintenance checks.

With 70 years of experience and facilities located around the world, Eriez offers an unparalleled level of skill, knowledge and access. "A qualified Eriez engineer or technician is within hours of you



to ensure your equipment and systems stay online," Mr. Hansen explains.

"Whether equipment is repaired in the field or at the Eriez 5-Star Service Center, all work is done with original Eriez parts, components and assemblies," says Dave Hansen. "5-Star Service customers can count on the fast, professional service that Eriez is known for."

Eriez stores several years of equipment records to help expedite service. Eriez'

5-Star Service also offers customers Instruction and Operation Manuals (IOMs), parts lists and step-by-step troubleshooting procedures. Source: Eriez

Looking for more stories? Visit our website www.infrastructures.com The concrete for runways and taxiways will be 435 mm thick. Apron concrete will be 415 mm.

"We have owned an S1500 paver since 1995, when we built Highway 407 in Ontario," says Mr. Zavarella. "That machine is still in use as one of our main paving units. In 2001 we added an S850 to our fleet. So our crews and operators are well experienced in operating Guntert equipment."

"When we were looking at the Calgary site, it called for paving 12.5 m wide at the widest, and for paving at that depth we knew that the S1500 was pretty well the



right machine. We have already tackled airport jobs of that width with that type of pavement and we had no issues with it." John Zavarella says Dufferin crews and



operators appreciate several features of the G&Z pavers and equipment:

- the paver has split guillotine side gates that allow the paver to back onto existing slabs at the start of the day with ease. Handwork is minimized;
- telescopic end sections allow quick mold changes between 12.5 m and 10 m wide;
- all three machines the paver, the placer and the texture-cure machine – have 90° steering capability. Each machine can turn the tracks 90° and move directly across to the next slab;
- the PS1200 placer allows Dufferin to place dowel baskets well out in front of the paving train. And the placer has a 162 cm belt that slides in and out for

faster operation than one that folds up and down. "We can place concrete a lot faster and more efficiently," says Mr. Zavarella.

Mike Cristinziano says Dufferin likely will run two pavers – the S1500 and the S850 – on the Calgary airport project. The S850 will handle narrower widths and shorter stretches of pavement.

"We strive to be leaders in the concrete paving business," says Mr. Zavarella. "Our crews and operators all take pride in achieving good quality. That's one reason we selected paving equipment from Guntert & Zimmerman."

Source: Guntert & Zimmerman Const. Div., Inc.

CDE Launches New Aquacycle Thickener

CDE has announced the launch of the Aquacycle A1500 thickener following its installation at a site operated by Creagh Concrete in Northern Ireland.

The addition of the A1500 to the Aquacycle range represents the completion of a significant R&D program and will ensure increased opportunities to specify thickeners on the washing plants installed by CDE throughout the world, according to senior design engineer with CDE, Paul O'Neill.

"The A1500 significantly increases our opportunities to win business in the many markets in which we operate," explains Mr. O'Neill. "As we make progress in areas like South Africa and Australia, the A1500 allows for the introduction of a single unit on projects with high processing tonnages. Up until now multiple machines were required to deal with the high processing throughputs that are typical in these areas."

The A1500 has a tank diameter of 15 m and a capacity of between 1000 m 3 /h and

1500 m³/h determined by the material being processed.

One of the many product developments on the new Aquacycle A1500 is the redesign of the rake mechanism which is employed to condition the settled sludge within the thickener before it is discharged to the next

phase of processing or the settling ponds.

In recent years CDE has reported a substantial increase in the specification of Aquacycle thickeners on their global washing plant installations. "Over 80% of all our projects now include some form of water treatment across all feed materials and geographies," explains CDE sales director, Enda Ivanoff. "The launch of the A1500 will allow us to realize further sales opportunities in the coming months."

The rise in popularity of the Aqua-



cycle thickener is a result of an increased requirement for operators to consider how to manage the waste water from their washing plant. According to CDE this is due to a desire to save space on site by reducing the space required for settling ponds, coupled with a growing realization of the costs of maintaining these ponds.

The full Aquacycle range covers capacities from 100 m³/h up to 1500 m³/h across five models.

Source: CDE Global

New Stone Slinger[™] Keeps Operators Out of the Cab!

W.K. Dahms Mfg. Ltd. has successfully launched a new generation of remote controls for Stone Slinger truck conveyors that can dramatically reduce the time to unload and place aggregate loads with precision.

