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This electronic version of InfraStructures is made available for the sole purpose of giving our English speaking readers a taste of the original printed version of the magazine.

We will try to publish as much of the editorial content of the printed version as it is possible given the technical limitations.

Welcome to InfraStructures

Until recently, InfraStructures has been read mainly by French speaking users of heavy machinery.

Over the last seven years, InfraStructures has become a leader in its field. First by becoming the only magazine covering all aspects of the industry published in French in Canada. Then by being the first to publish all its editorial content on the web, and also by being the only construction magazine, published in French, having a significant readership outside the Province of Quebec.

For many years, we have received requests for an English version of InfraStructures. Technical limitations, and the lack of advertising revenue have prevented us from publishing such a magazine in print. Now, with the extent of the use of Internet by professionals, we feel that the time as come for a portable digital file (.pdf) version of InfraStructures in English.

While the content of the English version differs slightly from the original, most of the important news will be published in English. In the near future, more and more of the content of the original will be translated into English.

With over 500 visitors per day on average, spending over 13 minutes per visit, the website of InfraStructures in one of the most important sites of this kind. More than two thirds of the visitors come from outside Canada. With the English version of the magazine available on the web, visitors from outside will find it easier to enjoy the magazine.

Hoping to hear your comments,





Cover page:

Scania Trucks are not distributed in Canada at this time. With MAN, they are among the last indepedent manufacturers of heavy trucks.

We expect many changes in the industry in the coming months, this could all change. We will keep you up to date...

In the News...

Bechtel Quebec to Play Major Role in Alcoa's Icelandic Aluminum Project

Bechtel announced recently that its Montreal office will handle the bulk of engineering, procurement, and project management in the construction of a US\$1 billion smelter in eastern Iceland for Alcoa.

The decision to locate much of the work in

Montreal - where Bechtel has its global Center of Aluminum Excellence and its North American mining and metals headquarters - reflects the company's commitment to Quebec and underminum industry. The aluminum center is expected to employ some 250 engineers and specialists for the Iceland project.

scores the province's importance to the world alu-







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Andy Greig, president of Bechtel's Mining & Metals global business unit said, "Executing the project in Montreal will provide a significant opportunity to Quebec-based companies experienced in the aluminum business to competitively bid on approximately US\$550 million of plant equipment and bulk material."

Working with its Icelandic partner, the engineering consortium HRV (Honnun, Rafhonnun, VST), Bechtel will construct the smelter in eastern Iceland near the town of Reydarfjordur. The project will employ 1,500 local and foreign workers during peak construction. In addition, some 450 jobs will be created when the plant becomes fully operational.

"This project provides a perfect opportunity for Bechtel to work with some of Quebec's most outstanding and knowledgeable companies," said Brian Kenny, president of Bechtel Canada. "At the same time, the construction of the new plant should help strengthen the economy of eastern Iceland, a remote area that depends largely on fishing for its livelihood."

Planning and preliminary engineering for the new smelter will begin in Bechtel's Montreal office this month. Construction is expected to begin in November 2005 and be completed in the second half of 2007. When complete, the facility will have the capacity to produce 322,000 metric tons of aluminum per year.

Source: Bechtel, www.bechtel.com

Alstom Awarded Contract for Brilliant **Expansion Hydroelectric Powerplant in British Columbia**

Alstom Canada Inc. announced that it has signed with SNC-Lavalin, a contract, valued at some \$45 million, for the supply, installation, testing and commissioning of 1 turbine-generator set, plant controls and their auxiliaries at the Brilliant Expansion hydroelectric powerplant. This contract is part of a larger project to expand the existing Brilliant dam generating station owned by the Brilliant Expansion Power Corporation, the dam is located on the Kootenay river near Castlegar, British Columbia.

Design and engineering work for this new 120 MW hydro turbine-generator set is already underway at Alstom Sorel-Tracy plant. Manufacturing will start in spring 2004 in order to be commissioned in August 2006.

Pierre Gauthier, President of Alstom Canada Inc., stated: "Alstom and SNC-Lavalin have been working together for 15 years. They have built during these years a sound relationship based on a proven expertise and technology. This contract is a proof of this mutual trust".

Source: Alstom

Cummins Westport Leads Depolyment of Natural Gas Heavy Duty Trucks on Highway 401 Corridor

Cummins Westport Inc. announced recently that it will lead Canada's first multi-fleet deployment of natural gas heavy-duty trucks on Highway 401, the country's busiest urban corridor

Cummins Westport will work with a consortium including Enbridge Gas Distribution Inc. to deploy trucks using 15-liter, heavy-duty engines operating on liquefied natural gas (LNG) along Highway 401 between Toronto and Windsor, Ontario. Funding for the two-year "Clean Air Corridor" project is provided by Sustainable Development Technology Canada (SDTC) and Natural Resources Canada (NRCan).

SDTC, a not-for-profit, arms length organization created by the Government of Canada, will provide \$1 million (US\$740,000) for the Clean Air Corridor demonstration. NRCan is contributing a further \$400,000 (US\$296,000) towards the project that will determine the performance and emissions reductions of trucks using proprietary Westport-Cycle™ technology in regular on-highway operation.

"SDTC's mandate is to look for solutions to reduce not only greenhouse gases, but harmful criteria air contaminants," said SDTC President and CEO Vicky J. Sharpe. "Westport technology reduces emissions of nitrogen oxides, particulate matter and carbon dioxide emissions. It is a home-grown solution that is ready to make a difference in the transportation sector."

"Companies such as Westport are leading by example by investing in new, innovative technologies," said the Honourable Herb Dhaliwal, Minister of Natural Resources Canada. "These technologies will also help Canada reduce its greenhouse gas emissions and provide new economic opportunities for Canadians."

The Honourable David Anderson, Minister of the Environment, said, "This project is an excellent example of the growing commitment of Canada's transportation sector to our national climate change and clean air goals. A successful demonstration of this innovative engine technology has the potential to make a significant, long-term contribution to reducing greenhouse gas emissions in the commercial trucking industry."

The first two trucking companies deploying Westport-Cycle trucks along the 401 Corridor are Challenger Motor Freight Inc. of Cambridge, Ontario and Bruce R. Smith Limited of Simcoe, Ontario. Each will use five heavy-duty trucks, equipped with 450-horsepower 15-litre ISX G natural gas engines in regular highway service. These engines match the power, torque and fuel effi-

ciency of an engine operating on diesel fuel. In addition, they produce significantly lower emissions of particulate matter, oxides of nitrogen and greenhouse gases.

