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From the Publisher's Desk

Dear Readers,

The task of publishing Concrete Decor and proofing each new edition of the magazine is like unwrapping a Christmas present eight times a year. I'm always inspired to see so much creativity and use of color in a magazine about concrete. Fifteen years ago I imagined an industry that would forever change with the advent of integral coloring systems at ready-mix plants, but I had no idea the industry would look as glamorous at it does today.

When I survey the immense number of places where decorative concrete has been specified and used, I am again inspired to imagine how this industry will evolve over the next 15 years. Adding to this are the relationships I've gained over these years. I'd like to take the opportunity to tell you that it's a blessing to have your company.

Connecting with the decorative concrete industry at the recent Concrete Decor Show was again more than I could have imagined. The quality of the products and the people standing behind those products, together with thousands of attendees eager for knowledge and inspiration, made this year's event a powerful environment. Product demos, demos that showcased new building applications and the new Brawl in the Fall competition (details in January) told me that decorative concrete is moving in a healthy

This industry is growing. It attracts more and more people. It's finding more ways to compete with traditional building products and, best of all, the quality of your work keeps improving.

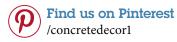
As we celebrate 15 years of Concrete Decor and look to the year ahead, you can anticipate these pages to be filled with great topics. The February issue will include interviews by known architects and design pros nationwide who'll shed new light on why they prefer concrete. The April issue will include the anticipated decorative concrete products guide. May will include a special supply store supplement designed to help these stores help you better. The July issue will mark our 100th edition, making it an outstanding collector's edition. August will showcase all the reasons you need to head to Indianapolis for the 2015 Concrete Decor Show. The October issue will feature the decorative concrete industry's best guide to training, and November, well, that's an issue that you'll need to save for reading on the beach if you want to join us for the next Decorative Concrete Cruise (details in January).

Making 2015 another year of progress for decorative concrete requires all of its parts to be working together. That requires responsibility for the way we do our jobs as well as the positive ways we can choose to treat one another.

From your friends in concrete,



On the cover: Craft breweries, such as Black Market Brewery in Temecula, California, are increasingly turning to concrete as sanitary and decorative surfaces in their facilities. Photo courtesy of Surfacing Solutions Inc.











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Bryon "Bru" Bruington is technical sales director for KutRite, a producer of products for the concrete grinding, polishing and scarifying industry. Email him at b_bruington@kutritemfg.com. See Bryon's column, "Hands-on Grinding & Polishing Tips," on page 54.



Doug Carlton is working on his third decade in the decorative concrete industry. He's the owner of Carlton Construction, located at the base of the Big Horn Mountains in northeastern Wyoming. Doug can be reached at carltondoug@sbcglobal.net. See Doug's column, "Carlton's Corner," on page 42.



Jennifer A. Faller has been in the surface preparation and concrete polishing and chemical industries for two decades. She is Diamatic USA's national account director for ULTRAFLOR architectural polished concrete system. Contact her at jennifer.faller@diamaticusa.com. See Jennifer's column on page 58.



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Karen Van Heukelem wears many hats at Denverbased Colorado Hardscapes Inc., including business development, marketing, sales, estimating and project management, with an emphasis on specialty rock construction. She can be reached at karen@ coloradohardscapes.com. See Karen's article on page 22.

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PTI announces 2015-2016 leadership, board of directors

The Post-Tensioning Institute (PTI) elected the 2015-2016 officers and additions to the board of directors during the October 2014 board meeting in Cancun, Mexico.

The new officers, who will serve from

Jan. 1, 2015, through Dec. 31, 2016, are Robert Sward, vice president of VSL, president; David Martin, business unit manager of Dywidag Systems International USA Inc., vice president; Guy Cloutier, PT manager of Harris PT, secretary; and Marc Khoury, president of CCL USA and regional chief operating officer for CCL International, past president.



The PTI board of directors consists of designated representatives Marc Khoury from each post-tensioning company member in addition to elected representatives from PTI's other membership classes and committees. These individuals are involved in the policymaking and direction of the institute. www.post-tensioning.org

Huntsman acquires Rockwood's additives, TiO₂ businesses

Huntsman Corp. (NYSE: HUN) completed the acquisition of the performance additives and titanium dioxide (TiO₂) businesses of Rockwood Holdings Inc. The company acquired the manufacturing capabilities of functional additives made from barium- and zinc-based inorganics used to make colors more brilliant, primarily in plastics, coatings, films, food, cosmetics,



Robert Sward



David Martin



Guy Cloutier



pharmaceuticals and paper. TiO₂ is a white pigment derived from titanium-bearing ores.

The company acquired the manufacturing capabilities of color pigments made from synthetic iron-oxide and other non-TiO₂ inorganic pigments used by manufacturers of coatings and colorants. The company also acquired the manufacturing capabilities of wood protection chemicals for timber treatments, used primarily in residential and commercial applications, as well as water treatment products used to improve water purity in industrial, commercial and municipal applications, and specialty automotive molded components.

Huntsman paid approximately \$1 billion in cash and assumed certain unfunded European pension liabilities. Huntsman Corp. is a publicly traded global manufacturer and marketer of differentiated chemicals with 2013 revenues of approximately \$13 billion including the acquisition of Rockwood's performance additives and TiO2 businesses.

www.huntsman.com

ACI publishes new edition of concrete formwork manual

The American Concrete Institute recently published its eighth edition of the "SP-4(14) Formwork for Concrete" manual.

Now in full color, ACI's iconic manual includes the current standards and practices, removes outdated or irrelevant material. adds content on new developments in formwork technology and practice, and updates the look and layout of the document.

The new edition is authored by David W. Johnston and Edward I. Weisiger, a distinguished professor emeritus at North Carolina State University and member of ACI Technical Committee 347, Formwork for Concrete. The committee made significant contributions to the new manual, including revisions to bring it up-to-date with "Guide to Formwork for Concrete" (ACI 347R-14), which is reprinted in full in the appendix.

The eighth edition is the first to be printed completely in color, with nearly 500 new photographs and over 150 illustrations. Span tables and design values have been updated to comply with the 2012 National Design Specification issued by the American Wood Council, and loads have been updated to reflect changes in the latest edition of ASCE/SEI 37, "Design Loads on

Structures During Construction."

New formwork design examples include the use of allowable stress design, as well as load and resistance factor design. Chapter problems also have been included for the first time to make the document easier to use as a teaching tool, while still maintaining its status as a reference for practicing engineers.

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NSF funds Watershed Materials to develop sustainable products

The National Science Foundation has awarded Watershed Materials, a sustainable masonry products manufacturer, a \$740,000 Phase II Small Business Innovation Research grant to develop and commercialize structural masonry blocks with a significantly reduced carbon footprint achieved by the elimination of cement. The blocks, known as ZeroBlock, are designed as a drop-in replacement for the ordinary concrete block, also known as a cinder block or Concrete Masonry Unit (CMU).

Watershed Materials currently designs, manufactures and distributes a firstgeneration masonry block called Watershed Block that uses half the cement of an ordinary concrete block. The NSF SBIR grant will be used to commercialize a second-generation product called ZeroBlock that uses no cement in the manufacture of durable, resilient masonry. The company anticipates a 2015 market release of the new block. Both Watershed Block and ZeroBlock incorporate recycled content such as quarry byproduct, mine tailings and even recycled concrete in place of virgin mined rock.

The new technologies being explored have the potential to reduce the energy required to produce ZeroBlock by 90 percent compared to an ordinary concrete block.

Full details of the grant are available on the NSF website: www.nsf.gov.

(707) 224-2532

www.watershedmaterials.com

Michelman opens new center

Michelman celebrated the grand opening of its new Advanced Materials Collaboration Center in October at the company's global headquarters in Cincinnati, Ohio. The AMCC enhances Michelman's ability to develop innovative water-based coatings,

surface additives and polymers for the many industries it serves. The center includes six new laboratories with state-ofthe-art equipment, bright and accessible open space and meeting rooms designed to allow application teams to collaborate on projects, and office space for staff and associates.

