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Volume 26 • Number 7 • August 2021 • *English Edition*







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## InfraStructures

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## A Brief Word...

Weather has been the headline for much of this summer, from “Heat Domes” in the west to “Thunder Domes” in the east. More recently it has been melting asphalt in England and floods not seen since the breaching of the Ruhr dams have hit Germany and neighboring countries. Ultimately any news that is not about Covid is some respite to many.

InfraStructures has always made our August headlines about weather – winter weather specifically. It may seem a long way off as you apply the Factor 40 and wipe the sweat from your brow but, for maintenance planners, the first flurries (of activity) fill the October air in earnest. Being proactive is what most organizations aim for and it all starts with selecting products that fit the proposed plan and budget.

In this issue you will find new products and information from customers and applications that may influence your choices. Inside is insight into Tenco's new WWS or High Sierra's road conditions sensing/reporting system amongst news on tooling and equipment innovations across all the segments of the equipment industry.

Regardless if your perusal is virtual or actual, InfraStructures is available on all platforms. You can enjoy our content while relaxing on the deck, on the water or in the cab of your truck and have access to our extensive archive wherever you may be.

Tornado warnings will very quickly change to winter precipitations and you want to be prepared, and this issue will help you achieve that. In the meantime, did you happen to notice where I put my beach towel and snorkel?

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On the cover: When the snowstorm is so bad that nobody wants to go outside, someone must still plow the roads and groom the trails.

The Unimog and Pisten Bully are in their element – just like here in Rottach-Egern on the Tegernsee, in Southern Germany.



**EVOLUTION EDGES ACQUIRES BUILT BLADES, LLC**

Evolution Edges, A Division of Chemung Supply Corporation, a distributor of snowplow wear parts, recently announced the acquisition of Built Blades, LLC located in Fairport, New York.

Evolution Edges was founded in 2009 in response to the snowplow industry's growing need for a streamlined wear parts ordering process that delivered high qual-

ity products with rapid response. Evolution Edges is an authority on quality snowplow cutting edges and wear parts for highway departments and municipalities. Evolution Edges offers an expansive product line of snowplow wear parts that now includes the patented Built Blades Sabre® armored carbide snowplow blade technology.

Built Blades, LLC is also a New York State company located in Fairport, a northeast suburb of Rochester, and has

delivered innovative, proprietary and patented snowplow wear parts since 2016 under the direction of its founder and inventor Matthew Aquino. In 2018, the Built Blades Sabre® armored carbide snowplow blade was awarded both a fully issued utility patent and registered trademark.

"Delivery of an affordable, innovative, quality snowplow wear parts portfolio in a rapid and efficient manner to the customer is our goal. This acquisition of Built Blades demonstrates our ongoing focus to improve snowplow cutting edge technology," stated Marc Stemerman, president and CEO of Chemung Supply Corporation.

Built Blades' product offerings include 8 major product categories with more than 50 individual wear parts that will be integrated into the existing Evolution Edges product portfolio that are already on the NASPO and Sourcewell – National Cooperative Agreements.

Source: Evolution Edges

**METSO OUTOTEC SIGNS GLOBAL PARTNERSHIP WITH AM KING**

Metso Outotec and AM King, a marketplace for surplus mining and processing equipment globally, have entered into a global partnership agreement covering spares, wears, repairs and field service recommendations for AM King brokered mill and crusher sales, irrespective of the OEM. Metso Outotec will provide competitive aftermarket solutions for optimized performance, higher reliability and increased profitability, covering solution packages on certified inspections and warranty, maintenance services, and optimization services.

"We are very excited to partner with AM King. Through our comprehensive service portfolio, customers can maximize the performance of used or unused surplus equipment. Metso Outotec's extensive aftermarket offering combined with our unique field service expertise bring many sustainable options to expand the equipment life cycle. This is a concrete action to contribute to circular economy targets which are increasingly important for all companies," said Sami Takaluoma, president, Services Business area at Metso Outotec.

Metso Outotec has an extensive footprint of over 3,000 field service professionals and additional support resources close to customer operations. Today, Metso

Outotec has 140 service centers around the world.

"Partnering with Metso Outotec will further enhance the promise we make to all customers interested in surplus assets by providing a faster time to production, lower capital costs and a more sustainable future for the mining industry," said Albert King, a member of the Management Team at AMK.

Source: Metso Outotec Corporation

**CUMMINS TO ACQUIRE 50% OF MOMENTUM FUEL TECHNOLOGIES**

Cummins Inc. and Rush Enterprises, Inc. recently announced that they have signed a Letter of Intent for Cummins to acquire a 50% equity interest in Momentum Fuel Technologies from Rush Enterprises.

"This partnership will enable Rush Enterprises to continue to provide unparalleled support to our customers through our mutual, wide-ranging portfolio of Cummins' and RushCare aftermarket solutions and keep trucks up and running across the country."

The proposed transaction is expected to close later this year, subject to completion of customary preclosing activities and entering into mutually agreeable transaction documentation. The joint venture between Rush Enterprises and Cummins will produce Cummins-branded natural gas fuel delivery systems for the commercial vehicle market in North America, combining the strengths of Momentum Fuel Technologies' compressed natural gas (CNG) fuel delivery systems, Cummins' powertrain expertise, and the engineering and support infrastructure of both companies.

The joint venture will offer aftermarket support through Rush Truck Centers dealerships and Cummins distributors which will be able to service both the engine and the fuel delivery system. The partnership between Cummins and Rush Enterprises will benefit customers by providing them with access to an extensive CNG vehicle parts and service network; both Cummins' and Rush Enterprises' respective networks, which together represent over 250 locations in the U.S. and Canada, will be equipped with certified technicians and access to a comprehensive CNG vehicle parts inventory.

Source: Cummins Inc.

**HEIDELBERGCEMENT TO BUILD THE WORLD'S FIRST CARBON-NEUTRAL CEMENT PLANT**

HeidelbergCement recently announced its intention to upgrade its plant on the Swedish island of Gotland to become the world's first carbon-neutral cement plant. The installation at the Slite plant of HeidelbergCement's subsidiary Cementa will be scaled to capture up to 1.8 million t/y of CO<sub>2</sub>, which corresponds to the plant's

total emissions. Additionally, the use of biobased fuels in the cement production at Slite will be increased in line with the Group's commitment to significantly raise the share of biomass in the fuel mix. The full-scale capturing of the plant's CO<sub>2</sub> emissions is targeted by 2030.

"HeidelbergCement will be the leader in the global cement industry on its transformation path towards climate neutrality," said Dr. Dominik von Achten, chairman of

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the managing board of HeidelbergCement. “Key for decarbonising our industry is to find, apply and scale technical solutions for carbon capture and utilization or storage. After having gained valuable experience with CCU/S technologies in Norway and other countries, we are now excited to make the next step with a completely carbon-neutral cement plant in Sweden. This will be a game changer for our industry.”

The breakthrough project supports Sweden’s ambitious carbon emission reduction goals. The carbon capture facility will be built next to the existing plant in Slite, where three quarters of the cement used for concrete production in Sweden are currently produced. The authorization processes and the construction period are estimated to take just under 10 years. A feasibility study, which has already been launched, will address critical issues re-

lated to technology selection, environmental impact, legal issues, financing, logistics, and energy supply. The captured CO2 will be safely transported to a permanent storage site offshore several kilometers down in bedrock.

HeidelbergCement is currently building the world’s first full-scale installation for carbon capture at the Brevik cement plant in Norway, capturing 400,000 t/y or 50% of the plant’s emissions from 2024 onwards.

“Based on the positive collaboration with the Norwegian government and other partners at our site in Brevik, we have now chosen to significantly ramp up our ambitions for a carbon capture installation in Sweden that is 4 times larger,” said Giv Brantenberg, general manager of HeidelbergCement Northern Europe.

The planning for the plant in Slite will benefit significantly from the experience gained at Brevik.

Source: HeidelbergCement

**SERVICE PRIORITY NO. 1 FOR VACUWORX DEALER LEGACY EQUIPMENT**

Legacy Equipment Inc., based in the city of Edmonton, Alberta, has joined the Vacuworx network of authorized distributors serving the western provinces. A privately owned family business, Legacy specializes in buying, selling and renting construction, landscaping and earthworks equipment with a broad selection of aerial lifts and material-handling units to tackle projects of any duration or size.

