

Products & Practice



QUIKRETE Builds Home for Largest Saltwater Crocodile

The Toledo Zoo welcomed the largest saltwater crocodile in North America to its animal family. Transported from Australia, the 17 ft (5 m) crocodile required a spacious and ecologically friendly home. A.A. Boos & Sons and Great Lakes Concrete used QUIKRETE® to help renovate an existing solarium into a crocodile habitat. More than fifty 3000 lb (1360 kg) bulk bags of QUIKRETE Shotcrete MS was applied over a reinforcing bar frame in the 80,000 gal. (302,400 L) solarium pool before Graphite Design sculpted the surface to reflect the crocodile's natural environment. The surface was finished with a concrete stain to maximize the authenticity of the unique zoo exhibit.

—QUIKRETE, www.quikrete.com

Hilti PS 1000-B X-Scan Radar Detection System

The Hilti PS 1000-B is designed to produce images of what's inside concrete structures. Locating reinforcing bar, post-tensioned cable, metal and plastic conduits, glass-fiber cables, voids, and wood in concrete is made simple. Immediate scan analysis is possible as the objects are shown in a 2D plan view or cross-sectional view. This makes it easy to find and mark drilling locations, helping to avoid concealed objects when drilling, breaking, or sawing concrete.

—Hilti, www.us.hilti.com



Spider Launches SpiderLine

Spider, a division of SafeWorks, LLC, now offers the SpiderLine™ Temporary Horizontal Lifeline System, a fall protection system for workers on bridges, building construction, roof tops, and other elevated surfaces. Engineered to fit multiple applications of height, it meets OSHA and Canadian Standards Association fall protection requirements. With a maximum length of 300 ft (91 m), the design includes standard pass-through stanchions to allow free movement, a wide clamp option to allow open walkways, and a low profile chain to reduce trip hazards.

—Spider, www.spiderstaging.com

Morton Safe-T-Plus Surface Care Ice Melt

Morton® Safe-T-Plus® is an ice-melt blend that provides safety benefits for plants and vegetation while using technology to prevent concrete damage. It contains an active ingredient that creates a seal on surfaces to help protect concrete steps, driveways, and sidewalks from winter damage. It reduces environmental run-off, uses hydroxyl ethyl cellulose (HEC) technology to create a seal on surfaces, and melts ice and snow in normal winter temperatures. Once melted ice and snow evaporate, the HEC turns to a powder and reactivates to form a gel when new ice and snow forms, continuing the protection process.

—Morton, www.mortonsalt.com

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Wyco Electric Motor Vibrators for Concrete Receive Safety Certifications

Wyco, a division of Badger Meter and developer of concrete vibration products, received U.S. and international safety certifications for its electric motor vibrators. The Sure Speed Electric Vibrator minimizes concrete surface defects and the 994 Electric Motor Vibrator meets the highest electrical compliance standards and National Institute for Occupational Safety and Health standards for noise levels. Both comply with the U.S. and Canadian UL 60745-1 and UL 60745-12 standards for safe tool operation in grounded and double-insulated categories. The Sure Speed met international electric standards in other countries with IEC 60745-2-12 and EN 60745-1 certifications and the OSHA 29 CFR 1910.95 standard for noise levels.

—Wyco, www.wycotool.com

ARDEX Introduces ARDIFLO System

ARDEX now offers the ARDIFLO™ System, which addresses concrete construction issues through a new finishing method for new concrete with an integrated system of moisture control and self-leveling underlayment products, installed with pumping platforms from traditional mixing barrels to standard-, medium-, and high-capacity pumping systems. Each system is designed to match capabilities with the project parameters. It saves time and labor costs by eliminating the traditional steel trowel step in the finishing process.

—ARDEX, www.ardex.com



18V Multi-X Oscillating Tool

Bosch Power Tools now offers the 18-volt MXH180, the first oscillating tool with an EC brushless motor design. The tool delivers up to three times longer life, 30% more power, 65% longer run time, and integrated electronics for control and motor life. The tool is engineered to provide corded power without the cord. Users can benefit from lighter weight, reduced vibration, minimal maintenance, and extended motor life. It is compatible with all generations of Bosch lithium-ion Fat and Slim Pack 18-volt batteries. With a variable speed ranging from 8000 to 20,000 oscillations per minute, the tool can perform a wide range of applications: cutting, sanding, grinding, and scraping.