"It's a great opportunity for us to showcase our 450-horsepower ISX G engine along Canada's busiest thoroughfare, where the biggest emissions gains can be made," said Hugh Foden, President of Cummins Westport. "As the highest performance and most efficient alternative-fueled engine developed today, the ISX G will make a

compelling case for other fleet operators hauling goods along the 401 corridor. This Clean Air Corridor project is the model Cummins Westport plans to employ to expand the use of LNG-powered heavy-duty trucks in urban centres in Canada and the U.S."

Arunas Pleckaitis, Vice President, Enbridge Gas Distribution Inc. said, "We are pleased to be part of this project to demonstrate efficient and low-emission solutions for the Canadian heavy-duty trucking industry. "We believe LNG will prove to



be good for the fleets' bottom line as well as the environment which benefits us all."

Enbridge Gas Distribution Inc. will source and deliver LNG to customer sites in London and Toronto. Canada's largest natural gas distribution company, Enbridge Gas Distribution Inc. provides gas to about 1.6 million industrial, commercial and residential customers in Ontario, Quebec, New Brunswick and New York State. It is owned and operated by Enbridge Inc., a leader in energy transportation and distribution in North America

and internationally.

Cummins Westport Inc., a joint venture of Cummins Inc. (NYSE: CUM) and Westport Innovations Inc. (TSX: WPT), develops and markets low emissions alternative-fueled engines manufactured by Cummins. Cummins is a global power leader in engines, electrical power generation systems and related technologies. Westport is a world leader in the development of clean natural gas- and hydrogen-fueled engines.

Source: Cummins Westport Inc.,

Cummins Inc...

Ministry of Natural Resources Canada, Sustainable Development Technology Canada

GL&V's Process Group Awarded a \$4.3 Million contract in the United States for Drinking Water Treatment Equipment

GL&V announces that its Process Group (DORR-OLIVER EIMCO) has landed a \$4.3 million contract as part of the expansion of the water treatment plant of a major city in the southwestern United States. GL&V will supply two 150-square-foot Reactor-Clarifier mechanisms, scheduled for delivery at the end of 2003, and for installation and start-up by early 2005. Once in operation, the equipment will be used to soften the city's drinking water prior to filtration. In the early 1990s, EIMCO delivered four similar clarifiers to the same municipality. The quality of the water treated and the equipment's low maintenance cost led to GL&V being awarded this second major order.

Laurent Verreault, President and Chief Executive Officer, says he is very pleased about this first large-scale contract in the municipal drinking water treatment sector since the November 2002 acquisition of EIMCO. "Although we already had expertise in the treatment of industrial and municipal wastewater, the EIMCO acquisition has brought GL&V valuable know-how in drinking water treatment. As a result, GL&V now has a critical mass of \$50 million in the environmental sector, mostly in the North American municipal market."

According to management, the total U.S. water treatment market is estimated at US\$95 billion, and could reach US\$200 billion within 15 to 20 years. The treatment of drinking water, in particular, is expected to experience steady growth in the coming years, given the obsolescence of existing infrastructures and the requirements of the Safe Drinking Water Act. "Banking on our competitive high-performance technologies, we intend to rapidly develop our business in this market, including through the acquisition of complementary businesses, in order to position ourselves for the complete or partial upgrading of municipal facilities, as well as for spare parts and after sales services," added the President.

Source: Groupe Laperrière & Verreault Inc.

Trouvin, Fimatec France and S.A.M. Fimatec Join SNC-Lavalin France

Jean Claude Pingat, President and General Manager, SNC-Lavalin France is pleased to announce the SNC-Lavalin Group's acquisition of Trouvin, Fimatec France and S.A.M. Fimatec.

Trouvin is based in Montreuil, near Paris, and



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currently employs 50 people. The engineering firm was founded in 1957, and is recognised for its engineering of technical equipment used in buildings, industrial facilities and infrastructure. The firm has worked on the Tour EDF and the Grande Arche in La Défense, Paris, the Eiffel building at Issy les Moulineaux, and Charles de Gaulle 2F Airport.

Trouvin is also known for its expertise in security and safety, and is successfully developing its hospital-sector business.

Fimatec France and S.A.M. Fimatec are located in Nice and Monaco, and employ a total of 20 people. As a result of their operations in the Principality, the firms have acquired special expertise in highly innovative engineering projects, such as heating and cooling with heat pumps run on seawater developed for hotels and the Thalassotherapy Centre in Monaco, as well as sand, natural-gas heating and air conditioning at the Exhibition Centre in Nice.

"This alliance is in line with one of the main principles in SNC-Lavalin France's strategic plan," explained Jean Claude Pingat, "in that the acquisition of Trouvin will strengthen the Company's position in the Ile de France region, while Fimatec will provide a presence in southeastern France."

Jean-Paul Turquin, CEO of Trouvin, Fimatec France and S.A.M. Fimatec said he is pleased with this arrangement, since it reflects his desire to develop his businesses with the backing of a major group. "This alliance makes sense, as SNC-Lavalin France has the ability to merge the expertise of its affiliates, and this will give Trouvin, Fimatec France and S.A.M. Fimatec access to larger projects."

The acquisition of Trouvin, Fimatec France and S.A.M. Fimatec brings the total work force at SNC-Lavalin France to 420 employees, and constitutes a new phase in the Firm's growth.

SNC-Lavalin Awarded Contracts for a Thermal Power Plant in Algeria

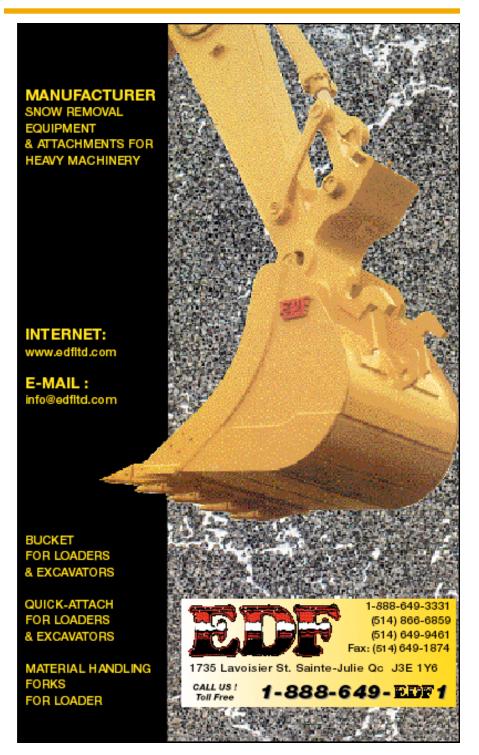
SNC-Lavalin Constructors International Inc. has been awarded two contracts by Shariket Kahraba Skikda S.p.a.; one, for nearly \$600 million, to design and build a 723 MW combined cycle thermal power plant in the Skikda region of Algeria, and the other to operate and maintain the plant, once it is built. Shariket Kahraba Skikda is owned by three companies belonging to the Algerian Government: Sonatrach, Sonelgaz and the Algerian Energy Company.