The staff at Legacy has years of experience working with construction equipment and innovative manufacturers serving interrelated industries. The company prides itself in maintaining a diverse inventory of new and preowned solutions with one of the largest fleets of independently owned equipment in the area.

Service is priority one in terms of everything Legacy strives to accomplish at its Edmonton site, including a dedicated service building and manager, wash bay and attendant, and manufacturer showroom. They stock or have near-immediate access to a wide assortment of machines from excavators to telehandlers and skid steers. They also offer attachments that range from standard buckets and forks to vacuum lifters.

Dana Tapley with Legacy Equipment said their first close look at a Vacuworx unit on display was during a trade show about a



When most people think of mining, compressed air rarely comes to mind. Yet, powerful, innovative air compressors play an essential role in the everyday maintenance and repair of critical mining equipment.

Mobile air compressors are mounted to mining service vehicles and allow mechanics to power air tools and other equipment in the world’s remote locations. In doing so, mechanics have a convenient, efficient, and cost-effective power source that enables them to work as quickly as possible. Mobile air helps maximize productivity by keeping downtime to a minimum.

Hydraulic air compressors are a common mobile air option because many mining service vehicles require hydraulic cranes. Hydraulic air compressors use the same hydraulics system to provide high CFM output in relatively compact systems. For example, VMAC’s H60 hydraulic air compressor provides 60 CFM, which is enough air to power 1” impact wrenches and 60-pound jackhammers. The H60 is also frequently used for OTR tire inflation, filling tires in a fraction of the time of other air solutions.

But there is another mobile air solution that has recently become popular in mining: multi-power machines, including VMAC’s 6-in-1 Multifunction. Multi-power machines combine an air compressor with several other types of equipment, providing multiple power sources within a single system.

VMAC’s Multifunction system combines an air compressor, generator, welder, battery booster, battery charger, cold climate kit, and PTO port into one compact design. The Oilman Series Multifunction also includes a Shocker PASS® (Positive Air Shutoff System) to prevent the diesel engine from “running away” if it comes into contact with flammable gasses. Because of its diverse capabilities, VMAC’s Multifunction ensures mechanics are prepared to tackle any job they come upon without having to go back – even when there are unexpected challenges.

Regardless of the system chosen, mobile air power is a convenient, reliable, and efficient way to power tools and equipment for remote mining maintenance and repair.

Source: VMAC Global Technology Inc.

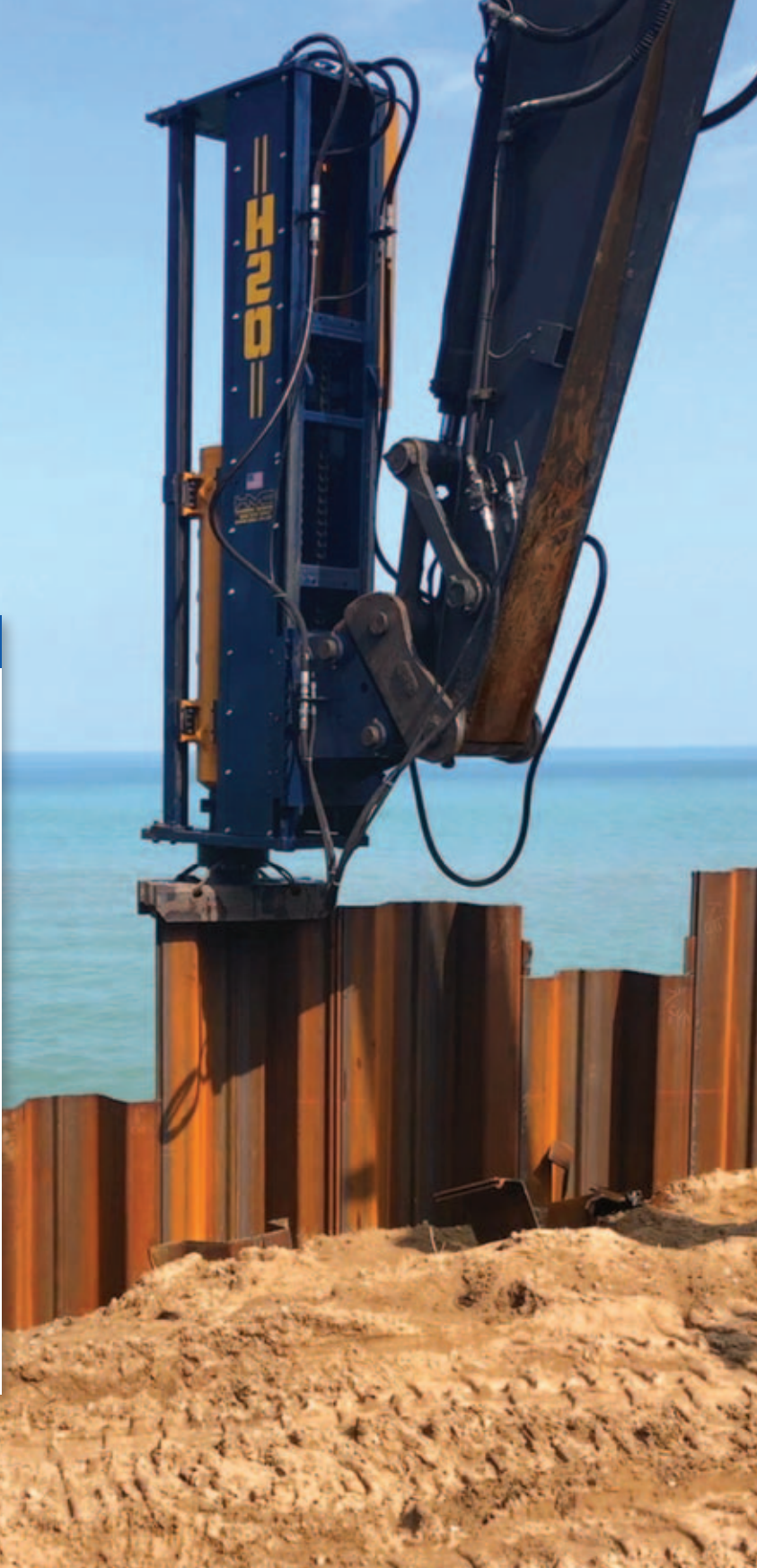
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year prior to buying in. With strong ties to construction and interior removals of concrete slab, they started with the Vacuworx PS/PHD Series, a battery-powered line of portable vacuum lifting systems with lifting capacities ranging from 800 to 1,134 kg.

For heavier lifting jobs either indoors or outside, the Vacuworx SL 2 Subcompact Vacuum Lifting System has a lifting capacity of 2 t and can be used with compact equipment such as skid steers and mini excavators. In addition, Legacy represents the Vacuworx RC Series lifters, with lift capacities from 10 to 25 t, for handling or removal of pipe or concrete slabs in heavy highway, civil engineering and underground construction applications.

"We do a lot of rentals for existing construction, where you have to go in and cut a concrete floor out for plumbing and electrical utilities," said Mr. Tapley. "We see a lot of slab lifting, steel plate, other concrete materials. Basically anything that is flat that we can get (the vacuum lifter) to suck down and adhere to."

"Right away it looked like a good rig to make it a cleaner, easier job," he noted.

"At the same time, we are always thinking about how to make it easier on our customers, to do more with fewer employee or simply making the job easier and quicker, which is always more profitable."

For Legacy, the ultimate goal is to connect customers with an appropriate solution that meets their needs. "We are an inside rental company and we are here to look after our customers," said Dana Tapley. "We have about 30 excavators plus all the attachments, skid steers, screening buckets, gravel buckets, winter heating. When a customer comes to us for a material-handling solution, they usually need the host equipment, too. We think Vacuworx will be a useful item. We are coming into that season. The need is there."

Source: Vacuworx

#### MOBILE APP PROVIDES EASY REMOTE ACCESS TO ESSENTIAL CRANE AND HOIST STATUS AND PERFORMANCE INFORMATION

Downtime caused by unexpected maintenance is expensive. To help address this, Columbus McKinnon Corporation

introduced Intelli-Connect™ Diagnostics and Analytics, the newest solution from its Automation Division. Using Intelli-Connect, crane and hoist users can access detailed system information on their tablet or smartphone through the Intelli-Connect Mobile App. With diagnostic information available at their fingertips, customers can address issues faster, reducing the mean time to recover (MTTR), plan maintenance and ultimately increase uptime.