—Bosch Power Tools, www.boschtools.com

Penetron Provides Waterproofing for Historic Tunnel

Technical support from Penetron provided a waterproofing solution and concrete mixture for an upgrade of the historic Allegheny Tunnel. Built in 1904, the tunnel was a crucial improvement to the nation's railroad system. It allowed freight to be transported from ports on the Eastern seaboard to the Allegheny Plateau above the Chesapeake Bay and to Pittsburgh and growing Western markets. The construction and design team enhanced waterproofing and freezing-and-thawing resistance for the over 100-year-old concrete structure. The wider entrance structures of the tunnel were upgraded with a concrete mixture treated with PENETRON ADMIX, an ingredient to waterproof the tunnel structure.

—PENETRON Waterproofing Solutions, www.penetron.com

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Web Notes

Bentley Now Offers Bentley Map Mobile App

Bentley Systems now offers Bentley Map Mobile, enabling users to view and act upon Bentley Map information through mobile devices. Infrastructure professionals can share geospatial data with non-GIS specialists. The information mobility provides professionals with real-time access to up-to-date information about the landbase, utility, telecommunications and transportation networks, and other spatially managed infrastructure they support. Bentley Map Mobile works with Bentley's next generation of i-models that can package geospatial information for use on mobile devices. The new i-models use the SQLite software library to deliver performance on almost all mobile devices. The new mobile app provides the following functions: access to geospatial data sets, standard tablet-based gestures, simple query mechanism to look up features, GPS integration for location in the field, Google Maps integration for directions to located features, view-only operation for access anywhere, and raster and vector display. Bentley Map Mobile is available to all Bentley Passport holders at no additional charge and can be accessed at www.bentley.com/bentleymapmobile.

—Bentley Systems Incorporated, www.bentley.com

Book Notes

The Little Book of Waterstop

by David R. Poole

The engineering and contracting reference manual concerning waterstops is available free for iPads. Concrete is the preferred building material for large structures, especially those subjected to hydraulic pressure, because of its long lifespan, high workability, and worldwide availability. Concrete structures that require protection from the ingress of water or other fluids require a properly installed waterstop in and along their concrete joints. The joint is the most likely point of leakage, and waterstops are designed to prevent this. This book's purpose is to educate the reader on all facets of waterstop.

Waterstop King, website: <http://waterstopking.blogspot.com>

price: free; 177 pp.

Products & Service Literature & Videos

CPAA Releases Polishing Industry Position Papers

The Concrete Polishing Association of America (CPAA) now offers six position papers for the concrete polishing industry. The papers include five definitions and one position statement:

- Polished Concrete Definition—D100.0: The act of changing a concrete floor surface, with or without aggregate exposure, until the desired level of finished gloss is achieved;
- Bonded Abrasive Polished Definition—D101.0: The operation of mechanically grinding, honing, and polishing a concrete floor surface with bonded abrasives to cut a concrete floor surface and to refine each cut to the maximum potential to achieve a specified level of finished gloss;
- Burnished Polished Concrete Definition—D102.0: The operation of mechanically friction-rubbing a concrete floor surface with or without waxes or resins to achieve a specified level of finished gloss;
- Surface Coated Concrete Definition—D103.0: The operation of applying a film-forming coating to a concrete floor surface to achieve a specified level of finished gloss;
- Hybrid Polished Concrete Definition—D104.0: An operation using either standard grinding/polishing, lightweight, high-speed burnishing equipment, or a combination of, to combine the mechanical grinding, honing, and polishing process with the friction-rubbing process by using bonded abrasives, abrasive pads, or a combination of, to achieve the specified level of finished gloss; and
- Slip Resistance Criteria for Bonded Abrasive Polished Concrete: Polished concrete floors shall be tested for slip resistance by measuring the wet dynamic coefficient of friction using an approved tribometer and achieve a Slip Resistance Potential rating of Acceptable.

The full list of CPAA industry specifications, guidelines, and position papers is available online.

—CPAA, www.concretepolishingassociation.com