"There is a demand for additional power generation in Algeria at the moment," said Sami Bébawi, Executive Vice-President, SNC-Lavalin Group Inc. "This plant will increase the country's current production capacity by over 10%, while emitting less per unit greenhouse gases than existing facilities."

SNC-Lavalin will execute all engineering, procurement and construction (EPC) for the plant, which is expected to start immediately and be completed in approximately 32 months. SNC-Lavalin Capital Inc. has been mandated by SNC-Lavalin to structure financing for the EPC contract. Once construction is finished, SNC-Lavalin will operate and maintain the plant for twelve years, with the possibility of a further twelve year contract extension.

"We will be using advanced combined cycle technology in the plant's design and construction," said Tim O'Meara, Senior Vice-President and Project Executive. "Environmental concerns are also a top priority on projects of this kind, and we will ensure strict compliance with the environmental standards set by both the World Bank and the European Union."

The plant is the first to be built under new regulations designed to foster private investment in



the power sector in Algeria. During the construction phase of the project, the share capital of Shariket Kahraba Skikda will be opened up for private investors, and SNC-Lavalin intends to subscribe to the project capital.

"We are pleased to participate in the emerging private power market in Algeria" said Klaus Triendl, Executive Vice-President SNC-Lavalin Group Inc. "We have been working in the country for 30 years, most recently on urgent water projects, and we look forward to expanding our services to include the power sector. Our local experience combined with our Thermal Power Group's world-renowned expertise are a winning combination."

SNC-Lavalin Awarded US\$1.95 Million Contract For Copper Plant In Mexico

SNC-Lavalin Chile S.A. has just signed a US\$1.95 million contract with Compania Minera La Parrena S.A. de C.V., a wholly-owned subsidiary of Grupo Penoles of Mexico. The contract is for work on Milpillas' greenfield copper plant in the Santacruz Municipality of the State of Sonora, Mexico. SNC-Lavalin Chile S.A. is reviewing existing basic engineering, providing detailed engineering services, and coordinating the procurement process for the new plant. Once completed, Penoles estimates the plant will produce approximately 65,000 tonnes of high grade copper cathode per year.

SNC-Lavalin's office in Santiago, Chile is designing a Copper SX-EW facility to extract

copper through solvent extraction and an electrolytic process, including above-ground stock pile secondary and tertiary crushers, an agglomeration plant, a solvent extraction plant and an electro-winning refinery.

"This project is another example of one of SNC-Lavalin's Centres of Excellence exporting its expertise to other parts of the world," said Pierre Duhaime, Executive Vice-President, SNC-Lavalin Inc. "In this case, our Santiago office, which specializes in copper production and processing, is expanding its presence in the Americas".

Penoles is the world's largest producer of refined silver, metallic bismuth and sodium sulphate; Latin America's leading producer of refined lead and zinc; and the largest refined gold producer in Mexico.

Source: Groupe SNC-Lavalin Inc.

Lafarge North America to Sell Florida Cement Operations

Lafarge North America Inc., the leading supplier of construction materials in the U.S. and Canada, today announced that it has signed a definitive agreement for the sale of its whollyowned subsidiary Lafarge Florida Inc. to Florida Rock Industries, Inc.

The operations of Lafarge Florida Inc. consist primarily of two cement grinding and import facilities, one located in Tampa and the other in Port Manatee, Florida. Net sales in 2002 associated with these operations were approximately \$89 million.

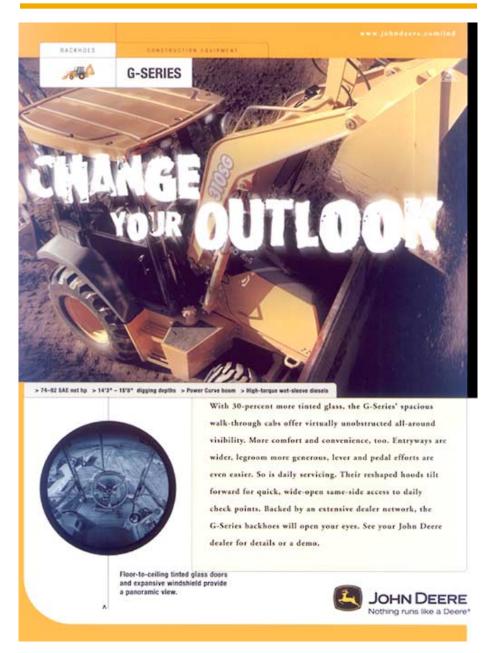
The sales price is approximately \$122 million. The transaction is subject to regulatory approval and is expected to close by the end of the third quarter, 2003.

"Lafarge Florida Inc. is a profitable business that has performed well for many years," said Philippe Rollier, president and chief executive officer of Lafarge North America.

"However, as a stand-alone import operation, its long-term strategic fit in our overall portfolio is limited, and we believe this is an appropriate time for us to divest."

Lafarge to build new cement plant in Mexico

Lafarge announced recently its decision to build a new cement plant in Mexico close to its existing site in Hidalgo State, near Mexico City. This new, competitive plant will have an annual production capacity of 600 000 tonnes. It will replace the existing high cost operation which has a capacity of 350 000 tonnes per year. By the time production commences in 2006, the total investment cost including additional reserves will be approximately \$120 million. The project is



expected to create value very quickly due to cost reduction and market growth.

With this modern, low cost, strategically located plant, Lafarge will actively participate in the future growth of the Mexican market. Mexico is the second largest cement market in Latin America, consuming more than 30 million tonnes per year.

Commenting on this development, Bernard Kasriel, Chief Executive Officer of Lafarge, said: "This project further demonstrates our strategy to enhance profitability and strengthen our position in growing markets."

Source: Lafarge North America Inc.

Boralex Acquires Five New York Hydro Facilities

Boralex Inc. announced recently that it has agreed to purchase from Black Hills Generation Inc., a subsidiary of Black Hills Corporation, five hydroelectric power stations located in the State of New York for US\$ 8.7 million (approximately \$CND 11.7 million). The purchase price will be financed through Boralex's available funds.

Boralex, through one of its US subsidiaries, will acquire these hydro power stations totalling 23.0 MW of installed capacity. They are the Middle Falls facility (2.3 MW), the New York State Dam facility (11.4 MW), the Fourth Branch facility (3.1 MW), the Warrensburg facility (2.9 MW), and the Sissonville facility (3.0 MW). Each of these facilities is located on a different river, except for New York State Dam and Fourth Branch, which are both on the Mohawk River. The Middle Falls power station has a long term power purchase agreement (PPA) with Niagara Mohawk Power Corporation (NIMO), a highly-rated regulated utility, which terminates in 2028. The four other facilities have short term PPA'S with NIMO, which are in force until the end of 2003. These power stations have been in operation since the early 1990's.