The new Stone Slinger Creep Drive system provides operators with a remote control feature that not only controls the speed and direction of the conveyor, but allows the operator to remotely maneuver the truck itself around the jobsite. The operator now has a single set of controls to run the conveyor and reposition the truck for ideal placement of the material, without returning to the truck. The truck and the Stone Slinger become a fully integrated material delivery system.

Scott Nelson, manager of W.K. Dahms, reports that the first of the new Stone Slingers equipped with Creep Drive was delivered last August to John Da Silva of Rock Concrete Forming Ltd. in Mississauga, Ontario. After putting the Stone Slinger through its paces for a full season, Mr. Da Silva says, "If I was buying another truck, I wouldn't get anything else – no question!"

According to John Da Silva, his investment in the Creep Drive feature has paid off well. "On a typical weeping tile job, the driver has to go back and forth to move the truck four or five times. And, each time, when you get into the truck, you have to turn the PTO off, drive the truck, put the air brakes on again and restart the PTO. It's the time-saving that pays you back."

By using the remote control to move the truck, the operator remains outside the cab to keep the material flowing until the load is completely delivered. Mr. Da Silva says that getting out of the truck is the right place for operators to be. "You get out here and you can see everything. We are always working in very tight spaces. You can watch the wheels and the ground more closely than if you're steering from the cab. You won't ever put the truck into a pothole or a ditch, so you never have to wait for another truck to come and pull you out!"

The Stone Slinger Creep Drive adds a complete hydrostatic drive system to the standard powertrain of the truck. A hydraulic driven gearbox is inserted into the driveline. A CAN Bus panel controls all hydraulic and operating functions and communicates with the remote, which the operator carries in a sling.

Scott Nelson explains that safety was a key factor in Dahms' design of the system. "The maximum speed the

truck can achieve under hydraulic power is 2.5 km/h – a comfortable walking speed. The control circuitry receives constant feedback on the actual wheel speed from the truck. If the truck's on an incline, the hydraulics will brake its speed automatically. Several failsafes are built in as well. If the wheel speed exceeds



move the truck into the best location,

Creep Drive helps operators to distribute

4 km/h, the CAN Bus will shut down and stop the truck completely."

John Da Silva finds that the Creep Drive leads to better job quality, too, with less wasted material. Operators naturally tend to avoid extra walks back to the truck if they possibly can. By making it easy to the material more precisely and consistently with no extra time or inconvenience. For a contractor like Mr. Da Silva, that translates into lower costs for clean-up and for material.

Source: W.K. Dahms Mfg. Ltd.

Flawless Micro-Milling Results with New Cutter from Roadtec

With new U.S. DOT specs for thinner friction courses, proper surface preparation is more important than ever. Delaminating of thin courses is likely when surfaces are

prepared with conventional milling. Furthermore, water can get trapped in the valleys of a conventionally milled surface, leading to premature pavement failure. In thin overlay applications micro-milling is required for good results.

Roadtec now offers a cutter that produces a fine, straight-line pattern, which neither deviates with changes in travel speed nor machine stops for



truck changes. DOT tests of the surface have been passed consistently with this cutter. Moreover, the milled surface's texture is extremely safe for cars and motorcycles alike when opened to traffic before paving begins.

Tooth consumption is extremely low with this product. On a recent job consisting of 8 km of roadway (16 lane kilometers), 2.5 cm removal with a micro finish, and an average travel speed of 14.8 m/min and as high as 21.3 m/min, zero teeth were changed during the 5-day project.

Source: Roadtec

New Hilti 18 V Impact Drivers and Wrenches are Powered by Brushless Motors

Hilti announces the first family of impact drivers and wrenches with high efficiency brushless motors – the Hilti SID 18-A CPC Compact Impact Driver, SIW 18-A ½" Compact Impact Wrench, SIW 18-A 3/8" CPC Compact Wrench and the high capacity versions SID 18-A CPC Impact Driver, SIW 18-A ½" Impact Wrench, and the SIW 18-A 3/8" CPC Impact Wrench.

All of these new impact tools feature a highly efficient hammering mechanism that delivers more work per charge to the applications because of the precision hammering and heat treatment process used.

