

Products & Practice

Advance Commander FD4000

Advance® announced the Commander FD4000 model. The Advance FD4000 front discharge concrete truck incorporates front and rear tandem drive axles with disc brakes for improved braking performance and lower long-term operating costs. Other safety features include a rear-view camera, tire pressure monitoring system, and improved lighting, contributing to a more secure operation. An improved HVAC system, optimized information screen placement, and more robust switches and interior controls contribute to an enhanced overall driving experience. The Commander FD4000 also offers additional optional equipment to cater to diverse operational needs. Users can now choose from a slide or flip hopper, integrate a telematics system for advanced tracking, and add a water meter for precise mixing control.

—Advance, www.terex.com/advance



Brokk 900

The Brokk 900 is a major upgrade from its predecessor, the Brokk 800. Equipped with SmartPower™, the Brokk 900 is designed for optimized and more reliable runtime for longer periods of time. This power system makes the Brokk 900 well-suited to work in environments with generators or potentially unreliable power supply. This machine is also equipped with BHB 1500 to give customers greater hitting power for demolition. The Brokk 900 is service friendly and has a durable, robust design. Optimal for heavy tasks, the breaker delivers high-quality performance.

—Brokk, www.brokk.com



MAPEI Carbon-Neutral Products

The MAPEI family of carbon-neutral products offers customers a way to contribute to the well-being of the environment, the planet, and the future, while still providing strength and durability. This family of carbon-neutral products includes Keraflex® Super, an extra-smooth, large-and-heavy-tile mortar with polymer; Large Tile & Stone Mortar, a polymer-enriched, large-and-heavy-tile and thin-set mortar; Light Mortar for Tile & Stone, a lightweight, polymer-enriched mortar for floors and walls; Mapecem® Quickpatch, a high-performance, fast-setting, cementitious material for patching concrete; Mapefer® 1K [NA], a corrosion-inhibiting coating for reinforcing steel; MAPEI Ultralite® Mortar Zero, a lightweight mortar with polymer for large and heavy tile; Planitop® XS, a one-component, fast-setting, extended-working-time, vertical and overhead repair mortar; Ultracolor® Plus FA, a rapid-setting grout replacement for sanded and unsanded grouts; and Ultraflex® LFT™ (white and gray), a large-and-heavy-tile mortar with polymer.

—MAPEI, www.mapei.com



Hyperion Materials & Technologies PCD

Hyperion Materials & Technologies launched two polycrystalline diamond (PCD) lines, the P-Series and U-Series. The P-Series PCD is specially designed for tools used in machining nonferrous and nonmetallic workpieces for automotive, aerospace, electronics, and other precision applications that demand consistent performance and long-term cost savings. In addition, the P-Series PCD delivers results across a diverse range of workpieces, including aluminum, metal matrix composites, copper, carbon fiber-reinforced polymers, and other precision applications.

The U-Series PCD is explicitly designed for tools used in machining nonferrous and nonmetallic workpieces in woodworking, heavy machinery, and other utility applications. This product line enables toolmakers to optimize costs without sacrificing reliability. Suggested applications include concrete, wood, medium-density fiberboard, melamine, laminates, particleboard, and stone. The P-Series and U-Series PCD lines are offered as discs with a 2.4 in. (62 mm) usable area and as cut tips in either standard shapes or to customer drawings.

—Hyperion Materials & Technologies, www.hyperionmt.com

Book Notes

Strengthening of Concrete Structures

by Amr Abdelrahman

Strengthening of Concrete Structures presents a unified design approach for strengthening concrete members with different techniques such as concrete, steel, and fiber-reinforced polymer jacketing. Preference between the various techniques is explained in the light of strengthening limits, procedures, and application for each case. Examples for evaluation of existing structures and design equations for strengthening concrete elements are presented based on ACI design codes and standards. Numerical examples are also given for different strengthening techniques, with illustrations for the construction methodology and detailing for each case. Several case studies are explained, starting from problem diagnosis, structure analysis, proposal for different strengthening methodologies, and implementation procedure for the selected scheme. The case studies include structures subjected to gravity loads, lateral loads, elevated temperatures, and differential settlement of the foundations. The book also addresses design and construction errors, environmental impact, and soil movement.

139.99 USD (hardback); 174 pp.; ISBN 9789811980756

—Springer, <https://link.springer.com>



Steel-Reinforced Concrete Structures: Assessment and Repair of Corrosion

by Mohamed Abdallah El-Reedy

Steel-Reinforced Concrete Structures: Assessment and Repair of Corrosion, third edition, examines the corrosion of reinforced concrete from a practical point of view, highlights protective design and repair procedures, and presents ongoing maintenance protocols. Updated throughout, this new edition adds additional information on concrete repair and reviews new examples of the effects of corrosion on both prestressed and reinforced concrete structures as well as advanced testing and repair techniques. It also examines economic analysis procedures and the probability of structural failures to define structural risk assessment. This book covers precautions and recommendations for protecting reinforced concrete structures from corrosion based on the latest codes, standards, and specifications.