Moreover, Boralex will manage the two hydroelectric power stations acquired concurrently by Boralex Power Income Fund from Black Hills; namely, the Hudson Falls (45.8 MW) and the South Glens Falls (13.9 MW) power stations, located in the State of New York.

"This transaction represents a significant step in the pursuit of our growth objectives. It will allow us not only to consolidate our presence in the North Eastern US but also to enhance the diversification of our operating sectors in the renewable energy and green energy sectors," said Boralex's President and Chief Executive Officer, Mr. Jacques Gauthier

This transaction is subject to customary closing conditions including regulatory approvals, which

are expected to take up to 90 days.

Boralex owns and operates twelve power stations located in Québec, the United States and France, with an installed capacity of 229.0 MW, as well as an urban wood processing and recycling centre in Montréal. In addition, the Corporation holds a 34% interest in Boralex Power Income Fund, which owns eight power stations in Québec with an installed capacity of 131.0 MW. Management of the Fund's assets is provided by Boralex. The Corporation employs more than 230 workers and its operations focus on four types of power generation in fields where Boralex has developed proven expertise. These are centered on renewable energy and green energy.

Source: Boralex Inc., www.boralex.com

Aecon refines strategic focus of its infrastructure and heavy civil operations

Aecon Group Inc. recently held its annual meeting at The Carlu in Toronto, where its Buildings division recently finished extensive restorations on the historic theatre.

During his remarks, John M. Beck, Aecon's Chairman and CEO, announced that management had conducted a comprehensive review of Aecon's operations to identify measures to improve the Company's financial performance, and has subsequently begun implementation of an action plan based on this review. The action plan, expected to be in place by the third quarter of 2003, addresses what Mr. Beck referred to as disappointing results in fiscal 2002. It is expected to result in positive changes to the operations in each of Aecon's business units.

With respect to Aecon's infrastructure development business, Mr. Beck announced that Aecon is actively exploring new value added arrangements for its future participation in infrastructure development, including the possibility of combining its development business with that of a strategic partner who can add international scale to Aecon's expertise in this area.

"We believe there are ways to better leverage our infrastructure development expertise while reducing our risk and improving our returns, and we are actively exploring these alternatives," stated Mr. Beck.

Pending the implementation of such an arrangement, Aecon will be focusing its infrastructure development activities primarily on achieving financial close of the US\$550 million Quito Airport project in Ecuador, expected this fall.

With respect to Aecon's heavy civil business, Mr. Beck also announced that, in an effort to reduce bid costs and manage project risk, Aecon will be focussing its resources primarily on Canadian-based transportation infrastructure projects. Historically Aecon's heavy civil business has included both Canadian and international projects such as hydro-electric dams and tunnels in addition to transportation projects.

"Generally, our strategic direction is to concentrate on our specific strengths in core sectors and to focus on proven capabilities that continue to provide returns for our shareholders," stated Mr. Beck. "It has been our experience that operating costs and project risks increase the further away the project is from the core of our operations."

Source: Aecon Group Inc.

EDF Pulls Out of the Nam Theun Project

The Board of Directors of EDF International (Electricite de France) has taken the decision to pull out of The Nam Theun 2 project in Laos after hearing the opinion of the Strategy Committee and the State representatives. EDF International will therefore not be signing the Power Purchase Agreement with EGAT, the Thai national electricity producer.

The French utility had a 35% stake in the Nam Theun 2 project. The other partners in the Nam Theun 2 project are the Laotian government and Thailand's Electricity Generating PCL , with 25% each, and leading Thai construction firm Italian-Thai Development PCL , which holds the remaining 15%.

The 25-year power purchase agreement was originally expected to be signed in June last year, but it was delayed by environmental reviews and a review by Thailand's Office of the Attorney General.

Source: Electricite de France

Terex Announces Manufacturing and Supply Agreement with Daewoo

Terex Corporation announced that it has entered into an agreement with Daewoo Heavy Industries and Machinery to distribute crawler excavators and wheel loaders under the Terex brand in North America. The agreement includes crawler excavators from 13 to 47-ton operating weights and wheel loaders with bucket capacities from 2.0 to 5.3 cubic yards.

Terex Chairman and Chief Executive Officer Ronald M. DeFeo commented, "This agreement fills a gap in our product line with cost-effective and reliable products, and now our full product offering is one of the most complete in the industry. Our dealers can now focus on a full Terex product line and deliver on our mission of providing the highest investment returns for users of construction equipment."

Jae-Shin Yang, President and CEO of Daewoo, commented, "We are pleased to have Terex as a partner in this important market in addition to our

existing distribution network. Customers in North America are increasingly recognizing the superior value of our products, and working with Terex will accelerate that market recognition."

Terex expects to begin offering these Terex branded crawler excavators and wheel loaders during the fourth quarter of 2003.

Source: Terex Corporation

Caterpillar Inc. and Terex Corporation Announce Intent to Realign Caterpillar's Mining Shovel Business and Terex's Mining Truck Business

Caterpillar Inc. and Terex Corporation (NYSE: TEX - News) announced that they have reached a non-binding agreement in principle for Caterpillar to acquire Terex's worldwide electric drive mining truck business, and for Terex to acquire Caterpillar's 5000-Series mining shovel intellectual property. Their respective Boards of Directors have authorized commencement of due diligence and the negotiation of a definitive agreement.

Caterpillar will acquire Terex's eight-model line of DC and AC electric drive mining trucks. The trucks will continue to be sold under the familiar Payhauler and Unit Rig brand names, and will be distributed and supported through Caterpillar dealers worldwide.

Terex will purchase the intellectual property, including patents and designs, for Caterpillar's 5110B, 5130B and 5230B models of hydraulic excavator mining shovels. Under a marketing agreement, Terex will continue to manufacture its seven-model O&K line of hydraulic mining shovels for distribution and service through the Caterpillar dealer network. Caterpillar dealers also will assume responsibility for supporting the existing population of O&K shovels.

In separate transactions, certain Caterpillar dealers will purchase Terex's wholly owned product support businesses relating to Payhauler and Unit Rig mining trucks and O&K mining shovels.

"This transaction will provide customers with a full line of mining shovels matched with mechanical and electric drive trucks," commented Gerald L. Shaheen, Group President, Caterpillar Inc. "By repositioning these product lines, we provide the best value to customers with a full range of equipment coupled with the unparalleled sales and product support expertise offered by the global Caterpillar dealer network."

Thys de Beer, President, Terex Mining, said, "In the near term, we remain focused on our customers to ensure that the transition of support and service will be seamless."