"This new remote diagnostic and analytic solution delivers critical status information from a Magnetek variable frequency drive on a crane or hoist to the Intelli-Connect Mobile App, providing insight into how equipment is being used to ensure proper and timely maintenance," said Peter Stipan, global director of Columbus McKinnon's Automation Division. "By accessing information directly on a tablet or smartphone, operators no longer need to climb up to the drive, power down, and connect hardware to access status information, thus eliminating potentially hazardous situations."

By incorporating this technology into an overhead crane or hoist, users can quickly and easily program, monitor and troubleshoot equipment. Intelli-Connect also allows them to proactively monitor and schedule maintenance to ensure the necessary parts and support are available when they are needed. If a system does go down unexpectedly, Intelli-Connect helps reduce MTTR by providing critical operating details, such as signal monitors, equipment status and energy use, to determine where the issue occurred.

The Intelli-Connect Mobile App is equipped with features that allow users to easily set up their system, adjust parameters and store backup sets, log events for faults and alarms, and access technical support for troubleshooting right from their mobile device. The mobile app is available as a free download on Google Play or the Apple® App Store®.

An upgraded version of the app, Intelli-Connect Mobile+, features advanced diagnostics and analytics, including trending data, event logging and visibility to remaining hoist life. With this additional information, users will be able to easily coordinate maintenance schedules to keep downtime costs to a minimum.

Intelli-Connect can easily integrate with cranes, electric wire rope hoists or



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chain hoists, including select Columbus McKinnon models, that utilize Magnetek-brand IMPULSE®G+/VG+ Series 4 or IMPULSE®G+ Mini Variable Frequency Drives.

Source: Columbus McKinnon Corporation

#### ELEVATE CHOOSES PROCORE AS ITS CONSTRUCTION MANAGEMENT PLATFORM

Procore Technologies, Inc. recently announced that ELEVATE Build has chosen Procore as its construction management platform.

ELEVATE was founded in 2019 and specializes in creating high-end commercial spaces, including Alchemy, a Toronto

retailer recently featured in Interior Design Magazine. The company delivers projects across Canada and the U.S.

After trialing other solutions, ELEVATE chose the Procore platform for its complete feature set, flexibility and fast onboarding. Paul Bélanger, ELEVATE's principal and project director, estimates that Procore will save the company about \$45,000 each year by streamlining administrative work. With Procore, ELEVATE is able to provide clients with frequent updates about project finances, confident that no details have been missed.

"My vision is for ELEVATE to be a 100% mobile company, with our team able

to work anywhere with all the project information at our fingertips," said Mr. Bélanger. "Procore enables us to do that, and to provide a high level of customer service while ensuring we are streamlining our processes to be more cost efficient. Procore was the right fit for us – and we're aligned about where the construction industry needs to go."

While ELEVATE initially implemented Procore to leverage financial and project management tools, the company continues to discover new ways to use the platform to innovate and improve day-to-day operations.

Source: Procore Technologies, Inc.

#### METSO OUTOTEC TO DIVEST ITS WASTE RECYCLING BUSINESS

Metso Outotec has signed an agreement to divest its Waste Recycling business line to Ahlström Capital, a family-owned investment company. Metso Outotec announced in October 2020 its decision to divest its Recycling business which comprises of the waste recycling and metal recycling business lines based on the company's strategic focus on the aggregates and mining industries. The closing of the transaction is expected to take place during the Q4 of 2021.

The parties have decided not to disclose the value of the transaction. The divestment will have a minor positive impact on Metso Outotec's financial results. The Waste Recycling business has been reported as part of discontinued operations in Metso Outotec's financial statements. Metso Outotec continues with the divestment process of its Metals Recycling business line.

"We are very pleased that we have found a new owner for our business, whose strategic thinking and ambitions are so well aligned with ours," says Uffe Hansen, who is heading the Waste Recycling Business. "As a standalone company with a sole focus on waste recycling, we will be more agile and customer centric in order to further exploit growth opportunities."

The Waste Recycling business will be operating under the M&J brand, and its headquarters will be in Horsens, Denmark. All current employees of the business, approximately 120 persons, will transfer to the new company in connection with the transaction.

Source: Metso Outotec Corporation

## SNOCOM's Inside Scope on Emissions



Transportation represents almost a quarter of Canadian greenhouse gas emissions (GHG) and is the main cause of air pollution in cities. Canadians' answer to the emission reduction challenge in this sector is an irreversible shift to low-emission mobility. By midcentury, GHG from transportation will need to be at least 60% lower than the 2005 level and be firmly on the path towards zero. Emissions of air pollutants that harm our health need to be drastically reduced without delay.

The environmental requirements also push winter operations for a different approach. Cities need to reduce traffic movements (congestion and CO<sub>2</sub>) while handling the snow and keep cities open during or just after snow events – as soon as possible. SNOCOM's volume reduction technique is different and unique. It significantly helps to reduce emissions and movements. In an average winter, snow dumping sites in Montreal, Quebec, receive approximately 13 million m<sup>3</sup> (325,000 truckloads) of snow – a real ballet of heavy machinery and trucks!

SNOCOM's machine, the Snowcuber, ingests large amounts of snow and exploits its compressibility to reduce the volume by a factor of 2. Just imagine what SNOCOM's Snowcuber means for CO<sub>2</sub> emissions if you can reduce the number of truckloads by half. The additional advantage is that it also saves a lot of money on hiring trucks.

Covid-19 gives most of us a hard time handling our activities. When we leave Covid-19 behind, it feels like a new start. Why not immediately start with a method in which we can reduce emissions, movements and fuel consumption?

Source: METEC Metal Technology Inc.



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# High Sierra Electronics Expands Suite of Road Weather Information Systems for Driver Safety

High Sierra Electronics, Inc. recently announced the release of its new StormLink® RWIS Lite range of road weather solutions. The StormLink RWIS Lite Icy Road Warning System and StormLink RWIS Lite High Water Detection System provide economical options for local cities and municipalities to enhance motorist safety by installing warning systems that notify travelers of dangerous road weather conditions.

The StormLink RWIS Lite Icy Road Warning System alerts drivers about hazardous conditions created by winter weather in real time. Sensors measuring road temperature, and other atmospheric conditions such as air temperature, and relative humidity determine if icy road conditions exist and automatically activate flashing beacon warning stations on the road. Agency personnel access a centralized dashboard to view system data and set up real-time alerts via Contrail® software. The flashing beacon signs warn drivers in

advance of icy conditions so they can be prepared and take necessary precautions such as adjusting speed or finding alternate routes.

The StormLink RWIS Lite High Water Detection System (HWDS) warns drivers of flooding events on roadways. Real-time sensors track water levels at the low point of the road and send alerts through Contrail to agency personnel and warning stations when water levels breach a custom set threshold. The flashing beacon warning stations will turn on, providing drivers with ample lead time of the flooding event to avoid dangerous situations.

These StormLink RWIS Lite solutions provide cost-efficient and scalable products

for road weather sensing and warning. Wireless communications and solar-powered systems make StormLink RWIS Lite easy to install, even on existing signs. Each package includes a control station, 2 warning stations for either side of the roadway, and Contrail data management services. StormLink RWIS Lite products fit into the complete network of StormLink products, enabling a packaged safety solution for smaller cities and municipalities.

“Weather can impact roads very quickly,” said Brett Hansen, road weather



# Hilltip Brings HTrack™ Tracking System Technology to the North American Market

Hilltip recently introduced its HTrack™ online tracking software to the North American market. Compatible with all models of HillTip's IceStriker™ and SprayStriker™ spreaders and de-icing sprayers, the software allows winter service professionals to track and manage all of their HillTip equipment via computer, tablet or smartphone. This innovative technology helps minimize environmental impacts, track expenses and properly document that agreed-upon services were completed, among multiple other benefits.

The HTrack system uses HillTip's easy-to-use StrikeSmart™ controller, which is placed in the cab and connects to IceStriker and SprayStriker products. It offers the industry's only 2-way GPRS capability to transmit data to a custom online user interface, which can be accessed by an internet connected device. This feature allows route details of all equipment to

be tracked remotely, such as speed, GPS location and material used.



Geofencing capabilities allow users to remotely create work sites for different client areas, as well as set application rates for each client's site according to weather conditions. With this information entered into the system, the StrikeSmart controller alerts drivers which sites to treat during winter events, and it recognizes when the driver enters each work site. Then, the spreaders and sprayers automatically

adjust application rates according to the presets for each property.