This new line of tools was developed using Hilti's brushless motor technology which provides long lasting, reliable power because there are no brushes or commutators, which are wear parts for other tools. These high efficiency motors convert more of the battery's energy into power while reducing the motor heat – which leads to longer tool life. These tools have sealed electronics to help protect against dust and humidity, an intelligent power switch to prevent burn outs, and four LED lights which provide better visibility of the work surface.

The Hilti 18 V difference

is in the batteries. The compact versions of these tools come with a 1.6 Ah compact battery to provide lighter weight while the new B 18 3.3 Ah battery offers 25% more energy for the highest work per charge and ultimate run time. Using Hilti's superior lithium ion battery design, the ultimate run time comes from individual cell management which monitors the electronics and helps protect each cell against overheating, overloading and deep discharge. This, combined with sealed electronics, an accurate State of Charge display and drop resistance housing provides corded



performance in cordless tools.

Backed by Hilti's Lifetime Service *, the tools, batteries and chargers are all covered by this unique service agreement that includes two years of no-cost coverage including wear and tear. With Hilti Tool Fleet Management, the tools and batteries are covered for three years.

Source: Hilti

*Some limitations apply. One year no-cost period on SD 4500-A and ST 1800-A tool bodies



Hydraulic Hybrid Assistance for Light Commercial Vehicle

The innovation is a hydraulic hybrid transmission dedicated to light commercial vehicles (LCV). It offers the possibility to transform a conventional front-wheel drive LCV into a 4x4 (all wheel drive) vehicle on demand and only when needed. In 4x4 mode, the pump generates oil flow through the

and only when needed. When the hydraulic hybrid transmission is not activated, the vehicle behaves in all respects as a conventional vehicle.

When the hydraulic hybrid transmission is activated, the vehicle behaves like a 4x4 vehicle, increasing its obstacle-clearing capacity.

A hydraulic pump is placed at the output of the LCV gear box and two motors integrated in the wheels of the rear rigid axle. A valve is placed between the pump and the motors. The system controlled by an ECU. valve and the hydraulic motors. The motors provide torque and traction is effective.

In 4x2 mode, the valve shortcuts the pump and motors are in freewheeling mode. The system is activated from the cab, even when driving under load. At the heart of the system, there is a Poclain MF01 hydraulic motor. All hydraulic components used in the system are either designed by Poclain Hydraulics or standard automotive components. Tested and reliable, they are compact and offer high density power level.

This results in a low intrusive design, with all parts integrated in the standard vehicle chassis.

Productivity and ease of maintenance have been taken into consideration in the design of the system. No specific technical training is needed for regular maintenance. Access to the hydraulic motors is easy and the brake disks can be changed quickly and easily without dismantling the motors. When not engaged, the system

has no effect on the fuel consumption or performances of the vehicle.

Source: Poclain Hydraulics

INTERMI booth 5a F 028





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Dana Launches Production SPICER of Spicer® TZL Series Transmissions in Chin

Dana Holding Corporation recently announced the start of production on the Spicer® TZL Series, a new line of powershift transmissions for premium front-end loaders manufactured in China.

The first Spicer TZL16 transmission rolled off the assembly line on February 29, 2012, as part of a special ceremony commemorating the occasion at the Dana

assembly facility in Wuxi, Jiangsu Province, China.

The Spicer TZL16 transmission has been engineered for 17 t ZL50 front-end loaders, which account for about twothirds of the front-end loaders manufactured in China today.

"The production of the TZL16 transmission marks a significant milestone in our 20-year commitment to



our Chinese customers," said Aziz Aghili, president of Dana Off-Highway Driveline Technologies. "The Chinese construction market is growing steadily, and there is an increasing number of Chinese manufacturers pursuing global expansion. Dana can best support this growth opportunity with an increased presence in both product range and in-region operational capability." First unveiled at Bauma China 2010, the Spicer TZL Series is a new four-speed transmission platform that uses proven internal components from the extensive line of Spicer powershift transmissions already available for the off-highway market worldwide. The Spicer TZL Series has been specially designed to supply front-end loaders with higher horsepower capability, reduced maintenance, and smoother, quieter operation.