The spirit of the word "collaboration" is carried throughout the facility. The building was designed physically and technologically so that Michelman's teams of internal application specialists and chemists are able to seamlessly interact with customers, vendors, research universities and other R&D facilities engaged in activities related to the markets Michelman serves around the globe.

New simulation equipment in Michelman's pilot laboratory allows the company to more accurately observe how product solutions perform under actual end-use conditions and use that information to improve formulations. This capability helps customers reduce product concept to commercialization time.

www.michelman.com





Retiring TCA executive director to be honored at jubilee

The Tilt-Up Concrete Association (TCA) will honor Ed Sauter, the association's longstanding executive director, at its Winter Tilt-Up Jubilee Feb. 4, 2015, during the World of Concrete.

Sauter will enter part-time retirement at the end of this year and step down as TCA executive director. He began his tenure at the association in 1992, when he agreed to take over as interim director during a meeting at WOC. He continued in the position for 23 years, bringing passion, commitment and leadership to the organization.

The Winter Tilt-Up Jubilee, sponsored by the TCA Global Associates Council, provides a festive networking opportunity and is free to members of the TCA who register by Jan. 23, 2015. Non-member and on-site registration is \$40. Registration will be refunded in full to those whose company joins the TCA within 30 days of the event. Register online at www.tilt-up.org/events.

A brief annual meeting, starting at 4:45 p.m., will precede the event which will be held from 5-7 p.m. at the Las Vegas Hotel.

- **(**319) 895-6911
- www.tilt-up.org

Wells Concrete, PCI grant fund college concrete course

Thanks to funding from Wells Concrete Products Inc. in Albany, Minnesota, and a grant from the Precast/Prestressed Concrete Institute, Minnesota State University, Mankato, is teaching precast and prestressed concrete concepts to the school's civil engineering and construction management undergraduate students.

Named "Building a Concrete Future," the program kicked off this fall, funded in part by a \$100,000 grant from the PCI Foundation. MSU, Mankato, is the first school in Minnesota and just the 10th in the nation to benefit from a PCI grant.

As part of the program, Wells Concrete CEO Dan Juntenen said his company will provide access to "real-life" projects for students and faculty to use as case studies and for research. Students will follow a project through phases like preconstruction planning, engineering design, 3-D modeling, production of components and field installation.

The program also will be a resource for professional engineers in southern Minnesota.

www.wellsconcrete.com

TRANSITIONS

Rudd Co., an independent privately held coatings manufacturer founded in 1912, has appointed **Tom Parker** as vice president of sales. Parker brings more than 15 years of executive sales management experience in the coatings industry.

Aztec Products Inc. welcomed Stephanie Kulp as business development manager. In her four years with Aztec, Kulp has been successful in each of her roles with the parts department, purchasing, inventory management and accounting.

The National Association of Women in Construction installed Sandy K. Field, CBT, CIT, as its 60th national president in September during NAWIC's Annual Meeting and Convention in Indianapolis, Indiana. Field, the office/HR manager for Horizon Group International, has been a member of NAWIC's Houston, Texas, chapter since 2005.

Boride Engineered Abrasives has hired Carla Nickodemus as product manager for Industrial Wheels, which includes the Blue Star Diamond product line. Her experience includes industrial sales and product line management for both U.S. and international companies.

Lee Watson joined Husqvarna Construction Products as district manager for distribution sales-South, which covers Virginia and Washington, D.C. For the past 15 years, Watson has worked in distribution, selling construction materials and equipment.

Jason Lavrinc joined Husqvarna Construction Products as district manager for distribution sales in Pennsylvania and West Virginia. Lavrinc has general construction experience, and for the past 10 years serviced and sold insurance in the Pittsburgh area.

The CTLGroup board of directors elected Cary O. Cohrs as chairman during the organization's recent fall board meeting in Chicago, Illinois. Cohrs is the current president of American Cement Co. LLC, a joint venture of CRH's Oldcastle Materials Inc. and Trap Rock Industries Inc., based in Sumterville, Florida. Cohrs is also the current chair of the Portland Cement Association board of directors and has been an active member of the Florida Concrete and Products Association, serving as a member of its board of directors and Executive Committee.

Manuel Davila has been promoted to the position of assistant manager of Quest Building Product's San Diego location. Since he began with the company in spring 2013, Davila has become a "concrete wiz." He has previous electrical, mechanics and plumbing experience.

Western Construction Group has promoted Ken Black of Dardenne Prairie, Missouri, to senior director of enterprise risk management. Employed by Western Construction Group since 1997, Black has held the positions of claims manager, manager of claims and benefits, director of claims and benefits, and director of enterprise risk management. He has 28 years of industry experience.

Western Construction Group has hired Enrique Alegria as safety manager. In this position, Alegria will contribute to the overall risk management and safety management of the company including inspections, quality control, foreman training and site-specific safety plans. Western Construction Group is among the nation's largest specialty contractors in masonry, concrete and facade restoration, waterproofing and specialty roofing.

Penetron and W.R. Grace launch North American partnership

Penetron and W.R Grace & Co. recently launched a strategic partnership to market, sell and distribute Penetron crystalline ready-mix concrete solutions to the construction industry in North America. This new partnership expands the distribution of Penetron products and fills a key product category for Grace. The company's construction products division is a global leader in the construction products industry, with a wide range of specialty construction chemicals and materials and, now, crystalline solutions from Penetron.

When Grace recognized the growing market need for an effective crystalline concrete admix solution, it also recognized Penetron as a company with a strong product offering, a loyal customer base, and a reputation for innovation and market leadership.

The portfolio of products and services marketed under the Penetron brand includes crystalline solutions for maintenance, repair and renovation of buildings and infrastructure, as well as new concrete construction. Penetron's crystalline technology offers increased concrete durability through effective permeability reduction.

The Penetron Group is a leading manufacturer of specialty construction products for concrete waterproofing, concrete repairs and floor preparation systems. The group operates through a global network, offering support to the design and construction community through its regional offices, representatives and distribution channels.

- **(**631) 941-9700
- www.penetron.com
- www.grace.com/en-us

TCA announces winners of 2014 safety awards

The Tilt-Up Concrete Association (TCA), the global authority for the tilt-up industry, has announced the winners for the 2014 Alphonse Engelman Safety Awards.

TCA created the safety awards program to recognize contractors in the industry committed to maintaining safe working environments on their job sites. In 2007, this program was renamed "The Alphonse Engelman Safety Awards Program" in honor of past TCA president and champion of tilt-up construction safety, Al Engelman. Engelman helped introduce this industry awards program that now bears his name.

The Alphonse Engelman Safety Awards program was developed to enhance the TCA's overall mission to improve the industry through recognition and education, while providing a special emphasis on safety. Winners were announced at the TCA Annual Convention in San Jose, California, in September.

This year's winners include:

Best Tilt-Up Safety Achievement

Award: Conewago Enterprises Inc., Big-D Construction Corp., E.E. Reed Construction LP, Precision Concrete Construction Co. Inc., T.A.S. Commercial Concrete Construction LLC and American Concrete Construction Inc.

Most Improved Safety Achievement Award: Chesapeake Contracting Group Inc.

Zero Lost Time Accident Achievement Award: Arch-Con Corp., AML Inc., Alston Construction Co. Inc., Bob Moore Construction Inc., E.E. Reed Construction LP, DIVCON Inc., SiteCast Construction Corp., American Concrete Construction and Hakanson Construction Inc.

- (319) 895-6911
- www.tilt-up.org

TruCrete under new ownership

TruCrete, a company that manufactures decorative and industrial coatings for concrete, masonry, wood and metal surfaces, was recently acquired by a Maryland company. TruCrete, which launched in 2010 after two years of field trials, toll blends, private labels and offers its own line of products.