The HTrack system also allows for complete remote control over an entire fleet of equipment. If weather conditions unexpectedly change, one can adjust application rates on hundreds of spreaders or sprayers in just a matter of seconds, if necessary. Thanks to this unmatched level of automation, drivers are able to concentrate solely

product manager, High Sierra Electronics. “Measuring road conditions along with alerting drivers on the road is important to keeping both large and small communities safe from severe weather. We are excited to play a larger part in improving weather safety in areas where it is needed the most.”

The addition of the StormLink RWIS Lite product line expands an already robust and full-featured road weather product line that includes sensor stations and driver warning systems. The StormLink RWIS Pro and StormLink RWIS One systems provide additional safety features for larger geographic areas or more complex road weather situations such as high winds and low visibility. High Sierra Electronics also offers integrated camera subsystems and machine learning object detection allowing for visual confirmation and 24/7 alerting.

Source: High Sierra Electronics, Inc.

# The PowerBully 18T Will Do the Job. No Matter What!



A passion for engines, machines and technology is inextricably linked to the Kässbohrer organization. There are new ideas, technologies, and improvements in their vehicles that make them an efficient partner. The name Kässbohrer is known around the world for leading quality, customer service and rapid response.

PowerBully low ground pressure track carriers are the best mobile base for the construction and maintenance of pipelines, power and telephone lines, fire control and many other applications. They are the perfect platform for digger derricks, cranes, man lifts, dumpers, knuckle booms, backhoes and more. Their light footprint ensures you have the right vehicle to access those hard to reach locations.

With a payload of 16.6 t, the PowerBully 18T can be built individually according to customer requirements. The vehicle outclasses all comparable vehicles with its innovative X-track. The cleat design of the high-performance rubber track offers excellent stability and a powerful grip, even on steep and muddy slopes. An important and unique feature of the X-track is the interchangeability of individual master links.

Kässbohrer's decade-long experience with tracked vehicles in winter sports, translates in trailblazing innovations in the commercial vehicle industry. As an absolute first on the utility vehicle market, the PowerBully 18T is the only vehicle worldwide that enables intelligent fleet management via interfaces.

This is of particular interest to contractors and as well as rental companies. It enables them to see, for example, whether the PowerBully urgently requires oil or monitor engine speeds while driving. Rental companies can see where and for how long their vehicles are in use.

The connectivity is especially advantageous for servicing. By using the telemetry option – i.e. remote data transmission – the service technician has the option to connect remotely to the respective vehicle in advance of service and read out numerous service and maintenance parameters as well as data on the usage of that specific vehicle. If a problem arises, the service technician will know in advance which parts are needed and can fix the issue more quickly and cost-effectively.

Source: Mécanique J. Clair Inc.



on completing jobs as quickly and safely as possible. Additionally, the amount of skill required to operate the equipment is minimized.

Other benefits of the HTrack system include assistance with route optimizations and resource allocations for increased operational efficiency and profitability.

Headquartered in Pietarsaari, Finland, Hilltip is a leading manufacturer of road maintenance equipment in Europe. Opening its U.S.-based subsidiary, Hilltip Corp., in 2020, the company is now actively bringing these industry-leading advancements to the North American market.

Source: Hilltip Corp.





# Inhibiting Corrosion in Vessels Containing Salt Water or Brine

Marine environments are extremely aggressive and corrosion protection in these areas requires an especially careful approach. Application of VpCI® inhibitors in the hydrostatic testing process is of great importance since the test water can be aggressive to pipeline material. The same goes for seawater ballasting of ships. M-645 is a float coat used to inhibit corrosion in vessels containing salt water or brine. It floats on the surface of the water, forming a self-healing protective film on adjacent metals.

M-645 is ideal for ballast tanks that are frequently emptied and refilled as well as hydrostatic testing applications.

The film displaces water containing chlorides from the surface of the vessel. As the water is raised or lowered, M-645 coats every square millimeter of the vessel's interior – including ring stiffeners, girders, piping, and side shells – with a sufficient amount of product to protect against corrosion. M-645 is ideal for ballast tanks that are frequently emptied and refilled. Because M-645 floats on the surface of the water, the non-aqueous formula does not contaminate ballast water, allowing for normal discharge procedures. It is also an effective corrosion inhibitor for hydrotesting large above ground storage tanks (ASTs). The product is non-hazardous, nonflammable and self-reapplying. It will provide corrosion protection for a broad range of saltwater/brine applications. M-645 extends ballast tank life, minimizing costs for dry docking repairs, and does not interfere with ballast water discharge. It is effective for multiple tank refills.

In one application of M-645, the subcontractor needed to perform hydrostatic testing on tanks fabricated for the customer. The project involved 11 vessels with capacities varying from 10,382 m³ to 45,156 m³. The subcontractor needed an economical and environmentally acceptable method of corrosion protection for interior carbon steel surfaces during the



hydrostatic testing process. Due to the scarcity of potable water in the UAE, it was decided to use seawater. Cortec's system, consisting of M-645 Float Coating and S-7 Oxygen Scavenger, was selected for corrosion inhibition. M-645 Float Coating at a concentration of 6 m²/l and S-7 Oxygen Scavenger at 100 ppm were added to a tank before filling them with the required volume of seawater. The length of the hydrostatic tests varied from 35 to 45 days, and the seawater was reused in several tanks.

When testing the next tank in line, the full calculated amount of M-645 and a reduced amount of S-7 were added. After hydrostatic testing, the interior surfaces of the tanks were immediately cleaned with Cortec's VpCI®-418 L, a non-foaming cleaner, diluted 3-5% with potable water, to remove any residual chloride prior to application of an epoxy coating.

Cortec® proposed this chemical system as an economical and environmentally responsible method of effective corrosion protection for interiors of carbon steel

tanks subjected to hydrostatic testing using seawater. The customer did not need additional biocide, which would have been both costly and environmentally undesirable. The treated seawater, after hydrotest-



ing, met all requirements for discharge back to the sea. In addition to providing a high level of corrosion protection, Cortec® technology also offered important environmental benefits for the application.

Source: Cortec® Corporation



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# Fugro Wins Deepwater Site Investigation Contract for Equinor in Eastern Canada

Equinor has selected Fugro to perform a deepwater site investigation in Flemish Pass, 500 km off the coast of St John's, Newfoundland and Labrador, in water depths of approximately 1,200 m. Fugro's field campaign entails a seabed survey, an environmental survey and a soils investigation, with client deliverables scheduled for September.

Having completed numerous projects for Equinor in the region for over a decade, Fugro is well versed in the complex geology and marine habitat of the Flemish Pass. This year's survey is performed using Fugro's newest autonomous underwater vehicle (AUV), the Echo Surveyor VIII, which is designed to capture engineering-grade bathymetric, imaging and shallow geological feature data in deep water. It also utilizes proprietary 3D photogrammetric methods for improved delineation of cold water corals and other benthic habitats. The soils investigation is



performed using Fugro's SEACALF Mk IV® seabed cone penetration test (CPT) system, which uses a coiled push rod and compact continuous thrust machine for increased efficiency and reliability.

"We look forward to continuing our collaboration with Equinor in the region as we help address the company's ongoing need for digital Geo-data acquisition, analysis

and advice. This project will allow us to showcase our locally developed digital 3D photogrammetric mapping methods to augment traditional geophysical sensors, which allows more quantifiable target definition," said Mike Cole, country manager for Fugro in Canada.

Source: Fugro

# Modular Bridge for a Snowmobile Trail Over the Odell River

Acrow recently designed and supplied a modular steel bridge for a vital crossing point on a popular section of a recreational trail network near the Village of Plaster Rock in New Brunswick. Located at the northern end of the Appalachian Mountain Range, the region is a year-round destination for outdoor activities. With more than 8,000 km of groomed trails across the province, snowmobiling is a vital part of the region's economy.

In the spring of 2019, an ice jam in the Tobique River caused the adjoining and smaller Odell River to back up. As a result, large sections of ice pushed the existing bridge off of its foundations. As the bridge was critical for crossing the Odell, the owners of the bridge, New Brunswick's Department of Energy and Resources (NBDERD), decided it would be most expeditious and more economical in the longer term to completely remove the old structure, rebuild the foundations and install a new bridge.

A modular steel Acrow structure was selected for the project, and design engineers

Hilcon Limited devised innovative foundations which allow the bridge to be lifted in the event of future backups, thereby preventing it from being pushed out of position. A key design feature of the new bridge are specially modified transoms allowing for up and down but not lateral movement, enabling the bridge to slide up the sides of the extended curtain walls in high water, and slide back down when the water level has dropped.