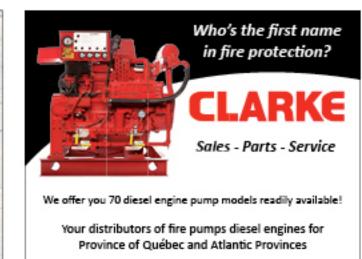
Dana has begun development on the next products in the TZL Series, including



Since 1964, Trecan Snowmelters have been clearing the way for municipalities, airports, and commercial operations. Since that time our snowmelters have enjoyed continuous refinement to provide today's cost-effective snow removal solutions.

trecan.com









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1905, Lional-Bertrand Beisbriund (Qc) J7H 1N8 1 865 441-3401 www.diesel-bec.com the Spicer TZL18 transmission for 21 t front-end loaders and the Spicer TMG14 transmission targeted for 150-215 hp motor graders. Production of these products is expected to begin this spring in Wuxi.

Over the past year, Dana has announced several initiatives to better support Chinese original-equipment manufacturers across all the vehicle markets served by Dana. In May of 2011, Dana broke ground on a 12,000 m² technical center in Wuxi. Scheduled to open this summer, the new technical center will provide advanced product and applications engineering through research, design, development, and testing of driveline, sealing, and thermal products, including electric vehicle battery coolers.

Last summer, Dana announced it had increased its stake in Dongfeng Dana Axle Co., Ltd. (DDAC) to 50%. Headquartered in Xiangyang, Hubei Province, it is the primary supplier of truck axles to Dongfeng Motor Co., Ltd., DDAC currently offers a complete range of truck axles in the Chinese market, including drive, steer, tandem, and hub-reduction axles for light-, medium-, and heavy-duty trucks, as well as buses.

Source: Dana Holding Corporation

New Goodyear G741 MSD for Oil Field, Mining, and Other Severe Service Applications

The Goodyear Tire & Rubber Co. has introduced a new truck tire for oil field, mining, logging and construction applications: the Goodyear G741 MSD.

"These are demanding applications that require a tire that's big, rough and tough, but also versatile and adaptable to a variety of conditions and environments," said Andrea Berryman, segment marketing manager, Goodyear.

The G741 MSD contains a wide range of features, including a deep 33/32" tread with a wide footprint to help provide high mileage and traction; an aggressive, self-cleaning tread design to help resist mud build-up and enhance grip; a cut- and chip-



resistant tread compound that helps provide long-lasting performance on tough terrain; and tread block sipes to enhance traction in wet, snow and icy conditions while helping to maintain dry traction.

"The G741 MSD also boasts an innovative sidewall design that allows chains to be placed above the tread blocks for enhanced traction and grip," said Ms. Berryman.

The tire will be available this May in size 11R24.5, Load Range H. Source: Goodyear



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Metso DNA Expands to Mining and Construction

Metso DNA is again leading the way by being the first in the world to introduce new control applications that enhance productivity and profitability in energy industries, pulp and paper industries, and as a new area, mining and construction industries.

Metso is the first to introduce embedded machine condition and runnability monitoring within process controls. Metso DNA has also been strengthened with new control applications, such as winder controls, power plant turbine controls and machine condition monitoring. As well, Metso is pioneering usability in process control work.

METSO DNA MEETS DIVERSE MINING AND CONSTRUCTION INDUSTRY NEEDS

Metso is a leading supplier in mining and construction machinery. This expertise is now combined with scalable Metso DNA automation systems that adapt to the diverse mining and construction industry needs, from single machine controls to entire plant-wide automation and information management systems.

An example of Metso's new offering is the new crushing plant control room solution that connects crushers and screens together, ensuring the effective management of the entire plant from a pleasant and safe control room. The Metso DNA user interface provides production information to ensure a proper and rapid response to plant events. Automatic controls stabilize the process and allow the operators to monitor the plant as a whole.

Metso DNA now offers one system for power producers, which includes energy management, plant information management, controls for the boiler, turbine and Balance of Plant, safety integrated systems, as well as emission management.

The integration of applications for turbine control, turbine protection and turbine management into the Metso DNA automation system provides customers with easy and cost-efficient maintenance, and reliability-based redundant process controllers. Metso's pulverized coal-fired combustion optimization manages control reactions to dynamic upsets, such as changes in mill configuration or load demand. The sootblowing optimization tool calculates, stores and displays the boiler heat transfer characteristics that indicate fouling and deposit accumulation on heat transfer surfaces. It also defines the economically

optimal sootblowing sequence. Another new application, machine condition monitoring, has been developed for the condition monitoring of rotating machines, such as flue gas fans, feed water pumps and turbines.