The company experienced an explosion of growth in 2013 after adding a few new distributors and several new clients for private labeling. It continues to be healthy and is growing, with a reported 17 percent increase in sales growth for 2014 year-to-date.

The new owners, who have manufactured industrial resins for metal repair in nuclear reactors, holding tanks and ship hulls for more than 20 years, are excited to add the TruCrete product line to its company. It will continue to service and supply all existing TruCrete customers with the same level of quality and service they have grown to rely upon. TruCrete will still operate in Maryland and all emails and phone numbers will remain the same.

- **(** (443) 205-4547
- www.trucrete.com



County jail, WerkMaster spearhead inmate training program

The Hopkins County Jail, near Madisonville, Kentucky, has figured out a useful way to turn a need into an opportunity. Looking for a solution to replace tiles throughout the facility, head jailer Joe Blue decided polished concrete was a viable option and began looking at concrete floor grinders and polishers. He recognized this provided the jail with an excellent opportunity for inmates to develop a skill they could use when they leave prison.

After reviewing a number of planetary designed machines, Blue chose WerkMaster's Raptor XT concrete grinder polisher because its versatility and features best suited the jail's needs.

Blue cites the reasons he chose this planetary machine over others is because it has the usefulness of seven machines in one. The Raptor XT edges to within 1/8-inch of the wall; it's a 5-horsepower variable-frequency machine that can run simultaneously on 240-volt singlephase, 240-volt three-phase or 110-volt; and it's capable of grinding, polishing, edging, burnishing and buffing concrete, terrazzo and stone floors as well as sanding hardwood floors.

Sgt. Billy Thomas and Deputy Donnie Barnett, who had attended WerkMaster's Certified Concrete Polishing Training

EVENT **CALENDAR**

CSDA Winter Meeting

Dec. 4. San Antonio, Texas www.csda.org

ASCC Webinar: Building Your Backlog Regardless of Market Conditions

Dec. 10 Presented by Steve Boughton, FMI Corp.

www.ascconline.org

GFRC Rock and Boulder Training

Dec. 11-12, Windsor, New York www.trinic.us



School at Braxton-Bragg in Knoxville, Tennessee, are in charge of training and supervising the inmate-assembled crew from the jail's community service program.

- **(**604) 629-8700
- www.werkmaster.com

Blue Star Diamond product line gets enhanced website

Boride Engineered Abrasives recently launched a newly designed website for the Blue Star Diamond Concrete Polishing product line. The new website is part of the company's continued commitment to provide outstanding customer service to decorative concrete and concrete polishing professionals.

The new site is tightly integrated with the company's manufacturing enterprise resource planning software system which allows orders to be processed more quickly and accurately. Boride Engineered Abrasives also has added "how-to guides" that detail how to utilize its Blue Star Diamond technology to achieve a superior finish in fewer steps, lowering overall costs.

- **(**0 (800) 662-0336
- www.bsddiamond.com

Solomon Colors Inc. acquires Ultra Fiber 500 product line

This September Solomon Colors Inc. acquired the Ultra Fiber 500 product line of concrete secondary reinforcement fibers from Georgia Pacific LLC (formerly Buckeye Technology).

For the past six years, Solomon Colors represented Ultra Fiber 500. Solomon Colors President Richard R. Solomon says he became interested in purchasing Ultra Fiber 500 because of its superb finishing quality, unsurpassed crack control, better hydration and bonding. He calls it a true invisible fiber for decorative concrete, with fully automated dispensing system capability.

Solomon Colors will continue the same

manufacturing and packaging process for Ultra Fiber 500 and will produce, service and install the Ultra Fiber 500 Automatic Dispenser System. As with the Solomon ColorFlo automated dispensing systems, these dispensers will be maintained by Solomon's in-house service technicians.

In addition to the current Ultra Fiber 500 shipping points, Solomon Colors will stock Ultra Fiber 500 at both of the company's Springfield, Illinois, and Rialto, California, manufacturing plants. This will allow Ultra Fiber 500 to be purchased and shipped with the complete line of Solomon Colors pigments, and Brickform and Legacy branded decorative products.

- **(**800) 624-0261
- www.solomoncolors.com

PCA releases free editions of two concrete publications

Two must-have publications on reinforced concrete design are now available free-of-charge on the Portland Cement Association (PCA) website.

Both publications, "Simplified Design of Concrete Buildings" and "Notes on ACI Building Codes," were revised and updated according to ACI 318-11 codes. They present timesaving analysis, design, how-to methods for construction of reinforced concrete buildings and more.

The fourth editions of these two publications include updated equations, design aids, graphs and code requirements.

The 900-page "Notes on ACI Building Codes" provides educators, contractors, materials and product manufacturers, building code authorities, inspectors and others involved in the design, construction and regulation of concrete structures with an invaluable aid. By incorporating discussions of the history and philosophy of concrete design, the manual strives to inform the reader of both the "letter of the law" and also the "spirit" behind the code provisions.

Based in Washington, D.C., with offices in Skokie, Illinois, PCA represents cement companies in the U.S. It conducts market development, engineering, research, education and public affairs programs.

Both publications are available in free .pdf versions. 🥗

www.cement.org

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ADDITIONAL THANKS TO

American Society of Concrete Contractors/ Decorative Concrete Council Concrete Polishing Association of America Merit Trade Source Val-Test Group

Fabricate any form with Smooth-On's new epoxy putty

Free Form Habitat Fire Safe epoxy putty by Smooth-On is a high-density epoxy sculpting putty that is flame-rated (E84, Class A). Habitat Fire Safe is solvent-free and contains no VOCs. Working time is 90 minutes and cure time is 16 hours at room temperature (73 degrees F/23 degrees C). Epoxy cures to a very hard, flame- and heat-resistant material that is easily painted. Fire Safe does not contain any carcinogens.

Suitable for interior and exterior theming applications and general sculpting, it is certified 'aquarium safe' and is used by aquariums and zoos to make hyper-realistic trees, vines, rocks, coral and other display elements.

The putty can be used with Habitat Folding Powder to thicken and reduce sag when applied to a vertical surface. Folding Powder also reduces stickiness and makes the epoxy easier to handle.

Once the putty is applied, it can be stamped with a silicone rubber stamp to create repeating patterns with intricate detail over a large surface area that can be smoothed with alcohol or water. New Habitat Fire Safe will bond to cured Habitat Fire Safe without delamination. It will not melt foam and can be used as an EPS foam coating.

Free Form Habitat Fire Safe is also an excellent repair cement and bonds permanently to itself, PVC, acrylic sheeting, wood, many metals, plastics and foams.

(800) 762-0744

www.smooth-on.com

Jon-Don offers new 32-inch propane concrete floor grinder

Jon-Don, a leading distributor of products, equipment, and training for independent contractors and in-house service providers across multiple industries, has added the Scan Combiflex 800 Propane to its line of Scanmaskin concrete floor grinders.

The Scan Combiflex 800 Propane is 100 percent powered by propane. This concrete floor grinder is ideal for use by operators with concrete polishing jobs in large, wide-open facilities or outdoor locations where the power supply is limited.

With a weight of 970 pounds and a grinding path of 32 inches, this heavy-duty machine is designed to help operators achieve productivity rates ranging between 750 and 1,290 square feet per hour.

Like all Scan Combiflex floor grinders, the 800 propane model directs the torque of the machine down at the floor, which significantly minimizes stress and operator fatigue. In fact, it can be pushed along almost as easily as pushing a shopping cart.



www.jondon.com

Walttools debuts new concrete bond coating mix

At the 2014 Concrete Decor Show in Fort Worth, Texas, in October, Nathan Giffin of Vertical Artisans debuted Walttools' new Structure Coat concrete bond coating mix for use in the decorative concrete arena.