The new bridge replacement is 21.3 m long and 3.7 m wide to accommodate 2 lanes of snowmobiles or one groomer. Manufactured from high-strength, high-quality steel and galvanized to eliminate



corrosion, Acrow's bridges are virtually maintenance-free over a service life of 75-100 years or more.

The project began in October 2020 and was completed in only a few weeks, rapidly restoring the crossing for the snowmobilers just in time for the first snowfall of the year.

Source: Acrow Canada



# A Wing to Answer a Prayer

The main difference between winter operations in Canada and those in Nordic and European jurisdictions is not types or volumes of precipitation, rather it is remoteness. With such a small population dispersed over such a huge land mass, roadways are critical for commerce and the essentials of life such as food and emergency services.

Equipment is the obvious answer, strategically located to provide coverage between communities and managed as part of a detailed winter maintenance plan. Sounds simple enough to those in more urban centers, not so simple when the availability of eligible operators is considered.

Tenco created a solution to the question of “How to do MORE, with less?” asked by North America’s winter maintenance planners. A leader in infrastructure maintenance equipment since 1976, Tenco Inc. is well-established in the field of winter operations.



“The biggest issue our customers are having, particularly in northern regions, is to find experienced operators,” said Jean-Phillippe Bourque vice president of sales & marketing for the company.

The solution Tenco designers created was the “Wide Wing System” aka WWS which allows one chassis to cover more ground, up to 8 m in a single pass!

When combined with the company’s pre-wet spreader and other equipment, a

single operator can effectively service a dual carriageway from a single lane in one direction.

Not trailing equipment behind eliminates the need for additional licensing and maintenance requirements in most jurisdictions. The WWS-equipped truck can be operated with a regular commercial driver’s license, just as a regular snowplow truck.

This makes one vehicle twice as effective in terms of levels of service giving the road

authority greater value, greater compliance, and greater safety per lane-kilometer.

If a single operator is twice as productive, will they be twice as stressed or fatigued? Tenco addressed that question and, in collaboration with Bosch Rexroth, eliminated the traditional clumsy multiple control lever arrangement and opted for a single, multifunctional ergonomic joystick.

This eliminates cab clutter and allows the driver to focus his attention to the conditions outside and maintaining the vehicle in the correct orientation for the safety of all road users.

That all looks good on paper, but can it deliver in real-world conditions? The Ontario Ministry of Transportation and one of their contract partners, Emcon, decided to put the WWS to the test in North-western Ontario – including sections of the Trans-Canada Highway. After examining the concept and discussing with Emcon and Tenco their expectations, the MTO gave approval to a 2-year evaluation trial



continuing through spring 2022.

Initial operations have garnered success and, after training and familiarization, crews have grown ever confident in the use of this new and innovative product.

“It has taken about 2 years to bring everyone together and get a working user-friendly plow into service. We’re very enthusiastic about WWS and expanding it into our fleet,” explained Norm Porterfield, fleet manager for Emcon.

Tenco is planning to launch WWS to all winter maintenance fleet operators across North America for the 2021/22 winter season.

Source: Tenco Inc.



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# Cubex Appointed Dealer of Trombia Sweepers in Ontario, British Columbia, Quebec and Manitoba

European sweeper manufacturer Trombia Technologies has appointed Canadian Cubex Ltd as the official dealer for its EU certified PM2,5 Trombia street sweeper attachments. Cubex will handle Trombia distribution in Ontario, British Columbia, Quebec and Manitoba.

Trombia attachments are mounted on wheel loaders, telescopic loaders and large agricultural tractors and enable year-round street and area maintenance. Sweepers are equipped with large 1.8 m³ hopper capacity, which makes them comparable to regular compact sweeper vehicles.

“Cubex has been in business for 49 years and represents industry leading sweeper manufacturers, which we distribute across Canada. Trombia is also an industry leader, we are very excited to partner with them and introduce this technology to our market,” stated Kitch Wilson, Cubex vice president of sales & marketing.



Trombia sweeper attachments are completely filter-free and use a globally patented technology that combines airknife dust removal, mechanical sweeping, vacuum and cyclone separation. Inside Trombia’s sweeping chamber the sweep-

ing process is carried out fully waterless, which enables a higher accuracy and perfection in sweeping results.

“We welcome Cubex with great excitement to Trombia’s global distribution network and can’t wait to kick start Trombia

# Liebherr T 274 – the New 305 t Mining Truck

Liebherr recently launched the T 274, a 305 t haul truck. It bridges the gap between the highly successful T 284 (363 t) and the upgraded T 264 (240 t).

The T 274 provides fast cycle times, higher production rates, low fuel consumption, and a low cost per tonne. It follows the same base design as the T 284, benefitting from its decades of field experience. The T 274’s mining-optimized components are developed, manufactured, and controlled by Liebherr following our vertical integration model to ensure top performance and reliability for the entire machine.

The Liebherr T 274 is powered by a 3,650 hp engine and features the Litronic Plus AC Drive system.

Speed on grade is a major contributor



to fast cycle times. The Liebherr Litronic Plus AC Drive System improves cycle time efficiency by providing continuous uphill speed, differing from traditional me-

chanical drive trucks that require shifting of gears.

The T 274 is equipped with double A-arm suspension, which keeps optimal

now also in Ontario, Manitoba and British Columbia for the first time,” says Antti Nikkanen, CEO of Trombia Technologies.

## SILICA DUST IS A CRITICAL WORK SAFETY ISSUE

In January 2018, the European Commission issued a revision of the Carcinogens and Mutagens at Work Directive (2017/2398/EC) which sets a maximum legal limit of worksite silica dust exposure in an 8-hour work shift to 0.1 mg/m³. The EU directive also sets pulp and wood dust levels at 2 mg/m³.

In the U.S., the Occupational Safety and Health Administration (OSHA) set the standard even lower, to 0.05 mg/m³.

Trombia technology is designed to support operators to get below these levels, with the permanent removal of even the finest dust from the precinct.

Source: Trombia Technologies

ground contact of the tire within the whole suspension stroke, reducing the tread and wear with optimized camber and toe angle.

Pairing the Liebherr T 274 with the Liebherr R 9800 hydraulic excavator provides the customer with a highly versatile and productive fleet. The fast swing times of the R 9800 will load the T 274 with 4 bucket passes. The T 274 is also compatible with the brand new R 9600, the successor to the thoroughly proven and iconic R 996B.

Liebherr offers an array of specific solutions for customers working in extreme environments. Specific solutions have been created to protect the components and help customers operate machinery in temperatures as low as -40°C. Liebherr also offer a solution to enable the trucks to be operated at altitudes between 3,500 and 5,000 m above the sea level.

The Liebherr Trolley Assist System is available as an option on the T 274 as an effective first step on the road to zero emission mine sites of the future. Using an overhead pantograph to connect the electric-drive system to the electrical network lowers diesel fuel consumption and truck fleet CO2 emissions.

source: Liebherr

# Flodraulic Launches Next Generation Precision Snowplow and Salter

Flodraulic recently announced the launch of its Archimedes Precision Spreader. Working with the University of Guelph, the Town of Halton Hills, and the City of Guelph, in Ontario, Flodraulic has redesigned salt management to accurately measure the salt applied on roadways in real-time.

The Archimedes Precision Spreader uses a LiDAR-based sensor array to measure the salt applied on roadways.

This sensor data is then instantaneously fed back into the control system to dynamically control salt application rates to be as precise as possible. This solution can also detect over-salting, under-salting, as well as blockages.

In tandem, Flodraulic also developed a cloud-based command structure and web center that can assign salt application rates to specific GPS coordinates. This solution allows operations teams to dynamically raise and lower salt requirements at any location based on weather, risk, and environmentally sensitive areas. The role of salt adjustment has always been solely the responsibility of the operators, who need to navigate dangerous roadways while simultaneously plowing snow.

“Snow and ice vehicles are large and by definition are only operated when road conditions are at their most dangerous,” said Chris Passmore, director of technologies at Flodraulic. “The Archimedes Precision Spreader will increase the safety of drivers by almost entirely removing salt control from their operational procedure. The municipalities will now be conscious of salt usage and environmentally sensitive areas without adding a layer of complexity for their drivers.”

Through Ontario’s Autonomous Vehicle Innovation Network (AVIN), led by the Ontario Centre of Innovation (OCI), Flodraulic received support to commercialize this advanced R&D, which otherwise may not have been possible.