Caterpillar has been a global leader in developing mining trucks designed specifically for high production mining and construction applications. "Expanding the product offering to include electric drive trucks will broaden our ability to respond to customer needs for efficiency and productivity in their mining operations," said Richard A. Benson, President of Caterpillar's Global Mining Division and Caterpillar Inc. Vice President.

Caterpillar will assemble its remaining shovel inventory and then cease manufacturing of 5000-Series mining shovels. Cat dealers will continue to provide ongoing technical and product support for 5000-Series shovels already in the field. "We are fully committed to supporting all users of Cat 5000- Series shovels so they receive full value from their equipment," Benson commented.

"Caterpillar and Terex intend to realign these businesses in order for each to concentrate on their strengths," commented Ronald M. DeFeo, Terex Chairman and Chief Executive Officer.
"Terex has been a long-time global leader in mining shovels. We have one of the largest populations of hydraulic mining shovels in the field and a reputation for a durable product that has been meeting industry needs for decades. Now this product offering is strengthened even further with distribution and support through the global Caterpillar dealer network."

Source: Caterpillar Inc. Terex Corporation

Canam Manac puts its American and Mexican Steel Joist Operations up for Sale

The Canam Manac Group of Saint-Georges de Beauce, Quebec, has retained the services of Banc of America Securities LLC to sell, totally or partially, the Company's American and Mexican steel joist and steel deck manufacturing operations.

The Company will continue to offer steel joists and steel deck in Canada and in New England. The Company will also continue to work on heavy structural steel projects throughout North America. Activities related to Steel Plus Network, engineering and detailing offices in Romania and India, Manac, and the Hambro, Murox, Expanpro and Sun specialized products are not affected by this decision.

Marc Dutil, President and Chief Operating Officer explained that the mandate given to Banc of America Securities LLC consists in identifying and evaluating all the available options meeting Canam Manac's objectives. These objectives are related to the on-going financial health and job security for the US and Mexican operations, as well as the interests of Canam Manac shareholders.

Marc Dutil said that "our modern plants and experienced personnel will allow a partner or

potential buyer to quickly establish or significantly consolidate its position in the American and Mexican markets".

The five plants located in Point of Rocks, Maryland, Jacksonville, Florida, Columbus, Ohio, Washington, Missouri and Sunnyside, Washington, make Canam Steel Corporation the second largest steel joist manufacturer in the United States. As for Grupo Canam Manac, it operates two plants in Monterrey and Ciudad Juarez in Mexico. Together the subsidiaries employ 1,096 people and have a total production capacity of 373,000 tons. Sales from its activities amounted to approximately CAN\$200,000,000 in 2002.

The Canam Manac Group would like to complete a transaction by the end of 2003.

Source: The Canam Manac Group

RPM Tech Inc. Obtains a Contract for Approximately \$ 7,000,000

RPM Tech Inc., an important Canadian manufacturer of specialized and snow removal equipment announced today that it has obtained a new order for a value of approximately \$7.0 million with the "Société de Transport de Montreal" for the manufacturing of eight subway maintenance service vehicles and six subway track motor-cars. These vehicles will be used for maintenance of the Montreal subway system and related equipment. The vehicles will be manufactured and delivered in the next eighteen months.

The conception and the manufacturing of these vehicles will be produced in Québec in the plants of the RPM Tech Group. This contract will ensure the upholding and creation of 25 jobs within the company for a one-year period. This is one of the most important contracts in the history of the RPM Tech Group.

R.P.M. Tech inc. has been a North American leader in the design, manufacture, distribution, financing and export of subway, railway, road, airport runway and snow removal equipment. The company also manufactures custom-made on/off highway carrier vehicles used, in particular for concrete pumps, cranes, aerial platforms, drilling and forestry work in America, Europe and Asia.

R.P.M. Tech inc.

Official snow ploughs at the Alpine Ski World Championships in St. Moritz

A total of 15 Mercedes-Benz Unimog implement carriers (principally U 300 – U 500 models) recently joined forces with three heavy-duty all-wheel drive Mercedes-Benz Actros trucks to keep the traffic running smoothly on the 90 kilometres or so of roads in and around St. Moritz when the

Swiss winter sport Mecca played host to this year's Alpine Ski World Championships from February 2 to 16, 2003. The vehicles helped to ensure safe access to the infrastructure developed especially for this event. Most of the roads leading to the individual competition venues incorporated extremely steep sections. Some 400 athletes from 60 nations were competing for ten world titles in St. Moritz (officially called "Top of the World"). The

first real test for the vehicles came right at the start of the first week of competition when around 25 cm of fresh snow fell in a single night.

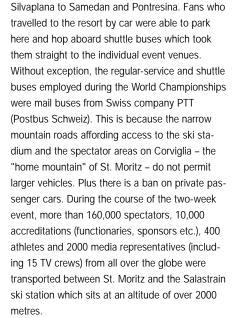
The 15 Unimog implement carriers from the Unimog product sector were supplied to the municipality of St. Moritz and the neighbouring municipalities of Pontresina, Celerina, Samedan and Silvaplana by Robert Aebi AG, the Unimog representative in Switzerland. To prepare them for their snow-clearing duties, the majority of the "World Championship Editions" were first equipped with snow ploughs and blower-cutters made by Schmidt Winterdienst und Kommunaltechnik, an implement system supplier based in St. Blasien. The St. Moritz Planning Department itself used a Unimog U 400 unit with plough/spreader combination, a Unimog U 140 vehicle with snow plough and ice scraper and a "veteran" U 1000 model from the former heavyduty Unimog series for snow removal. Other units from the St. Moritz and
DaimlerChrysler Schweiz AG
vehicle pool – the Actros 3340
AK 6x6 and 1838 AK 4x4 allwheel drive trucks – were primarily used for taking away the masses of snow



cleared by the snow ploughs. Neither the topography nor the weather posed major problems for the

snow removal operations organised by the St. Moritz Planning Department.

Besides continuous snow removal and gritting on the access roads and other roads in the municipality, the Unimog snow ploughs and gritters also had to keep each of the designated World Championship car parks clear. St. Moritz provided an additional 2500 parking spaces especially for the event, situated all over the area from



Source: DaimlerChrysler, www.unimogtrucks.com



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This past season Epoke has had the pleasure of delivering to the County of Aarhus, Denmark, two new SIRIUS S-4400 combination spreaders featuring a salt crusher.

This is a newly developed option, resulting from the following wish put forward by the County: when using rock salt, they wanted to be able to prewet and crush the salt as much as possible, thus obtaining a salt paste, which falls heavily on the road surface. In this way precise spreading, quick effect and possible salt savings are achieved.