This new product is designed to offer contractors a highly reinforced base mix which can be used as a scratch coat for application of a decorative vertical concrete overlay such as Tru Pac admix, cultured stone and other stone veneers. It excels as a bond coat on structural foam and EPS foam, but also works well on cement board, clean concrete and other related surfaces without a bonding agent. Structure Coat was engineered for superior strength and water resistance that far exceed traditional mortars.

It can be hand applied or sprayed on. The new concrete bond coating mix also works well as a high-strength patching compound.

Structure Coat is available through select decorative concrete supply distributors.

((888) 263-5895

www.walttools.com

Atlas Copco releases new QAS 25 generator

Atlas Copco Portable Energy recently released its new QAS 25 generator, which is equipped with an Isuzu 4LE engine and a diesel oxidation catalyst to achieve tier-4 final emission levels.

Ideal for concrete and construction projects, the QAS 25 generator can be used for prime or standby power and is designed to withstand the rigor of demanding use in the field. The QAS 25's overall durability, as well as the quality and dependability of its interior components, gives it one of the highest resale values in the industry.

The generator is equipped with a dependable

Leroy Somer AREP alternator for optimal motor-starting capability. DeepSea 4510 controls are comfortable, reliable and easy to use. The unit comes standard with two-wire remote start capability and features a 72-gallon fuel tank for a 45-hour run time, nearly twice the run time of other models.

The QAS 25 enclosure is sound attenuated and has a vertical radiator and exhaust discharge to ensure low dBA levels for noisesensitive jobsites, residential areas or at events. Its voltage selector switch allows operators to adjust the machine's output to 480 and 208/240 volt three-phase settings, as well as 120/240 volt singlephase for varying applications.

(0 (800) 732-6762

www.atlascopco.us

Breckenridge introduces new custom concrete mix

Breckenridge Material Co.'s new Powerhouse mix is a proprietary blend of portland cement, ground granulated blast furnace slag and Class C fly ash cementitious materials. It was derived from Breckenridge's experience working on highly technical projects across multiple sectors, including ICI construction, civil works and heavy highway. The end product delivers high early strength, low shrinkage, durability and greater aesthetic properties.

Compared to a traditional foundation mix, Powerhouse offers a finished product that rivals the strength of ICI construction, low shrinkage of wastewater treatment plants and the durability of heavy highways. In addition, Powerhouse provides an aesthetically pleasing end product that's lighter in color with less 'bug holes' and honeycombing.

Test results substantiate claims that the new mix is two to three times the strength required by building



codes and has high early strength, in turn mitigating lateral soil pressure cracks caused by early backfilling.

The custom mix offers additional cracking mitigation including 94 percent less shrinkage compared to standard/traditional foundation mixes. Powerhouse also is much less porous compared to traditional mixes and its density makes it resistant to moisture entering the foundation.

() (314) 962-1234

www.breckenridgematerial.com

Miracote designs new RenewTop cementitious coating

Miracote's new RenewTop (RT) is an innovative, singlecomponent, polymer-modified, spray-applied cementitious coating designed for application over existing conventional and decorative concrete, cementitious overlays, microtoppings and many other suitable substrates. Engineered for use with specialized texture spraying equipment and spray guns, Miracote RT provides an ultrathin skin to renew, restore and beautify the finish of aged, worn, discolored or stained concrete surfaces while preserving the original texture of the substrate.

Miracote RT is available in a standard white powder that can be integrally colored with the company's ColorPax LIP pigment packs or stained using water-based MiraStain.

- **West Coast: (310) 631-6594**
- (Fast Coast: (908) 245-2808
- www.miracote.com

Miracote adds new metallic floor coating

Miracote's MiraFlor Metallux is a unique architectural, highsolids, resinous floor coating that uses powdered metallic and pearlescent integral pigments to produce brilliant and dynamic designer effects to illuminate and beautify concrete floors and other surfaces.

Although it is suitable to use in any clear, high-solids MiraFlor polymeric flooring resin, Metallux integral pigments are most frequently used in conjunction with MiraFlor CQ Clear Epoxy. Depending on specific service conditions and owner requirements, MiraFlor Glazeop and MiraFlor Glazetop FC are also excellent choices for use with these pigments.

- West Coast: (310) 631-6594
- **©** East Coast: (908) 245-2808
- www.miracote.com



Water Cannon unleashes new pressure washer

Water Cannon has introduced Water Blaster, the 17H85 pressure washer that features a Honda GX 690 electric start motor and a 15-gallon long-run fuel tank. The new machine is roll-cage protected

and has a poly-chain drive and a TSP series general triplex plunger pump.

The blaster sprays 4 gallons per minute at 7,000 psi. It has a portable wheel and a push handle. Along with a three-plus-five-plus lifetime manufacturer's warranty, the machine comes with a 50-foot hose, trigger gun, wand, QC



of California regulations relating to fuel tanks, vents and carbon canisters. The machine can be sold in all 50 states in the U.S.

Water Cannon uses low-permeation fuel tanks and fuel lines. Its fuel caps vent to the engine air cleaners as required by law, not externally to the atmosphere. Additionally, an appropriate-sized carbon canister as required by California is included.

- **(800) 333-9274**
- www.watercannon.com

Wagner Meters releases DataMaster firmware update

Wagner Meters recently released a free firmware update, further improving the Rapid RH DataMaster, a winner of the Most Innovative Product Award 2013. A pocket-sized device, it combines Bluetooth technology with touch-screen controls to automatically record and store Rapid RH test results.

Used with the proven Rapid RH Smart Sensors, the DataMaster and Bluetooth reader combo allows users to acquire the internal relative humidity



and temperature of a concrete slab via Bluetooth technology. This data can then be uploaded to www.f2170reports.com, ensuring data integrity and proper data documentation to comply with ASTM.

The DataMaster firmware update automatically loads job statistics to the website, rather than users having to create a zip file before uploading data. "With this update we have made the DataMaster even better by improving the user experience and making the interface more user-friendly," says Jason Spangler, sales manager for the Rapid RH product line.

The update is included in all DataMaster units sold after August 2014. Current DataMaster users can download the free update at bit. ly/DataMasterUpdate.

(800) 634-9961

www.wagnermeters.com

Blue Star Diamond introduces product to polish uneven edges

Blue Star Diamond introduces EdgeFlex, a product manufactured by Boride Engineered Abrasives in Traverse City, Michigan, designed to polish uneven edges, wavy edges and drains. Its flexible design makes it easy to use on hard or soft concrete floors and countertops.



When testing was conducted, Boride quickly discerned the need for a flexible product that provided the same finishing capabilities on uneven surfaces.

EdgeFlex, which cuts quickly but leaves a great finish, eliminates the need for metal cup wheels that can result in gouging and scratching.

It's available in 30, 50, 100, 270 and 400 grits in both 5-inch and 7-inch sizes. The product is available with adaptors for most hand grinders.

- **(**800) 662-0336
- www.bsddiamond.com

MBW presents new barrel-mounted sprayers

MBW now offers two new barrel-mounted sprayers. The BMS75 and BMS95 mix and spray water-based curing and sealing compounds and form release agents for concrete applications.

The BMS75 features a 7.5 gpm roller pump and will handle up to 25 percent solids efficiently. The BMS95 utilizes a 9.5 gpm diaphragm pump for handling heavier particulate loads to 35 percent.

Both sprayers are housed in an extra-wide, heavy-duty protective cage. The sprayers are easily locked to a 55-gallon drum or can be used in conjunction with the Easy Load Cart so no lifting is required. Heavy 55-gallon drums are simply rolled onto the cart's tilt bed and secured with a winch strap. The cart rolls on pneumatic tires and rubber castors for use on green concrete without damaging the slab.