Natural waterways and wetlands are being salinized at alarming rates from winter road salt application. With this solution salinization can be cut by up to two thirds, in turn helping to preserve wildlife and maintain drinking water supply.

These advanced salt controls have the potential to allow for more accurate municipality salt usage. The University of Guelph has run tests and determined some salt trucks use more salt than necessary on roadways. This is often attributed to combating blockages, erring on the side of caution, or proactive applications from weather forecasts. The closed-loop control technology in these new trucks with the Archimedes Precision Spreader will automatically respond to blockages for the operator and will recommend an application of salt that will use less salt than current trucks on the road while maintaining the same level of public safety.

Flodraulic set out to create a semi-automated snowplow truck. After rigorous development, commissioning, and field testing, Flodraulic’s patent-pending control system is now on trucks and proving to be successful.

Source: Flodraulic



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# Greater Environmental Protection for Mine Tailings

An international team of scientists used the Canadian Light Source (CLS) at the University of Saskatchewan to identify destructive metals in mine tailings samples taken in Quebec.

When mine tailings are left exposed to the elements, they undergo changes in their chemical and mineral properties. Over time, oxygen and water cause the tailings to oxidize and release acid. This weathering can lead to the formation of new minerals within the waste that trap several metals harmful to the environment, including arsenic, copper, zinc, iron, and sulphur.

Since this oxidation happens over many decades, it is difficult to predict at the time of a mine shutdown its acid-generating potential and the volume of secondary minerals that will eventually form. To explore this problem, a team of researchers from Canada, Morocco and Belgium examined tailings samples collected from the Joutel gold mine in northern Quebec,

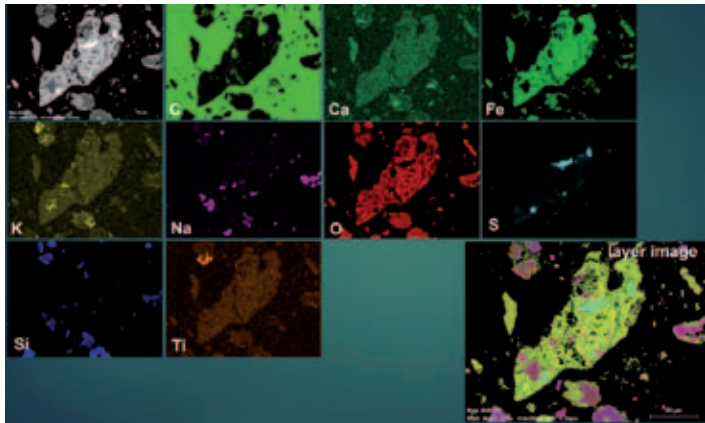
which has been closed since 1994.

Using the SGM beamline at the CLS and other technologies, the team analyzed weathered samples taken just below the surface of the tailings and fresh samples from beneath the water table.

The team discovered the 2 samples were markedly different in their chemical and mineral makeup – and in terms of the threat they pose to the environment. The shallower, weathered sample was acid-generating and groundwater within it contained metals in harmful amounts. However, the deeper sample, which was protected by a hardpan layer and thus not exposed to air or water, was neutral and

therefore posed little environmental risk.

These findings, which were recently published, disprove results of research done in the early 2000s, which concluded – based on lab testing only – that tailings left at the



site were largely neutral and thus posed little threat to the surrounding environment. Dr. Abdellatif Elghali conducted the study while he was a doctoral student at RIME UQAT-Polytechnique in Montreal.

Mr. Elghali said the changes in the properties of the tailings illustrate that it can take many years for the environmental threat posed by mine tailings to become apparent.

“This makes existing prediction tests widely used in the mining industry limited in their ability to accurately gauge long-term environmental impacts,” he stated.

Co-author Mostafa Benzaazoua with the Université du Québec en Abitibi-Témiscamingue (UQAT) said using synchrotron techniques at the CLS deepened their understanding of the role of secondary minerals that developed in the mine tailings over time.

“This story is beautiful because we had conclusions and interpretations from 20 years ago, and our new conclusions challenge them by bringing new insights,” said Mr. Benzaazoua. “This mine site, we know it very deeply now because we had access to high level facilities and research tools. We understand even the complex

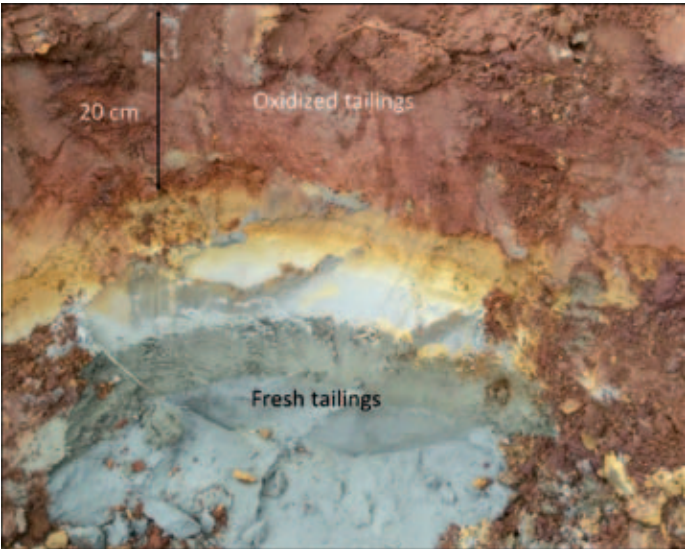
speciation and fate of the elements. So, we understand the field behavior of this mine site and the micro-scale behavior of its tailings.”

The team hopes their findings will lead to greater environmental protection from mine tailings in the future.

The Canadian Light Source at the University of Saskatchewan is a national research facility, producing the brightest light in Canada – millions of times brighter than even the sun. One of the largest science projects in the country’s history, the CLS hosts annually more than 1,000 scientists from around the world who use its light to conduct ground-breaking health,

agricultural, environmental and advanced materials research.

Source: Canadian Light Source



# Modular Steel Bridge Connects Communities in Ontario

A modular steel bridges from Acrow has been installed to replace an aging structure over a stream in Tay Valley Township, a remote region about 90 km southwest of Ottawa, Ontario. The crossing connects 2 communities and continued access is essential – without a bridge, a lengthy detour would mean inconvenience for residents and critically impact response time of emergency vehicles. After a 2018 inspection, of the structure of the single-lane Bolingbroke Bridge was found severely deteriorated. A weight restriction was imposed and a full replacement recommended.

Acrow’s modular panel bridge proved an ideal solution for the project. Firstly, it fulfilled the need for minimal concrete work (foundations only). This benefit, combined with the ease and speed of assembly on-site using prefabricated components, ensured that the construction process would be quick. The construction area was remote and consideration had to be given to ease of transporting bridge materials to site, ideally using compact



modular components, rather than large steel or concrete beam sections on narrow rural roads. Furthermore, it was estimated there would be reduced overall costs when compared to building with conventional reinforced concrete slab on steel or concrete girder systems.

The 42.7 m single-lane bridge is 5.5 m wide and has a steel deck with asphalt overlay. It is planned for a 75-year design life in accordance with the Canadian

Highway Bridge Design Code. The bridge was designed to accommodate an upward slope of 4.27% from the north abutment to the south and installed using a crane-assisted launch, with guidance from Acrow’s site representative. Total construction time for the superstructure was 8 working days with a 5-man crew, with the bridge opening in November 2020.

Source: Acrow Canada

# Hiab Receives Large Moffett Order in the U.S.

Hiab, part of Cargotec, has received an order for Moffett M8 55 NX truck-mounted forklifts worth €14.5 million (\$214 million) from one of the leading home improvement companies in the U.S. The order was booked in Cargotec’s 2021 Q2 order intake. The forklifts ordered will be delivered between October 2021 and February 2022.

All Moffett M8 NXs are delivered with connectivity enabled and premium access to HiConnect™ for 2 years. HiConnect Premium provides real-time insights into equipment utilization, operation, and condition that can be used to optimize performance, safety and avoid unnecessary downtime. The Premium subscription gives fleet managers access to operation and operator performance data, individual site visits, service alerts and equipment history.

“Moffett’s continued commitment to product development and advancements in the digital space helped to secure this order and strengthen our long standing partnership with one of the U.S.’ leading home improvement companies. They



deliver both heavy and high value products to customers across the U.S. in challenging job sites and ever changing conditions,” said Bob Bobroski, director, strategic accounts & dealer management, Hiab.

