Aquajet Provides Aqua Cutter Solutions to Rail Construction

A 20-year-old elevated rail deck in Holland presented demolition problems for contractor BAM Civiel bv. The deck had to be joined to a newly constructed concrete deck and new twin rail track. After removing a balustrade/end wall at one end of the existing deck using a concrete wire saw, it was necessary to further remove the deck concrete to expose the post-tensioning tendons and reinforcing bars. Two Aquajet Systems Aqua Cutter 710V evolution robots were used to remove concrete by hydrodemolition. Hydrodemolition works by pressurizing and widening existing pores and microcracks in a concrete structure using high-pressure water penetration. The rate of removal is dependent on the amount of water directed toward the concrete surface; thus, the area and depth of removal can be closely controlled. The first post-tensioning tendon was located 2 in. (50 mm) below the surface of the 39 ft (12 m) wide by 89 ft (27 m) long concrete deck. The second post-tensioning tendon was about 24 in. (600 mm) below the first tendon. Both Aqua cutters operated at a pressure of 1040 bar using 69 gal. (261 L) of water per minute.

—Aquajet Systems, www.aquajet.se

Nuheat Weather Ready Self-Regulating Melting Cable

Nuheat announced its Weather Ready™ Self-Regulating Snow Melting Cable. The cable can be cut to length to allow for easy on-site adjustments and less waste. The self-regulating cable adjusts its heat output based on the slab temperature to ensure that snow will melt on contact without excess energy use. The low-profile cable can be hidden in concrete or under paving stones without significantly raising the profile.

—Nuheat, www.nuheat.com

Crack-Stix

Dalton Enterprises, Inc., introduced the gray version of Crack-Stix®. Like the black version, introduced in 1999, gray Crack-Stix can be used for joints and cracks 0.5 to 1 in. (13 to 25.4 mm) in diameter. Crack-Stix are furnished as a solid rope in 0.5 in. (13 mm) thickness. The product is an elastomeric, self-leveling sealant, which liquefies quickly and can be used in concrete and asphalt pavements. When applied, it combines adhesive power with resiliency to protect against the infiltration of moisture through repeated thermal cycles of expansion and contraction.

—Dalton Enterprises, Inc., www.crackstix.com

Hilti Rotating Laser

The Hilti PR 2-HS Rotating Laser was built to be water-resistant, dust-tight, and to withstand harsh job-site conditions. With integrated Hilti Pulse Power technology, users will see reliable readings of an accuracy of ±0.02 in. (0.5 mm) at 32.8 ft (10 m). The operating range for the rotating laser is 2000 ft (610 m) diameter with the included laser receiver. It has shock-absorbent technology designed to resist a drop from a tripod at standard working heights.

—Hilti, www.us.hilti.com
CeraTech Ekkomaxx

CeraTech Ekkomaxx™ demonstrates inherent immunity to microbiologically induced corrosion (MIC), which is responsible for premature deterioration of portland cement concretes subjected to wastewater exposure. Ekkomaxx was tested per ASTM C267 Method C, “Standard Test Methods for Chemical Resistance of Mortars, Grouts, and Monolithic Surfacing and Polymer Concretes.” The tests demonstrated it has a resistance to 7% sulfuric acid without the addition of admixtures or coatings and is effectively immune to the impact of colonization by Thiobacillus bacteria. When used in a wastewater environment, Ekkomaxx does not require additional protection such as liners or acid-resistant coatings to provide durable and long-lasting concrete structures.

—CeraTech, www.ceratechusa.com

Aridus Used in School Replacement

Aridus® was selected for use in the construction of the replacement of Billy Earl Dade Middle School, Dallas, TX. Approximately 20,000 yd³ (18,300 m³) of concrete and 5000 yd³ (4600 m³) of Aridus Rapid Drying Concrete was used to cover 120,000 ft² (37,000 m²) of floor. Aridus reached full strength within 48 to 72 hours, which allowed the construction team to accelerate initiation of the next steps, such as stripping formwork, removing shoring, and installing re-shores. Aridus achieved 5000 psi (35 MPa) within 3 days, which allowed the finishes to be applied earlier. The construction team completed this project 4 months ahead of schedule.

—U.S. Concrete, www.us-concrete.com

Ritron 2-Way Radio

Ritron introduced PT-150M portable 2-way radio for construction sites. It operates in the VHF MURS frequency band and allows business-only users to operate license-free at 2 watts anywhere within the United States. A 2-watt transmitter is adequate for use up to 2 miles (3.2 km) or 250,000 ft² (76,000 m²) indoors. The radio has an eight-channel capacity, which allows maximum use of all five MURS frequencies and reuse of three frequencies for additional work groups. Other features include a 100mW speaker for easy-to-hear clarity, a lightweight design, and a seven-character alphanumeric display. Each radio comes with an antenna, lithium ion battery, spring-action belt clip, drop-in charging stand, and an AC adapter.

—Ritron Inc., www.ritron.com

Peri Provides Customized Formwork and Scaffolding

The Nordhavnsvej Tunnel, Copenhagen, Denmark, is the largest infrastructure project in Copenhagen in the past 50 years. The 1 mile (1.65 km) route will eventually link Copenhagen’s northern port area with the Helsingør motorway. The contractor faced a challenge in planning the course of the tunnel because the underground structure also crossed a busy railway line. Peri planned a solution with wall formwork and slab formwork carriages. The tunnel walls were concreted using the proven Trio panel formwork, in part single-sided against the bored pile retaining wall for the excavation. The stairways needed for the working areas and work scaffold were also supplied by Peri. A four-legged staircase unit was mounted on the slab formwork carriage and the two were moved together.

—Peri, www.peri.com
**Web Notes**

**The Crack Wizard**

The Crack Wizard is a foundation repair and dampproofing company that provides a mobile app for smartphone and tablet operations. The app features immediate pricing and advice to users across the Midwest. Users can find information on topics such as leaking foundation cracks and wet basements. The Crack Wizard uses injectable epoxy and urethane resins to permanently dampproof cracks in placed concrete foundation walls. The Crack Wizard app is available for free at [www.thecrackwizard.com](http://www.thecrackwizard.com).

**Book Notes**

**Bridge Construction Equipment**  
by Marco Rosignoli

*Bridge Construction Equipment* provides coverage of new and emerging bridge construction technology and modern construction methods for bridge professionals. The book shows industry trends for every family of machine and their configurations for operations, loading, kinematics, launch and lock systems, performance, productivity, and structure equipment interaction through extensive illustrations. The book examines design and operational flaws through a variety of case studies.

—ICE Publishing, [www.ice.org.uk/Publications](http://www.ice.org.uk/Publications)  
*Price: $80; 488 pp; ISBN 9780727758088*

**Products & Service Literature & Videos**

**Wagner Meters Rapid RH Training Webinars**

Wagner Meters offers a concrete moisture measurement webinar that carries the American Institute of Architects (AIA) accreditation for architects and engineers to stay current with the latest developments in moisture content management. The online training comprises a series of short, informative videos from industry experts. Participants are taken through basic concrete drying processes, historical test methods, the science behind various test methods, and real world job-site Q&As. A test and certification of completion are available for a small fee. This course is available through Hanley Wood University at [www.hanleywooduniversity.com/learncenter.asp?id=178409&page=789](http://www.hanleywooduniversity.com/learncenter.asp?id=178409&page=789).

—Wagner Meters, [www.wagnermeters.com](http://www.wagnermeters.com)

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