- **(**800) 678-5237
- www.mbw.com

MCP Supply offers improved paver edging spikes

MCP Supply, a distributor of Edgetite, offers paver edging spikes that make installations stronger.

The 10-inch Edgetite spikes help solve the separation problem that can occur when installing paver edging with common spikes. Paver edging spikes were created from firsthand experience when Jeff Goodman, a landscape/hardscape contractor with 25 years of experience, continually encountered this problem while installing paver edging. After growing tired of seeing and repairing failed brick edging for years, he felt there had to be a way to solve this problem. Edgetite paver edging spikes were created with this in mind.

The edging spikes are unique because of their patent-pending angled-tip design. As an edging spike is hammered into the compacted base, the angled tip deflects away from the installation while the head pushes the edge restraint tightly against the brick. The angled final position of an installed paver spike resists frost heave while adding strength and longevity to your brick project.

The paver spikes are available from landscape supply dealers.

- **(**0 (888) 627-6363
- www.mcpsupply.com

Stonhard provides infection-control flooring

Floors by The Stonhard Group provide infection control for health care facilities without compromising design aesthetics. Stonhard floors are seamless, with no cracks or joints in which bacteria can hide. This feature makes them a good choice for environments where infection control is a priority.

Stonhard has provided seamless floor and wall solutions to health care planners and owners for more than 90 years. Stonres RTZ is a high-functioning yet design-savvy stain- and slip-resistant, seamless system available in a variety of color blends. This system is ideal for operating rooms, patient rooms, hospital corridors and sterile environments. Like all Stonhard floors, Stonres RTZ is poured in place to eliminate seams, joints and the need for costly repairs.

Stonhard products are backed by Stonhard's single-source warranty on both products and installation.

(800) 257-7953

www.stonhard.com

Majestic Collection joins Affinity Surfaces' lineup

Domain Industries Inc., a nationwide supplier of kitchen and bath products, recently introduced the Majestic Collection to its lineup of Affinity Surfaces solid surface material. These 10 color additions inspire a wide range of design ideas within the kitchen and bath industry, focusing on one-of-a-kind natural textures and marble effects.

The Majestic Collection is a dramatically unique approach to solid surface, offering veined patterns with subtle direction that is an elegant alternative to stone products found on the market today. Majestic features 100 percent-acrylic composition.

These 10 new colors are in stock and are now available to fabricators and designers. They are backed by a 10-year product warranty.

(866) 385-7775

www.domainindustries.com

Smooth-On's new sprayer is a great alternative to aerosol

If you regularly use release agents in your processing for mold-making and/or casting, you can save a lot of money with the Kwikee Sprayer from Smooth-On. This liquid sprayer, an economical alternative to aerosol, can dispense release agents and sealing agents in a fine mist. It is a faster, labor-saving way to cover large models or molds.

When you spray a release agent using an aerosol can, most of what comes out of the can is propellant that dissipates in the air. Relatively little release agent is delivered to the surface of your model or mold. When you apply a liquid release agent to the surface using a brush or

non-aerosol sprayer, a much higher percentage of actual release agent is delivered. You use far less to get the same release effect.

Using the Kwikee Sprayer offers the convenience of an aerosol and the savings associated with buying in bulk. It pays for itself in as little as a single release application cycle depending on the project.







PRODUCT NEWS

Fill the sprayer with any liquid and charge with air using a compressor with a common tire-fill air chuck. Press the Kwikee trigger to spray. Use the nozzle to adjust the spray setting from a very fine mist to a concentrated stream. The sprayer is made of anodized aluminum and is chemical- and water-resistant. It works with waterbased, solvent-based or oil-based liquids.

(800) 762-0744

www.smooth-on.com

Blended powder is designed to harden thin-section concrete

Trinic LLC recently unveiled its new Stage II Blended Powder Hardener and Accelerator, an admixture formulated specifically for the production of high-performance thin-section concrete.

The new Trinic admixture increases the early strength and ultimate strength of concrete with minimal effect on initial workability. It offsets the retarding effects of high plasticizer dosages while reducing pozzolan strength lag and delivers excellent results in normal and cool conditions where very high, next-day strengths are required.

With this blended powder, curing times and heat requirements are significantly reduced while concrete quality is improved. This product does not contain calcium chloride or any other intentionally added chlorides and will not initiate or promote the corrosion of reinforcing steel.

With this product your concrete has less chance of warping, curling or cracking after stripping, and you can increase strength gains as much as 50 percent overnight.

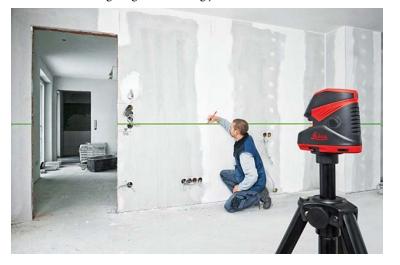
Concrete goes through three distinctive hardening/curing stages. During the first stage, little or no strength is gained. During the second stage as much as 1,000 psi per hour in strength gains can be realized, while during the third stage strength gains of 50 psi per hour can happen. Ordinary accelerators start working the second they contact the cement, shortening the working time of stage one. Trinic Stage II accelerator and hardener is designed to start working during the second stage of strength development.

(0607) 655-1517

www.trinic.us

Leica's improved green laser outshines traditional reds

The Leica Lino L2G+ by Leica Geosystems uses state-of-the-art green beam laser technology to project brighter and sharper lines much farther than traditional red lasers. Its wide-fan angle laser makes interior aligning and leveling jobs easier and faster.



The Lino L2G+ projects accurate (+/- 1/16 of an inch per 16 feet), independent vertical and horizontal lines to create highly visible planes or perpendicular lines. Its green laser diode has up to four times greater visibility than red-beam lasers for maximum visibility in interior applications. Brighter lines make it easier and faster to lay out construction details. The direct emitting green diode technology projects crisper, sharper lines with less speckle. Depending on lighting conditions, workers can see the green lines at distances of up to 100 feet indoors. The extended working range means fewer setups and more time saved.

Leica Lino L2G+'s low energy consumption makes it possible to work for seven hours with both beams activated—almost four times longer than competing green line lasers.

The laser is delivered with everything necessary for immediate use: standard AA batteries, a high-visibility green target plate and magnetic adapter in a compact carrying case. A Pro-Pack is also available and includes the standard package plus a professional carrying case, rechargeable NiMH batteries with charger and the TRI 70 crank tripod.

💲 www.leica-geosystems.us

Major firmware released for portable testing instrument

Proceq, maker of portable testing equipment, announced a major firmware release that extends the functionality and increases the value of the Pundit PL-200 Ultrasonic Pulse Velocity testing



instrument to all existing users free of charge.

The update provides area scan for the Pundit PL-200. Area Scan Mode extends the possibilities for uniformity testing of larger structures. The upgrade also allows data logging, which allows the automation of long-term measurements. Users can set up a test sequence to fully automate long-term measurement tasks such as monitoring pulse velocity changes in concrete during curing to identify the point of set.

With this upgrade, Area Scan Mode is also available for the Pundit PL-200PE. The area scan functionality also may be used with the distance measurement mode in Pundit PL-200PE Ultrasonic Pulse Echo testing instrument. This enables the user to carry out slab thickness uniformity testing in grid patterns. The Area Scan Mode can be used for measuring variations in tunnel lining thicknesses as described in the RI-ZFP-TU guideline for NDT of tunnel shells.

Proceq, founded 60 years ago and part of Tectus Group, manufactures high-quality portable testing instruments in Switzerland for the nondestructive testing of material properties of metal, concrete, rock, paper and composites.

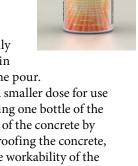
To upgrade your device, open the PL-Link software on your PC, connect the Pundit Touchscreen Unit to a USB port and click on the "PQUpgrade" icon to upgrade the new firmware via the Internet or from local files.

www.proceq.com

New concrete booster makes concrete harder. more waterproof

Super-Krete International Inc. now offers Concrete BOOST!, a ready-mix concrete booster that makes concrete stronger, harder and more waterproof. It's designed for smaller batches of concrete such as countertops but can be used with any portland cement-based material.