Metso DNA offers pulp and paper makers a single

system for all controls, from the fiber line to baling information, and from headbox to winder.

The new Metso DNA also offers winder controls, which increase the transparency between the winding process and papermaking process controls. The new winder controls enable operators to follow paper profiles through the winder controls, which improve both the runnability and productivity of the winding process.

Metso has also further developed its Metso DNA pulp mill information management offering and upgraded its bale tracking solution for the baling line. The newest application in Metso's pulp mill information management system, Metso DNA Bale Tracker, takes bale tracking to a new level. The new solution is based solely on the Metso DNA automation platform, which makes bale tracking and marking even more reliable. All online quality data needed for each and every bale is also available, thanks to full integration with Metso's Quality Control System (QCS) and Process and Quality Vision (PQV).

Mechanical condition monitoring is a part of preventive maintenance for wearing components, such as shafts and bearings, which need to be monitored for possible replacement needs. The new mechanical condition monitoring solution from Metso includes rotating machinery vibration measurements and analysis carried out as part of the automation system. Condition and runnability monitoring has traditionally been a separate system, mostly utilized by maintenance specialists. Thanks to Metso DNA Machine Monitoring, the same



information can be shared with machine operators in the control room.

In addition, Metso is pioneering usability in the process control work. Metso DNA takes a new approach to usability by regarding emotions and feelings as part of the process control work. "Despite being fact-based by nature, process control work at pulp and paper mills includes a lot of feelings connected with solving situations. When all the aspects of business and production processes are under control, people in various tasks can enjoy feeling in control of their work," explains Jaakko Oksanen, product manager for Metso DNA.

An example of usability is that Metso DNA is the only system in the world from which the user receives the process data in real time and retrospectively from the same user interface, with one push of a button.

All Metso automation systems delivered after 1988 can be upgraded with new applications as a whole or in sections. Existing equipment and applications can be used in the upgraded system. The system network may also contain different generation subsystems or even different generations of products within a single system, meaning that new product features can be easily added.

Source: Metso

World of Asphalt and AGG1 2012 shows are a huge success

The just-concluded 2012 World of Asphalt and AGG1 expositions were an unqualified success, posting record numbers for attendee registrants as well as amount of exhibit space, number of exhibitors and number of education session tickets sold.

Total attendee registration numbers totaled more than 6,500 at show close with a good participation from Canadian visitors.

"Attendees and their companies understand the importance of learning and networking to stay sharp and take advantage of a recovering economy. They know that the industry connections at World of Asphalt and AGG1 between buyers and sellers, peer-to-peer and with industry experts - are invaluable to meet the business challenges still facing our industry sectors in the U.S. and world economies," stated show director Melissa Magestro.

The next World of Asphalt and AGG1 exhibition is scheduled for March 19 - 21, 2013 in San Antonio, Texas.

Source: Association of Equipment Manufacturers (AEM)

Record Number of Exhibitors at bauma China 2012

Already bauma China is setting a new exhibitor record. By the middle of February 2012, over 1,900 companies had already applied to exhibit at the International Trade Fair for Construction Machinery, Building Material Machines, Construction Vehicles and Equipment, which takes place in November 2012. This figure exceeds the figure of 1,892 exhibitors who took part in the last bauma China. And there are still nine months to go before bauma China 2012 gets under way.

bauma China 2012 will be held November 27 - 30, 2012 at the Shanghai New International Expo Centre (SNIEC).

Collin Davis, Exhibition Group director at Messe München International, is upbeat: "It was our aim to offer our exhibitors improved conditions for their presentations in the halls. And, as we have eight more halls available for this year's event, we have been much better able to meet their space requirements."

Demand for space on the open-air site far currently exceeds the space available. Important key players, however, are making use of the additional hall space. In total, 300,000 m² of space are available for bauma China 2012.

Interest from the industry worldwide continues at a high level: Austria, Finland, Germany, Great Britain, Italy, Korea, Spain and the United States will each be taking a pavilion at bauma China.

Source: Messe München International (MMI)



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Appointments

Alan Korell officially became president of the Ontario Good Roads Association (OGRA) during the inaugural Board of directors meeting held on February 29, 2012.

As the managing director of Engineering, Environmental Services & Works, for the City of North Bay, Mr. Korell brings years of experience and knowledge to the Board and the Association.