96 USD (hardback); 230 pp.; ISBN 9781032525310

—CRC Press, www.routledge.com



Makinex Vacuum Attachment

In 2023, Makinex USA launched several new innovations including a vacuum attachment for the Jackhammer Trolley, an easy-to-assemble device that assists in removing tiles, vinyl, cork, and tile bed residue as well as assisting with surface preparation of concrete slabs. The vacuum attachment for the Jackhammer Trolley is suitable for 1.5 and 2 in. (38 and 51 mm) hose nozzles. This product works to reduce exposure to harmful dust particles and easily positions the nozzle for optimum dust capture.

—Makinex, www.makinex.com

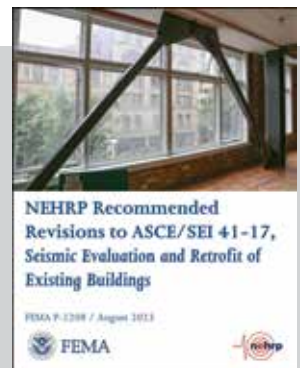
Products & Service Literature & Videos

NEHRP Recommended Revisions to ASCE/SEI 41-17, Seismic Evaluation and Retrofit of Existing Buildings

by The Applied Technology Council and FEMA

The Applied Technology Council (ATC) announced the availability of FEMA P-2208 report, “NEHRP Recommended Revisions to ASCE/SEI 41-17, Seismic Evaluation and Retrofit of Existing Buildings.” The report documents the work of a 5-year, Federal Emergency Management Agency (FEMA) funded project (ATC-140) that investigated and addressed technical issues and developed guidance related to seismic evaluation and retrofit of existing buildings. The project team submitted 35 detailed proposed revisions to the official ASCE/SEI 41 consensus standard process, which culminated in the recent publication of ASCE/SEI 41-23. FEMA P-2208 presents the submitted change proposals and commentary, in addition to the results from the technical studies that informed the proposals. However, this document is not intended to replace ASCE/SEI 41.

—The Applied Technology Council, www.atccouncil.org



Outlook 2024

by The Dodge Construction Network

The Dodge Construction Network announced their *Outlook 2024* e-book on insights for the construction industry this upcoming year. The report contains estimations, proprietary historical data, and industry forecasts to assist companies in growing despite challenges in 2024. *Outlook 2024* can be downloaded from the Dodge Construction Network’s website and covers areas such as residential buildings for single-family and multifamily housing; commercial projects like data centers, warehouses, offices, and hotels; manufacturing facilities and plants; institutional works for public buildings, health care, and transportation; and nonbuilding projects like roads, bridges, and utilities.

—Dodge Construction Network, www.construction.com

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Decorative Concrete Products

Durável PLC Formulas

Durável, a manufacturer of decorative concrete products for both residential and commercial applications, has modified its concrete overlay mixtures to incorporate portland-limestone cement (PLC). As with previous formulations, these new products have been engineered to protect and beautify concrete in even the harshest conditions. However, the new products have the same or greater open times as well as increased abrasion resistance and strength. The new mixtures can be found across the entire Durável lineup of concrete decorative overlay and repair mortars: Durável's Broom Concrete Overlay, Stamp Concrete Overlay, Decorative Concrete Overlay (Sprayable), and Thin Concrete Overlay (Micro-Topping).

—Durável, www.duravel.com

First Cut with Densifier

PROSOCO's First Cut with Densifier allows contractors to simultaneously grind and densify concrete. The combination of those two steps into one can eliminate downtime and the need to wait for a freshly polished floor to dry before densification can occur. A grinding aid and densifier in one, First Cut with Densifier is designed for use on new or existing concrete, using either a traditional walk-behind grinder or a power-trowel machine. First Cut with Densifier has the potential to save users hours of time and, therefore, create savings for projects.

—PROSOCO, <https://prosoco.com>



Woodform Alpine Concrete Bench

Trueform Concrete announced the Alpine Concrete Bench, a decorative and functional product created with their Woodform® fabrication technique. Trueform employs Woodform to create concrete objects with the grain, textures, and nuances of natural wood while possessing higher durability. Produced using high-strength glass fiber-reinforced concrete (GFRC), mindful application of stains and pigments, and environmentally conscious fabrication methods, the Alpine Concrete Bench is suitable for residential or commercial applications. It is available in five lengths with eight wood-look finishes and features removable stainless-steel leveling feet.

—Trueform Concrete, www.trueformconcrete.com



PIERI Decorative Solutions

CHRYSO & GCP's (Saint-Gobain Construction Chemicals) PIERI® Decorative Solutions provide high-quality finishes and offer alternatives to traditional, labor-intensive finishing techniques. PIERI Aquarol TT-31 is a high-performance release agent consisting of a suspension of 100% synthetic lubricants in water. It enables easy form removal and provides for a superior finish. It works well for architectural precast, including products cast using formliners, and reduces the need for rubbing or rework. PIERI in-form surface retarders provide precasters with a safe and consistent solution for products requiring acid-etched or abrasive-blasted finishes. Precasters can power-wash formed surfaces the next day and create multiple etch depths within a single piece. PIERI finish protectors provide stable, long-lasting finish protection. These acrylic-based products can be applied on damp and freshly demolded precast concrete and do not alter the color or finish.

—CHRYSO & GCP, www.chrysoinc.com