Concrete BOOST! is a spinoff of the highly popular Pene-Krete Additive, also manufactured by Super-Krete for highervolume mixes. The additive's most visible effect is how concrete mixes become virtually resistant to cracking due to shrinkage even in hot and windy weather conditions during the pour.



The new concrete booster is designed as a smaller dose for use with a ready-mix sack up to 90 pounds. Adding one bottle of the mix per sack will improve the overall matrix of the concrete by increasing strength up to 23 percent, waterproofing the concrete, resisting shrinkage cracks and improving the workability of the mix. The results of the treated concrete are significant reduction in permeability, efflorescence, susceptibility to freeze-thaw damage and resistance to water, radon and chloride ion intrusion. In concrete countertops, it will help keep slabs from curling as they cure.

Concrete BOOST! is available for purchase through authorized Super-Krete distributors.

(800) 995-1716

💲 www.super-krete.com

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PRODUCT ROUNDUP — ADVERTISING

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- **(**800) 884-2114
- 👣 www.EngraveACrete.com



Pool coping system will be a breakthrough in construction

Concrete Countertop Solutions, the innovative company behind Z Counterforms and Z Liqui-Crete, recently unveiled plans for a new concrete pool coping forming system. The patented system, called Z Poolform, marks a breakthrough development in the construction of concrete pool copings and decks.

Z Poolforms are made from hard, PVC plastic and lock directly into the liner track on vinyl liner pools, or into a

special receiver track on concrete and fiberglass pools. Rubber form-liners are then inserted into the forms, giving users a variety of different profiles and textures from which to choose.

Concrete Countertop Solutions expects to offer eight different profile choices with complementing stamps and texture mats by the time the product launches later this year. Z Poolforms are reusable and easy to install. In product testing, a two-man crew installed the entire system in less than two hours. Founder and

President Ed Baldoni expects this new forming system to save contractors time and effort during installation, and to ensure more consistent results than traditional Styrofoam forms. Z Poolform is considering requests from interested distributors.

(570) 587-3799

www.concretecountertopsolutions.com



Husqvarna's new Prime product line is now available

Husqvarna debuted Prime, a new product line of light and powerful electric equipment for handheld cutting, drilling and wall sawing, at the 2014 World of Concrete in January. The new line is now available for customers to purchase.

The Prime product range of equipment is powered by a unique power supply, either the Husqvarna PP 65 or PP 220 power pack, which converts regular AC power into a high-frequency current that drives the cutting equipment. With Prime, digital electronics replace hydraulics and mechanics in all areas of concrete cutting.

The following products are now available on the market: DM 650 drill motor, K 6500 power cutter, K 6500 ring saw and WS 220 wall saws. Customers can combine a system of products from the Prime range to suit what is most efficient for their needs.

The K 6500 is a powerful electric handheld power cutter with a high-output, low-weight, well-balanced

body and low vibration levels.

The K 6500 ring is the first electric ring power cutter from Husqvarna. This machine is capable of cutting 10 inches deep.

The WS 220 is a compact, yet powerful electric wall-sawing system. It uses blades 23 to 35 inches wide, and is capable of sawing through 15-inch thick walls. The engine delivers 8 hp (6 kW) on the spindle but weighs only 42 pounds.

The DM 650 is a powerful and versatile electric drill motor. Its high-power output, low-weight and intelligent design make this the ideal system for all drilling 4 to 24 inches.

The PP 220 is a water-cooled 9.3 hp (7 kW) power pack for the WS 220 wall saw. The PP 220 is equipped with wireless remote control and weighs only 22 pounds. Advanced computing power enables maximum cutting and drilling performance. It is compatible with the 6500 power cutter, K 6500 ring and DM 650 drill motor.

(913) 928-1000

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Decorative Concrete in Colorado:

Trends Near and Far

by Karen Van Heukelem

■ OME of the concrete design trends in Colorado differ from those in other parts of the country. In Colorado, we see a strong push for higher quality in even the most standard concrete. Even though we specialize in decorative concrete, some of our larger contracts this year include a good portion of standard uncolored broom-finished concrete because the owner or general contractor recognizes the value of having even the most basic concrete done correctly the first time. In addition to standard concrete sidewalks, driveways, curbs and gutters, our scope often includes forming unique stair or wall details, which can be challenging.

The popularity of Colorado Hardscapes' Sandscape finish continues in Colorado. We see landscape architects and owners drawn to the versatility of this finish and it remains prevalent in many designs.

Stamped concrete, however, continues to fade in popularity. Because stamped concrete simulates another material, such as stone, many designers opt to use natural stone. However, designers continue to be drawn to natural concrete finishes, such as Sandscape



Subtle shifts in color and texture appeal to designers and owners in Colorado. Template sandblasting is one of the methods used to achieve this look.

or exposed aggregates, because they're not trying to simulate another material.

Designs integrating lineal patterns and basic colors and finishes remain popular.

A minor tweak in color or texture is prevalent in many designs. Subtle shifts in color and texture appeal to designers and owners in Colorado. We see this in either alternating bands with different depths of etching or sandblasting along with template sandblasting for subtle pavement enhancements.

Because of our state's extreme temperatures and freeze-thaw climate, we see popularity in snowmelt systems. We team up with mechanical contractors to install radiant heat systems integral to our concrete paving. Hydronic systems are more popular than the electric systems.

We have to continue to educate architects about the design possibilities and limitations of interior concrete floors. Many still think of interior concrete floors as the traditional stained, sealed and waxed floors. They neither understand those limitations, nor the many other topping and polishing possibilities. They are getting better, but it's an ongoing educational process.

As the design industry in Colorado becomes more educated about the realities



Many of today's projects feature uncolored concrete with decorative elements such as saw-cuts and crushed glass, rocks and seashells.

and design potential of interior concrete, the possibilities seem to grow, especially for polished concrete. Some local architects understand concrete cracks and have learned the advantages of having the same concrete contractor place and polish concrete floors. When designed early enough, concrete mixes and aggregates are adjusted to meet the design intent. Through education and discussions, we see specifications requesting polishing to expose larger aggregates due to the design appeal along with the more consistent nature.

The artistic side of concrete design is reemerging along with the country's economic recovery. Anything highly decorative or unique disappeared with the recession, but now that the economy has loosened up a bit, we see more of a demand for unique applications of concrete. These range from LithoMosaic art pieces that involve mosaics integrated into monolithic pours without hand seeding individual pieces to realistic-looking artificial rocks and trees. We also are seeing a reemergence of high-end water features.

Has decorative concrete made a complete recovery in Colorado? No, I don't believe it has. Many projects are coming back to life that have been resting for years, and with them come some older trends or simpler designs from budget-minded development. But, as new designs are being created and projects have new life, I predict we will see a new push for decorative concrete that will expand and challenge the decorative concrete market here in Colorado and, I hope, across the nation.

Trends in the Rest of the Country

In comparison to Colorado's market, I reached out to some of our industry friends to see what trends they observe in their markets.

Kansas City, Missouri:

"Exposed aggregate finishes (e.g., revealed and Sandscape) continue to be the predominant exterior finish for architectural concrete. From an interior perspective, the polished concrete market continues to grow, as well as the use of polishable overlays (e.g., Modena and Deco-Pour) as an alternative to terrazzo flooring."

— Dan Kroesen, vice president, Musselman & Hall Contractors LLC





Sand finishes with clean saw-cut lines, such as the Sandscape and lineal design in this Denver project, are popular in many markets.