The operation of the salt crusher requires a relatively high oil pressure and

oil flow, and therefore, the spreading area and delivery quantity are limited compared with those of a standard combi spreader and a prewetting spreader, respectively.

Maximum delivery quantity equals 80 kg/min., and typically the spreaders operate within the following parameters: spreading width of 4-6 meters, 10-20 g/m2, up to 60 km/h.

Lower operation speeds allow for a larger spreading width and an increase of g/m2, respectively.

Epoke products are sold and serviced in Quebec by Cubex Ltée, based in St-Jean-sur-Richelieu near Montreal.

Enjoy the sun, Cubex and Epoke will take care of the ice melting! Source: Epoke A/S, Cubex Ltée, 1-800-462-8239 Daniel Gélinas, Ron Stewart, Stéphane Bouchard







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InfraStructures August 2003 — page 12

SOFT-PLOW







May not be exactly as shown

W. Côté & Fils Ltd, the largest Canadian manufacturer of snow removal equipment and an industry leader in North America, has developed a new and revolutionary suspension system.

This super-smooth system - called Soft-Plow - has been designed to absorb the shocks which occur during moving maneuvers with the snow blade in its upright position.

In this application, the hoist which is attached to the front harness of the truck is bolted to two accumulators filled with compressed nitrogen that allow a travel of three inches (76.2 mm).

Here are some of the benefits of this new revolutionary system:

- An unprecedented smoothness of ride.
- * Reduces impacts on the vehicle chassis.
- * Stabilizes the truck in sudden starts and stops.
- Minimizes vehicle vibrations.
- * A more enjoyable ride for the operator.
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And, best of all, it reduces the operator's stress level and fatigue, allowing him to go about his work in a much more quiet, enjoyable and controllable way.

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(This device is patent pending)



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Mack Granite Snowplow Creates Flurry of Sales

"We are very excited about these new trucks. Mack has always provided the Department with equipment that is both highly reliable and extremely durable. And now they're setting a new standard for operational efficiency and driver comfort - both key factors in enhancing the safety of snow removal operations."

That's what Charles Goodhart, Chief of the Pennsylvania Department of Transportation's Equipment Division, had to say recently when asked about his organization's experience with the new Mack Granite snowplow.



The snowplow application is the latest version of the highly successful Granite series of vehicles designed and manufactured by Mack Trucks, Inc. PENNDOT has already taken delivery of its first 11 Granite snowplows, and has ordered another 11 for this year. The Department has also ordered another 105 Granite snowplows for delivery next year.

"Granite is the ideal platform for this application because it has everything the snowplow customer needs," said Kevin M. Flaherty, Mack senior vice president - sales. "It offers best-in-class visibility. The cab is big, strong, comfortable, and quiet. Granite is exceptionally lightweight, but like all Mack vocational vehicles, it's extremely durable. It features state-of-the-art electronics, including Mack's V-MAC vehicle management and control system. And it's a great-looking truck to boot."

In developing the Granite snowplow, Mack worked closely with PEN-NDOT, soliciting input from operators and mechanics around the state - the people in the field with first-hand knowledge of what snow removal is all about. The result is a design that truly meets the specific needs of the customer in this market.

"We were thrilled to be asked by Mack to be involved in the development of the Granite snowplow," Mr. Goodhart said. "No truck manufacturer had ever before invited us to participate to this degree in the design of a new chassis. They put us directly in front of their research and development people, and it was clear that they really wanted to hear what we had to say. We were very impressed by their can-do attitude and commitment to developing the best possible product."

"And the result is a vehicle that allows us to meet the needs both of our internal customers, the operators and mechanics involved in snow removal operations, as well as our external customers, the motoring public," added Ray Rugh, Section Manager of PENNDOT's Specification Division.

Key features of the Granite snowplow include a heated windshield and mirrors, which, coupled with the Granite series' aerodynamically sloped hood, Mack "Visibility" door and large peep window provide excellent visibility in wintry weather conditions. The air cleaner is located under the hood, protecting it from harmful snow and ice. And the high-strength steel in front that carries the plow and hitch is an extension of the frame rail, ensuring maximum durability.

Source: Mack Trucks, Inc.

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Cougar Truck Vibrators

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Our complete line of rugged, durable Truck Vibrators are tightly sealed against dirt, dust, and water for long life in extreme conditions. Shielded oversized, permanently lubricated ball bearings assure exceptional service life. High-speed, lowamp electric motors keep size and weight to a minimum for easy, low-cost installation. And Cougar Truck Vibrators bolt to a mounting plate welded to the frame to maximize vibration effectiveness.

A simple push of the button activates the vibrator. Hold for a few seconds until the load begins to move.

Increase productivity

Since carry-back is practically eliminated, more payload can be hauled on each cycle. More material hauled means fewer cycles to move a given amount of material. That translates to lower labor and fuel costs, and reduced vehicle wear. With Cougar vibrators, dump times are also faster, and material is more evenly distributed when spreading. Labor costs may be further reduced since the need for an employee to clean out truck beds may be completely eliminated.

Reduce common causes of damage

Extra strain on hydraulic components from lowering half-full beds is eliminated. Operators won't need to bang the tailgate to loosen material. Drivers don't need to slam the brakes or "pop" the clutch to loosen the load min-imizing the potential for damaging critical components. And there's no need to clean out the bed with a backhoe or other equipment that can scar the bed and create even more places for material to stick.

Reduce risks associated with dumping and spreading cohesive materials

Cougar Truck Vibrators help keep the operator inside the cab and off the back of the truck. Truck vibrators can also facilitate mate-rial flow to minimize possible "tip over" during spreading or dumping.

Cougar truck vibrators are sold and serviced in Quebec by Innotag Industriel, from Beloeil, Quebec.



Source: Innotag Industriel, 1-800-363-8727 www.innotag.com

A Different Way to Control Your Snow Removal Equipment

By looking at this control panel, you undoubtedly notice that there is only ont lever to control the hydraulic functions of a snow removal truck. However, this panel is designed to operate one reversible snow plow, a side wing, the hydraulic quick attach of the snow plow, a scraper and the dump body. The electric switches preserve their usual functions. This panel is the fruit of a reflexion on the way snow removal equipment is used in the field. It is by no means necessary that all the functions operate simultaneously. For example, it is not necessary for the quick attach and the dump body to be functional at all time during snow clearance operations. On the other hand, one must be able to operate the lifting of snow plow and side wing simultaneously at any time during snow clearance. The panel is designed to operate pneumatically controlled hydraulic valves. The beauty of this system lies in

its great flexibility, which makes it possible to manufacture custom controls at a reasonable price. A double axis joystick with a handle incorporating the switches, a simple lever with a safety notch and eight electric switches, all on a

12 x 14 inch panel. Electronic spreader control is also operated from the

console, thanks to the "Chlorocom" remote control from ACE.