“Moffett is the original and the global leading truck-mounted forklift brand. This repeat order is further proof that Moffett delivers productivity and reliability to our customers that keep everyday life moving,” said Jann Hansen, vice president,

sales & product management, Moffett Truck-Mounted Forklifts, Hiab.

Moffett M8 NX truck-mounted forklifts can transfer heavy loads quickly and safely, even across challenging terrain. While the M8 NX is incredibly powerful, it is still compact enough to be carried on a wide variety of truck and trailer classes. All Moffetts are compliant with current emission standards.

Source: Cargotec Corporation



# ALL Crane Adds 18 New Grove Rough Terrain Cranes

The All Family of Companies, the largest privately held crane rental and sales enterprise in North America, is expanding its fleet of rough terrain (RT) cranes with a new 18-unit package from Grove that covers weight classes from 50 t capacity up to 150 t. The purchase includes 4 GRT9165, 3 GRT8080, 5 RT770, and 6 GRT655L. Also included are 2 TMS540 hydraulic truck cranes, bringing the full order to 20 total units.

The GRT9165s are in addition to 4 units of the same model purchased last year, a testament to their popularity with customers, particularly in wind energy, plant work, and general construction in tight urban job sites.

Introduced in 2018, the GRT9165 is the highest-capacity, longest-reaching Grove rough terrain crane. Its industry-leading 62.5 m boom is a favorite in wind markets, where the height of windmills continues to increase.

“It used to be that 118 t or 136 t capac-

ity RTs were the workhorses for wind,” said Chad Rados, industrial project coordinator for ALL. “But now, 150 t is the sweet spot, and they are typically on site for extended periods.”

The strength of the unit relative to its size also makes it attractive for urban construction.

“It packs a lot of power and reach into a small footprint,” added Mr. Rados. “It is highly mobile on job sites compared to ATs and crawlers, requiring no real disassembly before moving to another location on the same site.”

Furthermore, the GRT9165 is easily transported to job sites, requiring just 3 truckloads to deliver in full.



These same attributes drive interest in the GRT9165 among industrial plants, where scheduled downtime can be more easily accomplished with a machine that fits virtually anywhere and quickly moves from place to place.

ALL began taking delivery of units from this order in spring 2021, with the remainder expected to arrive throughout the rest of the year. Chad Rados says they will be deployed across ALL’s footprint of 33 branches.

Source: The ALL Family of Companies

# Pettibone Adds T1056X Telehandler to Traverse Lineup

Pettibone recently introduced the Traverse T1056X telehandler, the first 4,500-kg-capacity Traverse model in its X-Series lineup. Traverse is the industry’s only new telehandler product line with a traversing boom carriage with the capability to move loads by traveling horizontally. This exclusive feature allows operators to safely place loads at full lift height without needing to coordinate multiple boom functions.

The T1056X has a specified lift height of 17.2 m and the landing height is identical, thanks to its horizontal sliding boom. By contrast, traditional fixed boom pivots typically have a true landing height that is less than the promoted lift height, as the operator must account for withdrawing the forks out of the load with enough rearward travel for the fork tips to clear the landing zone.

The traversing boom of the T1056X provides up to 1.8 m of horizontal boom transfer, which extends its maximum forward



reach to 14 m. Delivering a maximum load capacity of 4,500 kg, the telehandler is powered by a 117-hp Cummins QSF 3.8 diesel engine. Mounted on a side pod, the engine offers easy service access while allowing excellent curbside visibility and ground clearance of 45 cm.

The Traverse T1056X was engineered on Pettibone’s next gen X-Series platform, providing a combination of rugged dependability, simplified maintenance, intuitive operation, and clear sightlines for

enhanced visibility.

The T1056X uses a single lift cylinder that improves operator sight-lines, and has twin hydraulic lines for tilt and auxiliary plumbing. Featuring formed boom plates and less welding, the machine’s 4-section boom offers greater strength while reducing weight. The design also minimizes boom deflection for better control and accuracy when placing loads.

Source: Pettibone/Traverse Lift, LLC

# Bergkamp Launches SP5E Spray Injection Pothole Patcher

Bergkamp Inc. recently announced the launch of its SP5E Spray Injection Pothole Patcher. The SP5E replaces the company’s proven SP5 spray patcher and is a safer, simpler, and more sustainable pothole patcher model. With the SP5E, each repair takes just a few minutes, where traditional hot-mix patchers require much more time to complete a patch.

The SP5E is truck-mounted and is operated safely from inside the cab by just one operator – freeing crew members for other tasks. Because patching operations are PTO-driven, Bergkamp has been able to eliminate the traditional auxiliary engine. The result is less pollution, less noise, and reduced maintenance requirements.

The SP5E is simple to use. Operators require only minimal training, included at startup, to become proficient in producing quality pothole repairs. A new feature that lends to the unit’s simplicity is Bergkamp’s SPECS (Smart Patching Equipment Control System), which controls material outputs according to a configurable mix design – improving the quality and repeatability of

pothole repairs. A touchscreen provides easy-to-follow steps to simplify operation. Joystick controls have been developed for ease of use and efficiency. Bergkamp works closely with agencies to help them locate the proper emulsion and aggregate materials in their area.

As an industry-exclusive option, a dual-chamber aggregate hopper (user-configurable for 60/40 or 50/50 split) allows the distribution of 2 different gradations of aggregate for more effective repair of deeper potholes and to better match the characteristics of the existing asphalt pavement. With either single- or dual-chamber, the aggregate hopper total



volumetric capacity is 3.8 m³. A 55° hopper wall angle allows material to flow steadily to the augers, eliminating the need for a vibration system. And in a feature exclusive to the SP5E, aggregate can easily be unloaded from the hopper by removing a cover in the rear and operating the auger(s) in reverse.

Source: Bergkamp Inc.



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2010 Terex RT780 80 ton



# Innovative Heat Storage Solution for Energy-Efficient Refurbishment of Residential Neighborhoods

The question of how to best reconcile sustainable technologies in builtup areas with affordable living space is currently being examined in the German city of Jena. As part of a research project, the regional growth initiative “smood – smart neighborhood” is working on innovative solutions for the energy-efficient refurbishment of older neighborhoods.

The go-ahead for this initiative – and for BAUER Resources GmbH as a partner in the joint GeoHeatStorage project – was given in July 2019. The aim is to structurally develop gravel aquifers near the surface for large-scale, cost-effective heat storage with the capacity to provide seasonal heat storage to an entire neighborhood. For this purpose, Bauer Resources, in collaboration with Bauer Spezialtiefbau, is developing a standardized and cost-efficient specialist foundation engineering method for construction of the cut-off wall for geothermal heat storage. What makes this project

unique: The use of a natural aquifer for heat storage has never been realized for a whole neighborhood with current methods.

After conducting extensive preliminary ground surveys, the mixed-in-place method (MIP) developed by Bauer proved to be particularly suitable for this project, building on its track record of 2.6 million MIP walls on about 650 sites. The method gets top marks not just from an economical and technical point of view but also in terms of ecology.

Compared to the jet grouting method, this achieves a reduction in the amount of construction materials as well as a substantial decrease in the need for disposal of excavation material. For the first time, there is a viable option for a sustainable and economical heat supply of existing neighborhoods, not



just making an important contribution to the energy revolution but also to climate protection.

Source: BAUER Resources GmbH, The BAUER Group

# Nissan Begins Production of All-New 2022 Frontier

Production of the all-new 2022 Nissan Frontier is underway at Canton Vehicle Assembly Plant in Mississippi.

The all-new 2022 Nissan Frontier stays true to its past while addressing modern mid-size truck buyer needs. The all-new rugged exterior design features a powerful front end with a massive grille and chiseled hood, framed by new precision interlocking headlights.

As the “right-sized” pickup for a workweek in the city or weekend of off-road adventures, every Frontier – 4x2 or 4x4 – comes equipped with a standard 3.8-l direct-injection V6 engine with best-in-class 310 hp. The engine is matched to a 9-speed automatic transmission designed



to maximize efficiency and provide strong acceleration.

Frontier’s modern, utility-centric interior includes a standard, 7-inch Advanced Driver Assist Display and an available 9-inch color touchscreen. Standard technology includes Apple CarPlay® and Android Auto™, with WiFi and wireless charging available. Nissan Safety Shield® 360 is available on every trim level.