Phoenix, Arizona:

"In Phoenix, the architects are using a lot of finishes that work with contemporary buildings. So sand and acid-wash finishes are popular with clean saw-cut lines. Architects are always looking for something unique and innovative, just like we are. We currently have some projects with Lithocrete sedimentary walls, which is something new to the Arizona market, and another project with an elaborate template sandblast pattern that resembles leather with a tooled Western design that will be used at The Scottsdale Museum of the West in Scottsdale. Along with these finishes we still use Lithocrete, exposed aggregate and Bomanite.

— Mike Riggs, manager, Progressive Hardscapes

Charlotte, North Carolina:

"The main trends in the last several years have been to install alternative finishes like exposed aggregate or colored concrete finishes using some of the newer surface

deactivation chemistry. I see the use of color moving away from the reds and dark grays toward tans and browns."

— John Fletcher, president, Carolina Bomanite Corp.

San Diego, California:

"I continue to see a trend out West toward refined, highly detailed and smarter looking concrete surfaces. We are seeing renderings that depict decorative concrete surfaces that look cleaner and are represented with color, exposed aggregates and saw-cuts for a well-designed effect, whether it is a seeded aggregate or exposed aggregate concrete finish, including just exposing the fine sands on the surface of the concrete. I also see architects and owners, as well as us as a concrete contractor, trending toward concrete finishes that are easier and friendlier to maintain. By designing and selling these types of decorative concrete finishes, we can still install projects that look beautiful and are functional and practical as well!"

— Byron A. Klemaske, executive vice president, T.B. Penick & Sons Inc.

Karen Van Heukelem wears many hats at Denverbased Colorado Hardscapes Inc., including business development, marketing, sales, estimating and project management, with an emphasis on specialty rock construction. She can be reached at karen@coloradohardscapes.com.



Designers are still drawn to natural concrete finishes, such as polished concrete with exposed large aggregate.





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(5 & 10 Segments)













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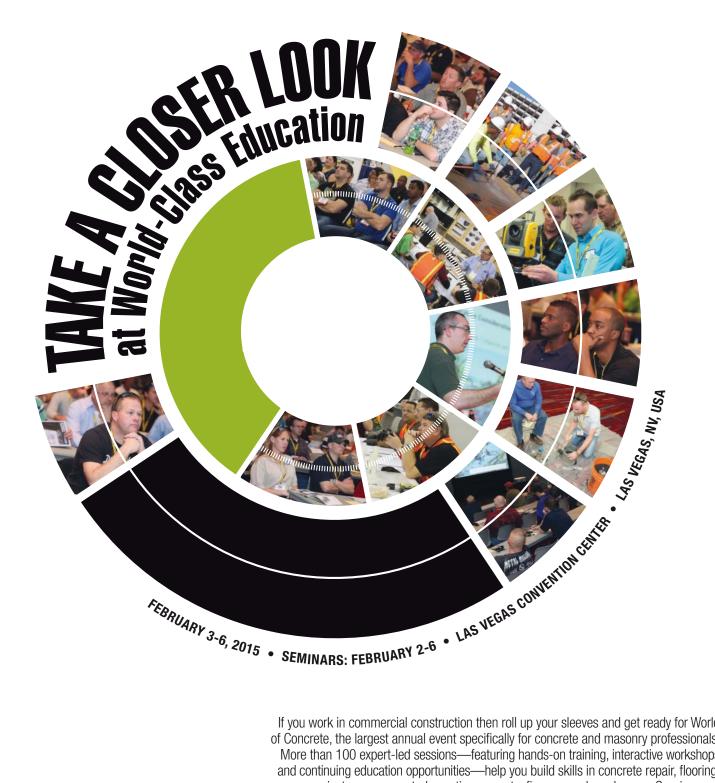
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ARTISAN In concrete

Emil Gera

Weatherly, Pennsylvania

by Vanessa Salvia

You don't have to be born into the family business to be good at it, but in Emil Gera's case, it sure helped. Gera's father, also named Emil, was a union concrete finisher who would take his son along with him to help on weekend projects. Some of young Emil's earliest memories involve concrete and a trowel.

"I've been working with concrete as long as I can remember,"

says Gera, 38. "I can still remember being maybe 9 or 10 years old and being out on Saturdays running the power trowel." Gera's father took his business full time in 1989, calling it Emil J. Gera Concrete.

When Gera graduated from high school in 1994, he went straight to work at the family business. Back then they were doing mainly residential flatwork and some commercial floors. "I can remember seeing stamped concrete and thinking, 'I need to be doing this,'" he says. "My father had his hands full with the work

they were already doing. He told me, 'If this is something you want to pursue, you will have to put the time into it yourself."

For the first 10 years or so the Geras did only a small amount of decorative work. "We were learning as we went along," Gera says. About 10 years ago, he took his first training class. "I thought if I am going to take this further, I need to learn more and from the best."

Learning from the pros

Gera credits learning from and working with Bart Sacco of Kingdom Products, located not far from the Geras in Northeast Pennsylvania. He also has attended many training classes, acquiring knowledge from experts such as Troy Lemon, Tommy Cook and Rick Lobdell through classes at World of Concrete, the Concrete Decor Show and at the Kingdom

Products Training Center. He credits this training in helping take his work to the next level.

The Geras are seeing their work shifting from traditional broom-finished concrete to stamping, stenciling, staining and now vertical stamping. "Every year the amount of decorative work we are doing is increasing," Gera says. "More people are

seeing the TV shows of backyards with fire pits and seating walls, so that is getting to be a really big thing. We are in a small market, and word about our decorative work has gotten around. People often call and tell me, "This is what we are looking for and they say you are the guy to call."

Gera took a course from Lobdell at last year's Concrete Decor Show that helped him prepare for a request for an engraved and

stained sunflower on the floor of a new indoor sunroom. The sunflower is 10 feet wide from petal point to petal point. "I was a little unsure if I could pull it off," Gera says. "But the training I got from Rick gave me the edge I needed."



Can't keep a good man down

Earlier this year while getting something off a shelf in his shop, Gera had a ladder slide out from under him. He landed on a rebar cutter, completely mangling his ankle. "My leg bone came out through the side of my foot," he recalls. "It was April 15 and we were just getting the season started after a very long winter. For a while I thought it was the end of the world."

Less than 5 weeks later he was out on jobsites, crawling around on his hands and knees to get things done. "Stamping takes on a whole new level of difficulty when you





cannot stand on two feet," he points out.

One of the first jobs he tackled after the accident involved a set of 10 stairs, designed to look like wooden timbers that stretched over 36 feet, leading to a 28-by-50-foot patio. The day before the job was to begin, Gera received a late-night text from the homeowner explaining the husband didn't like what the wife had planned. Working from a tiny cell phone picture of stacked railroad ties and stone, Gera was thankful for his decorative training.

"Through techniques I had learned in a vertical stamping workshop with Greg Hensley of Flex-C-Ment, I knew I could stamp the sides to look like timbers," Gera says. "The landscapers were right behind us standing on the steps. The sides of the steps are finished with end grain and knots, and he didn't know he was standing on concrete. That told me we did a pretty good job." And the homeowners thought so, too.

Despite the physical limitations of trying to navigate a steep worksite on crutches and the last-minute changes to the design, everything went off without a hitch. "I am particularly proud of that job," he says.

Setting the table

Another job Gera is proud of involves a 16-foot-long, 42-inch-wide concrete table built for a family of second-generation butchers who wanted a table decorated to look as if it was always set with placemats and dishes to match their mom's old plates and silverware. "Every Thursday they have a big get-together with their friends and they wanted to tell their friends, 'The table is always set, you're always welcome,'" Gera says.

While showing samples to the family on a cold January day, one of the brothers remarked about the concrete feeling cold. He asked if there was any way it could be heated. Gera initially thought this was a crazy request, but he wanted to please the customers.

He ended up outfitting the table with heating mats and a programmable thermostat. "Every Thursday when they have their get-together, by the time 6 in the



evening rolls around, the table's up to 80 degrees," he says.