It is quite obvious that this panel is designed for a specific application, but the basic principle of distinguishing the simultaneous,

occasional or sequential functions is always valid and makes it possible to simplify any similar application.

This approach makes it possible to reduce cabins clutter, while offering more facility to the driver to achieve his mission.

Source: Accent Contrôles Électroniques Éric Lemieux, (418) 687-6344

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"Aggregates in the city"

The Lafarge group is a partner of the second Paris-Plage (Paris-beach) event, which will run from 20 July to 17 August 2003 on the banks of the Seine. Lafarge will supply and transport by river the 3,000 tonnes of sand required to make



up beaches. The world leader in building materials will also inform visitors about aggregates (sand, crushed stone, gravel, etc.) in the sand castle area.

This partnership reflects the decision by Lafarge, a major aggregates producer in the Ilede-France region, to contribute to city life and the summertime festivities by using a clean and environmentally friendly mode of transport.

Aggregates (sand, crushed stone, gravel, etc.), a material used for construction and infrastructure projects and a vital ingredient in concrete, play a key role in urban development. After air and water, aggregates are the most used natural resource on earth.

Most aggregates are distributed in Paris by water. This method of transportation, which is economically viable, also represents a major environmental benefit for the city as river transportation is an environmentally-friendly, safe, economic and punctual mode of transport. It does not generate any noise pollution or traffic congestion. The delivery of the sand needed for the Paris-Plage event in a single convoy from Lafarge's Sandrancourt quarry will dispense with the need for the equivalent of around 200 trucks or 100 train wagons. What's more, thanks to its river fleet, Lafarge's aggregates activities in France can also transport excavated material from construction sites. For instance, Lafarge carried away material excavated from the construction of the Bibliothèque Nationale de France, which was then recycled as fill for Lafarge's quarries.



Located at the heart of the Seine valley region, Lafarge has a unique distribution network consisting of 14 ports and five depots, which enables it to stay very close to its customers.

This local service requires a responsible approach to minimize the environmental impact (reduction in noise, dust and vibrations, water quality monitoring process, integration of installations within the architectural environment, etc.).

Source: Lafarge Group

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some tight turns at your Kobelco dealer, and see how much work you can pack into a small space.



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Coins Mark Modern Innovation in Transportation

The Royal Canadian Mint introduces its newest sterling silver \$20 cameo coins highlighting modern Canadian innovations in transportation. The three coins continue the Mint's international award-winning coin series marking historic Canadian achievements in transportation by land, sea and rail.

Bricklin SV-1. Entrepreneur Malcolm Bricklin's

revolutionary safety sports vehicle, the gull-wing-designed Bricklin SV-1 sports car took the automotive world by storm in 1974. The acronym SV-1 refers to "safety vehicle 1" and



the car was equipped with an array of unique state of the art safety features that included impact absorbing urethane bumpers, a fuel tank protected on five sides to prevent fires when hit, a built-in roll cage and side guard rails. The province of New Brunswick was a 51% partner in Bricklin Canada and operated plants in both Minto and Saint John New Brunswick with 2,854 cars rolling

off the line before Bricklin went out of business. Ontario artist Brian Hughes designed this coin.

HMCS Bras d'or. This hydrofoil vessel was named after the location of hydrofoil tests in Bras d'or lakes, Cape Breton, which took place in the early years of the 20th century and also in honour of the original ship which was lost during the Second World War. Designed by deHavilland,

construction began in 1964 and was completed in 1967. Although no longer operational, the HMCS Bras d'or remains the most sophisticated and advanced design of a



surface-piercing type hydrofoil. It is on permanent display at the Musée Maritime Bernier near Quebec City. Nova Scotia artist Donald Curley designed this coin.

Canadian National FA-1 locomotive. The FA1 diesel electric locomotive was in service with the Canadian National Railway from 1950 until 1968. The powerful new FA-1 diesel was better

equipped to handle steep grades, sharp curves and heavy loads. Locomotives of this type were used extensively by Canadian National and Canadian Pacific in both freight and passenger service in Eastern Canada. The only surviving unit of this model is on display at the Canadian Railway Museum in Saint- Constant, Quebec. Ontario artist John Mardon designed this coin.

All three coins contain a gold plated cameo which features a different perspective of the vehicle, ship and locomotive.

Each coin contains one troy ounce of sterling silver. The obverse of



all three coins features a contemporary effigy of Her Majesty Queen Elizabeth II by artist Dora de Pédery-Hunt. The mintage of each individual coin has been limited to 15,000 worldwide. The coins are available from the Royal Canadian Mint's worldwide network of dealers and distributors and on the Internet at www.mint.ca.

Source: Royal Canadian Mint



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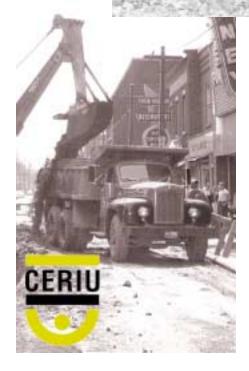
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concrete, clay tile, steel, PVC, polymer concrete and ductile iron.

The pipe thickness depends on the specific technical requirements of each project.

Types of Pipes or Structures

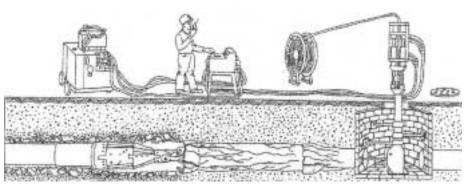
This technique can burst pipes which exhibit

tion is scheduled to take.

When necessary, HDPE (or other) pipes may be preassembled on site by fusion, according to the required pipe length.

Reconnecting Laterals

The laterals are manually reconnected to the



Fiche descriptive NI 01 Techniques sans tranchée Nouvelles installations - éclatement

Description of the Technology

Bursting technology makes it possible to completely replace an underground pipe with another pipe of equal or greater diameter and with the same profile and alignment.

The technique involves introducing a bursting tool into the pipe to be replaced and then guiding or drawing the bursting head or tool using a cable or tension rod. The tool is used to rupture the pipe and to force the fragments into the surrounding soil, while simultaneously installing the new pipe into the resulting space. Once the operation is complete, the appropriate connections are made.

Three types of tools can be used in bursting, namely pneumatic, hydraulic and static. The difference between them is in the method that they move the bursting tool through the pipe.

Another method exists which can replace a pipe following a new profile and alignment. This method eliminates the high and low points and so gives the new pipe the desired alignment.