The all-new Frontier gives Nissan one of the freshest lineups in the industry, alongside the Nissan Rogue, Pathfinder, Armada, Kicks and a full array of sedans and crossovers.

The all-new Frontier will arrive in dealer showrooms throughout the U.S. and Canada in late summer 2021.

Source: Nissan

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# Top Stability and Safety for Loads With a High Center of Gravity

When developing the new modular K25 L platform vehicle, SCHEUERLE focused on the safety aspect for the transport of loads with a high center of gravity. This is especially relevant when considering the transport of wind turbines. The K25 L also scores very favorably through maximum stability when transporting construction machinery or plants.

The energy industry is developing increasingly more powerful wind turbines. The increased dimensions and, in particular, the related high center of gravity of the load require an extremely stable means of transport with an especially low loading area. SCHEUERLE, a subsidiary of the Transporter Industry International Group (TII Group) from Heilbronn in Germany, has developed the modular K25 L series platform vehicles for ensuring the maximum stable and flexible transport of such products. The “L” in the type designation indicates the particularly low platform height along with the use of larger tires.

The track width of the K25 L is 2,100 mm along with an external width of 3,000 mm which is over 10% more than what is offered by competitors. Due to its wider track, the K25 L considerably reduces the risk of accidents caused by overturning when transporting wind tower segments with large diameters and thus greatly enhances work safety levels.

The maximum axle load of the K25 L is up to 23 t at low speed or up to 13.9 t at 80 km/h. In addition, the 285/70R19.5 tires are larger and more robust. In spite of the larger tires, the platform height is 875 mm



(loaded) or 910 mm (unloaded) which makes driving under loads easier. The high axle compensation of 680 mm also makes driving on uneven surfaces safer. Moreover, the maximum steering angle of +/- 60° ensures optimal maneuverability. Lifting and lowering is carried out with the help of a low-emission Power Pack Unit (PPU) from the Z19 series.

The highest negative and positive bending moment on the market creates economic flexibility for the operator through additional loading options. This offers particular advantages for products such as tower segments or nacelles (machine housings) that feature high point loads in combination with a high center of gravity, and those whose center of gravity lies far outside the support center as is the case when transporting long goods with the help of swivel bolsters. Furthermore, the K25 L has a 30% higher torsional stiffness compared to similar products which guarantees cornering safety during

transport.

EBS is an innovative braking concept that ensures enhanced braking performance and a shorter braking distance. Depending on the truck tractor, a diagnosis is possible from the driver’s cab. Connecting to a smartphone is also possible. The headlights on each individual bogie provide a further plus in terms of safety, enabling the driver to comfortably negotiate the route at night.

The model range of the K25 L series fulfils the requirements of platform vehicles with 2 to 6 axles. The vehicles can be combined with goosenecks, drawbars, swivel bolsters, bridges and tower adapters, and used in ambient temperatures reaching -25°C. Its versatility makes the K25 L the first choice beyond the wind power industry for the construction sector and for the transport of plant and machinery with high centers of gravity.

Source: Transporter Industry International Group

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## Appointments

Three years after entering the Canadian market, Royal Reesink's business is growing fast. Furthermore, the company is working on an ambitious growth path. Besides growth in the agriculture business, Royal Reesink sees major opportunities within the construction equipment and material handling business in Canada. To accommodate this growth, it recently announced the appointment of **Anna Sgro** as president for **Reesink Canada Holdings Inc.**



"Anna is a senior executive leader, with 25+ years of expertise in domestic and international marketplaces for several organizations like Volvo Financial Service, Volvo Construction Equipment-NA, Strongco Equipment, and Ritchie Bros.," said Gerrit van der Scheer, CEO Royal Reesink.

"I'm incredibly excited to join Royal Reesink and to be part of the senior leadership team focused on future product, technology, and support initiatives designed as industry leading solutions for our dealer network and customers across Canada. The customer-focused leadership captured my passion from the start, and I'm looking forward to this tremendous opportunity," added Anna Sgro.

Royal Reesink started its Canadian branch Reesink Canada Holdings in 2018. Its current footprint in Canada consists of partnerships in ag equipment dealerships: Tingley's Harvest Center in Saskatchewan and Alberta, genAG Inc. and Hepsom Equipment in Manitoba. It also runs a wholesale operation that distributes European agricultural equipment throughout Canada. The agricultural equipment businesses carry high tech brands like CLAAS, Kubota, JCB, Spudnik, Agrifac, Elmer's, Horsch and AgriSpread.

So far, Erwin Ros has managed Reesink Canada Holdings Inc. while he was based in the Netherlands. He will now become board member of Reesink Canada Holdings and support Anna Sgro.

Reesink Canada Holdings is rolling out its strategic agenda to grow the business autonomously, but also through acquisitions in the agricultural, construction and material handling equipment sectors.

Source: Reesink Canada Holdings Inc.

**Hatz Diesel of North America, Inc.** is pleased to welcome its new after-sales manager, **Myron Birschbach**.

Mr. Birschbach joins Hatz with 20+ years of experience working within the machinery and commercial vehicle industry. He will be working closely with distributors and OEM customers to expand and improve Hatz's after-sales channels.

Established more than 140 years ago, Motorenfabrik Hatz GmbH & Co. KG has become a globally-renowned and valued engine manufacturer and technical service provider of industrial diesel engines. Apart from designing, manufacturing and service for engines, Hatz develops and sells complete system solutions and engine components for the automotive and industrial engine industries.

Hatz Diesel of North America, located in Waukesha, Wisconsin, was established in 1978 to provide service for the U.S., Mexico and Canada. The company has been active in all sectors of the industrial engine market since its opening.

Source: Hatz Diesel of North America, Inc.



**SMS Equipment Inc.** recently announced that **Robin Heard** is appointed president and CEO. He is taking over from Mike Granger who retired on June 30.

Mr. Heard has over 28 years of experience and has held senior executive roles in various industries, including machinery and equipment dealership, investment management, and power generation industries. He was the CFO for SMS Equipment from 2014 to 2017, oversaw finance and operations at Alberta Investment Management Corporation from 2017 to April 2020, and rejoined SMS Equipment in May 2020 as COO. Mr. Heard has a CPA, CA designation and has an MBA with a marketing major.

Source: SMS Equipment Inc.

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# Agenda

**MATEXPO 2021**  
September 8-12, 2021  
Courtray (Kortrijk), Belgium

**Nordbau**  
September 8-12, 2021  
Neumünster, Germany

**MINExpo 2021**  
September 13-15, 2021  
Las Vegas, NV USA

**inter airport south east asia**  
September 22-24, 2021  
Singapore

**The Utility Expo**  
September 28-30, 2021  
Louisville, KY USA

**The ARA Show**  
October 17-20, 2021  
Las Vegas, NV USA

**Intermat INDIA**  
October 18-20, 2021  
Mumbai, India

**inter airport europe**  
November 9-12, 2021  
Munich, Germany

**SMOPYC 2021**  
November 17-20, 2021  
Zaragosa, Spain

**bauma CONEXPO INDIA**  
*Rescheduled to 2022*  
Greater Noida/Delhi, India

**Work Truck Show**  
March 8-11, 2022  
Indianapolis, IN USA

**World of Asphalt**  
March 29-31, 2022  
Nashville, TN USA

**Atlantic Heavy Equipment Show**  
April 13-14, 2022  
Moncton, NB Canada

**IFAT**  
May 30 - June 3, 2022  
Munich, Germany

**AORS Municipal Public Works Trade Show**  
June 1-2, 2022  
Barrie, ON Canada

**Svenska Maskinmässan**  
June 2-4, 2022  
Stockholm, Sweden

**Hillhead**  
June 21-23, 2022  
Buxton, Derbyshire, UK

**M&T Expo - Trade Fair for Construction and Mining Equipment**  
August 30 - September 2, 2022  
São Paulo, Brazil

**InnoTrans**  
September 20-23, 2022  
Berlin, Germany

**bauma**  
*Rescheduled to October 24-30, 2022*  
Munich, Germany

**CONEXPO-CON/AGG**  
March 14-18, 2023  
Las Vegas, NV USA

**International Rental Exhibition (IRE) / APEX access show**  
*Rescheduled to 2023*  
Maastricht, the Netherlands

**steinexpo**  
*Rescheduled to Summer 2023*  
Homburg/Nieder-Offleiden, Germany

**INTERMAT Paris**  
*Rescheduled to April 2024*  
Paris, France

Registration open! See you in Louisville!

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