Alan Korell was elected to the Board in 2008 to serve as director and represent the Northern Zone. He has extended his knowledge to OGRA in many areas but in particular has been closely involved with the Minimum Maintenance Standards. Mr. Korell served as Chair of the MMS Task Force and continues to offer support and advice to staff and members in this area. His professional affiliations include the Professional Engineers of Ontario and the Ontario's Professional Planners Institute. He volunteers on various boards and notably is a past president of the Municipal Engineers Association.

By invitation from the Standards Council of Canada, Alan Korell and Joe Tiernay, OGRA executive director, represented OGRA in Mongolia mid-March. The Association was specifically invited to assist in strengthening Mongolia's regulatory regime for roads and highway infrastructure; an area of expertise for the new president. This is the first of many milestones for Mr. Korell as OGRA president.

Source: Ontario Good Roads Association

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On March 1st 2012, **Einar Brønlund** took over the management of **Aker Wirth**, a subsidiary of the international oil service company Aker Solutions. He succeeds Christoph Kleuters, who is leaving the company at his own request. Einar Brønlund has been

with the company since 2009.



As CFO he has made a substantial contribution to setting the company on course for further growth.

Thor Arne Håverstad, executive vice president and head of drilling technologies in Aker Solutions, says Mr. Brønlund is the right person for the job. "Einar Brønlund has the right experience, qualifications and personality to manage our operations in Erkelenz, Germany. I look forward to working closely with Mr. Brønlund and his team, and to continue to develop our operations and products.

Source: Aker Wirth

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2001 JOHNSTON 610 vacuum sweeper, mounted on Freightliner FC70 cab over chassis. Stock: H39469 Price: \$52,500 Accessories Machinery Ltd Phone: 1-800-461-1979



1997 JOHNSTON 605 vacuum sweeper, single sweep right side, mounted on Ford cab over chassis. Stock: A41005 Price: \$24,500 Accessories Machinery Ltd Phone: 1-800-461-1979



2004 JOHNSTON VT 650 vacuum sweeper, catch basin cleaner, mounted on Freightliner FC80 chassis, 66,986 miles. Stock N10707 Price: \$69,400 Accessories Machinery Ltd

Phone: 1-800-461-1979



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Agenda

BRIDGELIFE™ 2012 - Bridge Safety & Longevity Conference & Expo April 10 - 12, 2012 Ottawa, ON Canada

EXPO Grands Travaux 2012 April 13 - 14, 2012 Montreal, QC Canada

April 16 - 21, 2012 Paris, France



INTERMAT 2012

Panama Canal 2012 International Engineering & Infrastructure Congress April 18 - 20, 2012 Panama City, Panama

The Steel Conference & World Steel Bridge Symposium April 18 - 21, 2012 Dallas, TX USA

AQEI's 3rd Annual Convention April 19 - 20, 2012 Montebello, QC Canada

APOM Technical Day May 4, 2012 Dollard-des-Ormeaux, QC Canada

IFAT ENTSORGA May 7 - 11, 2012 Munich, Germany

The Global Africa Infrastructure Exhibition May 8 - 11, 2012 Johannesburg, South Africa

AUTOSTRADA-POLSKA May 8 - 11, 2012 Kielce, Poland

CONEXPO Russia at CTT 2012 May 29 - June 2, 2012 Moscow, Russia

M&T EXPO - International Trade Fair for Construction and Mining

Equipment May 29 - June 2, 2012 Sao Paulo, Brazil

ANKOMAK 2012 June 6 - 10, 2012 Istanbul, Turkey

Hillhead 2012 June 19 - 21, 2012 Hillhead Quarry, Buxton, United Kingdom

DEMO International® 2012 September 20 - 22, 2012 Saint-Raymond, QC Canada

INTEROUTE&VILLE October 2 - 4, 2012 Lyon, France

INTERMAT Middle East October 8 - 10, 2012 Abu Dhabi, United Arab Emirates

Bauma China 2012 November 27 - 30, 2012 Shanghai, China

Ecobuild America December 3 - 7, 2012 Washington, DC USA

BAUMA CONEXPO SHOW - bC India February 5 - 8, 2013 Mumbai, India

bauma 2013 April 15 - 21, 2013 Munich, Germany

International Construction and Utility Equipment Exposition (ICUEE) October 1 - 3, 2013 Louisville, KY USA

CONEXPO-CON/AGG and IFPE expositions March 4 - 8, 2014 Las Vegas, NV USA



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