Generally speaking, this procedure is carried out using high-density polyethylene (HDPE) pipe, which is assembled using heat fusion. Other replacement pipe materials include reinforced

low tensile properties such as cast-iron, clay, concrete, asbestos-cement. Pipes which exhibit high tensile properties such as steel, ductile iron, and to a lesser degree PVC and HDPE can be burst but require special cutting tools. The pipes must have a diameter between 75 mm and 750 mm.

Upsizing is typically categorized into three different classes:

Class A – Routine: Usually 0% to 25% upsize in the 100 mm to 300 mm diameter range;

Class B – Difficult: Usually 25% to 60% upsize in the 250 mm to 600 mm range;

Class C – Experimental: Usually 75% upsize or greater for diameters greater than 450 mm.

Preliminary and Complementary Work

The precise nature and compaction of the soil as well as the location of any structures in the vicinity of the pipe being replaced must be determined.

Launch and entrance pits for the bursting mechanism must be prepared. They could either be existing access manholes, in the case of sewer mains, or newly excavated pits at key locations, in the case of water or gas pipe.

House laterals must be disconnected by way of a local excavation.

There may be a need for temporary services and bypasses, depending on how long the opera-

new pipe once the installation is complete.

Conditions and Limitations

The bursting technique causes significant stress on the surrounding soil. This stress may affect adjacent public utilities and other facilities or even cause heaving at the surface.

Since the available techniques are not necessarily compatible with every kind of pipe or soil condition, it is vital to ensure beforehand that the planned technique is feasible.

In cases where a larger-diameter pipe is being installed (upsizing), the resulting diameter is determined according to the depth of the pipe, the proximity of other buried structures and the compressibility of the surrounding soil.

Deadlines and Timeframes

Lead time for the delivery of the pipes is practically instantaneous, as they are readily available in a wide variety of diameters.

It is possible for 100 m to 130 m of pipe to be burst per day; however, it should be noted that the majority of time is spent on planning compared to the actual burst. Some of the longest bursts have been in the range of 400 to 500 meters.

Testing and Monitoring





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All routine tests applicable to the kind of pipe being rehabilitated must be conducted.

It is crucial that the condition of adjoining underground facilities be verified during the planning stage.

Status of the Technology

This technology was developed for the gas industry toward the end of the 1970s. Its application range grew during the 1980s.

It was first applied in Quebec in 1996.

CERIU assumes no responsibility whatsoever concerning the application of the techniques and procedures described in the present fact sheet.

To obtain a copy of the CERIU Compendium of Infrastructure Technologies, please contact CERIU's Céline Forest at (514) 848-9885, extension 272. at the Centre d'expertise et de recherche en infrastructures urbaines (CERIU). www.ceriu.qc.ca



CERIU launches INFRA 2003, the 9th Annual Urban Infrastructure Week

CERIU is proud to announce that it will be hosting the 9th Annual Urban Infrastructure Week – INFRA 2003 – on November 17, 18 and 19, 2003. On this occasion, more than 100 speakers from throughout Canada, the United States and Europe will be on hand to discuss the latest developments in urban infrastructure management, investigation, maintenance and rehabilitation.

The theme for this year's conference is The Changing Infrastructure Rehabilitation Market: The Emergence of a New Dynamic. Presentations will provide urban infrastructure managers with comprehensive information and invaluable food for thought on the issues of today and tomorrow.

Potholes, water main breaks and contaminated water supplies are all telltale symptoms of the dilapidated state of our public facilities. Experts agree that these problems will only intensify in frequency and severity unless specific, effective measures are taken immediately.

Rehabilitation plays a fundamental role in this process. Fittingly, the recently launched Quebec Water Policy, which devotes an entire component of its program to municipal infrastructure, advocates the improved management of water supply systems and the increased utilization of rehabilita-

tion techniques.

It is accordingly in the best of interest of municipalities and other system owners, private businesses and service providers, to bolster their knowledge of new management methods and technological developments. INFRA 2003 is designed to facilitate this process, with three days of unique, informative presentations made by individuals who have been involved in implementing new infrastructure management policies as well as researchers and front-line personnel with invaluable experience in this regard.

In addition to the lineup of presentations, discussions and technical workshops on the agenda, INFRA also features the Evening of Excellence which, for eight years, has been showcasing accomplishments within the infrastructure community. Among the highlights of the event is the presentation of the Technological Innovation in Infrastructure Award, which is given to a municipality in recognition of its exemplary performance and innovation in using a new technology in conjunction with a rehabilitation project.

INFRA is the only event of its kind to take an integrated approach to the various facets of municipal infrastructure management, including

financing, decision support, planning, maintenance, investigation, rehabilitation and construction. Every year, researchers, engineers, professionals, politicians and other stakeholders come to share their knowledge and expertise and discover new, more efficient and more economical infrastructure management and rehabilitation methods

INFRA 2003 is organized by the Centre for Expertise and Research on Infrastructures in Urban Areas (CERIU). Created in 1994, CERIU is a technology transfer centre that strives to promote the use and development of new, optimal urban infrastructure rehabilitation technologies. CERIU fosters the exchange of expertise and technological know-how and, as such, is one of the few organizations in the country dedicated to positioning urban infrastructure as a development tool. CERIU's primary focus lies in three key sectors, namely underground infrastructure, municipal pavement, and bridges, tunnels and retaining walls. Its efforts in this regard revolve around awareness, training and management initiatives.

Source: CERIU Luciana Brusa, (514) 848-9885 #270 www.ceriu.qc.ca

New Product Demonstration Event Added to ICUEE®

Rough Terrain Forklift Demonstrations Complement Show's Focus on "Equipment in Action"

The 2003 International Construction and Utility Equipment Exposition (ICUEE) has added a special equipment demonstration area that will feature manufacturers of rough terrain forklifts. The Show will be held September 23-25, 2003 at the Kentucky Fair and Exposition Center in Louisville, Kentucky, and the new forklift demonstration area will be located in Area G of ICUEE's outdoor exhibit space.



ICUEE is known for extensive outdoor product

demonstrations simulating real-life working conditions. Last year the show reconfigured its outdoor exhibit space to offer more opportunities to showcase deep digging, shallow digging and overhead applications of equipment at ICUEE 2003.

ICUEE 2003 is expected to attract 800 exhibitors using more than 1 million net square feet of exhibit space. The show is geared to all



segments of the utility, water, sewer, telephone, gas, cable television, electric and general construction markets.

The rough terrain forklift area was added as a result of increased interest in the show by general

contractor and the availability of a new grassy/gravel area, noted ICUEE Show Manager Paula Miller.



"We're called the 'demo show.' Attendees come to see and experience equipment in action so they can assess product performance in order to make informed purchasing decisions to fit their company needs," stated Miller.

Source: International Construction and Utility Equipment Exposition, www.icuee.com

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