Winning TV time

Gera's local TV station, WNEP, features a program about home and backyard projects, but the station itself had a lackluster outdoor wooden patio. The staff invited Gera and two other contractors to offer improvement ideas to make the patio a nicer backdrop for on-air segments while also creating an inviting place for the employees.

Gera's idea won, and WNEP filmed the patio's transformation in two episodes for its program. The existing patio was torn out and a new slab poured. Gera stamped the border and in the middle placed the WNEP

logo, which was created with a custommade stencil and custom-blended colors.

"It's one thing to do your job," Gera says with a laugh. "It's another thing to have a guy with a video camera over your shoulder and a mic recording everything you say and do!"

Loving his job

Gera's 5-year-old daughter, Katelyn, already knows her decorative concrete techniques. "She absolutely loves horses," Gera says. "I was in Bart's (Sacco) store with her looking at the carousel with stamps and she finds the horse stamp. She says, 'Daddy, we have to get this so we can put horses in the concrete!"

The next generation of decorative

concrete finishers in Northeastern Pennsylvania is still growing up, but in the meantime, Gera will be there to take the phone calls.

"I really enjoy what I do," he says. "I can honestly say I go to work every day doing something I love. And when a project is complete I can stand back and look at it and say, 'I did that.' There's a lot of pride involved."

👣 www.geraconcrete.com

See more photos from this feature online at ConcreteDecor.net

The Journey Home

A legacy of giving back at the Presbyterian Night Shelter

by Vanessa Salvia

HIS fall, a crew of trainers and the people who signed up to take their workshops transformed much of the Presbyterian Night Shelter in Fort Worth, Texas. Six workshops opened a week of activity surrounding the 2014 Concrete Decor Show held Oct. 1-3 at the Fort Worth Convention Center. In two days' time, working primarily during business hours, decorative concrete trainers and their students improved more than 7,000 square feet of flooring, replaced a lackluster patio and walkway, and created a carved rock entryway fit for a castle.

"Since you finished the work there's been nothing but positive comments," says Toby Owen, chief executive officer of the shelter. "The residents, staff and everybody are very pleased."

2014 was the fifth year of the Concrete Decor Show, which travels to a new host city each year. Part of the show's mission is not only to provide training opportunities but to put talent and high-quality products to good use. Rather than applying products to concrete that gets discarded at the end of the event, the workshops allow the show to give back to the host community in a tangible way, leaving a city better than it was before the show.

The 2010 show transformed several areas. of the Children's Museum of Phoenix. In Nashville, the 2011 show projects centered around a popular youth center called Rocketown. In 2012, trainers and students in San Antonio went to work at a youth art

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center called SAY Sí. Last year in Charlotte, North Carolina, similar projects were undertaken at the Charlotte Rescue Mission.

(Visit www.concretedecorshow.com and go to the "About" section, "Show Recaps," to see the recaps on projects along with the manufacturing companies who donated graciously to these workshops.)



On with the show

This year's community project helped out the Presbyterian Night Shelter, the largest provider of homeless services in the area. "Total capacity is 667 people," says Owen, "and we're averaging 650 a day." It is the area's only shelter that allows residents to stay as long as necessary.

The shelter spans both sides of a street, with facilities for single people on one side and a shelter for women and children on the other. Shelter staff purchased an adjacent plot of land, which they plan to develop in the near future.

When CEO Owen was first approached about the possibility of improving the shelter, he welcomed the idea. "I'm really thankful for all you did for us," he says. "It brightens it up and makes it more of a livable place."

This year's workshops at the Presbyterian Night Shelter focused on improving the following six areas:



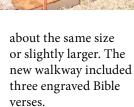
Women and Children's Courtyard

Course: Imprinted Concrete and Inlayed Graphics Lead Trainer: Brian Farnsworth, Cement Colors Inc.

Product and materials donated by:

Kingdom Products - 2014 Color Sponsor, Airlite Plastics, Cement Colors - 2014 Supply Store, Chapin International, Helix Color Systems, CMC Commercial Metals, Cow Town Redi-Mix Concrete, Dustless Technologies, Engrave-A-Crete, Fritz-Pak Concrete Admixtures, Kraft Tool Co., Proline Concrete Tools, QC Construction Products and Sunbelt Rentals.

The courtyard's existing 30-by-20-foot patio and 50-by-3-foot walkway were torn out and completely replaced with stamped and colored concrete





The Children's Library

Course: Adding New Dimensions with Metallics

Lead Trainer: Troy Lemon, Cornerstone Decorative Concrete

Products and materials donated by: Airlite Plastics, BN Quality Products, Dustless Technologies, Flex Das Original, GranQuartz, HTC, Key Resin Co., Kingdom Products - 2014 Color Sponsor, Kraft Tool Co., MSA Safety Works, Merit Trade Source, Midwest Rake, Sunbelt Rentals, VersaFlex, Wooster and Xtreme Engineered Floor Systems.

The library floors in two 17-by-14-foot rooms, housing computers and children's books, both had challenging joint patterns that had

to be removed before work could progress. Trainer Troy Lemon said the joints went down deeper than his blade.

To prepare them for the microtopping and metallic work, the class first made sample boards. The job involved stenciling one room with a metallic blue and silver design. The other room was stenciled with a pattern Lemon created based on the first letter of the Hebrew word "yovel," meaning "jubilee." The symbol represents freedom from bondage and forgiveness from God.





PROJECT PROFILE



The Women and Children's Cafeteria

Course: Aesthetic Restoration and Repair

Lead Trainers: Shellie Rigsby Cordell, Acanthus, and Randall Klassen, Klassen Concrete **Products and materials donated by:** Airlite Plastics, Chapin International, Dustless Technologies, Franmar Chemicals, GranQuartz, Kemiko, Merit Trade Source, MSA Safety Works, Padco, Preval and Sunbelt Rentals.

The 4,000-square-foot cafeteria in the women and children's wing needed a lot of work. One of the facility's largest rooms, it presented several logistical challenges because it was adjacent to the cafeteria and kitchen used by women and children residents. Because it's part of their living space, it could not be completely closed off to foot traffic.

The trainers, Shellie Rigsby Cordell and Randall Klassen, and students first thoroughly cleaned the entire floor. The floor was swept, washed and buffed with a swing buffer.

Overall, color was reapplied and corrected. A seal coat and subsequent paste wax was then applied to finish the project, leaving the shelter with a low-maintenance floor.

Prior to the beginning of class, Soy Gel by Franmar was used along the entryway to remove old sealer. The crew used spray

bottles of acid stain to color-correct. particularly in areas where the color had been walked off. and in places where existing walls had been removed and the underlying color did not match the rest of the floor.

"It's looks great," says Owen. "The work brightened the room. The floors are clean and there's more sitting room outside, which is great for the clients."





Men's Sleeping Quarters

Course: Beyond the Basics: Decorative Effects for the Polishing Contractor

Lead Trainer: Jeremy Wilkerson, DreamKrete

Products and materials donated by: Chapin International, Concrete Polishing Association of America, Engrave-A-Crete, Flex Das Original, FLOORmap Stencil Designs, GranQuartz, HTC, Iwata Medea, Kingdom Products - 2014 Color Sponsor, Merit Trade Source, Metzger/McGuire, MSA Safety Works, Prosoco, Sunbelt Rentals and VersaFlex.



The concrete in this long, rectangular 1,500-square-foot sleeping quarters, which holds bunks for 44 men, had many flaws. It was not only unappealing but the concrete was broken and chipped.

Course participants had to do spall repair at a control joint, where a piece of rebar was exposed. They made fresh cuts, removed all loose material and filled the joint with VersaFlex Quick Mender. Lines were then etched into the concrete along the joints with a Mongoose concrete engraving saw to mimic barbwire. Polyurea joint filler was used as a decorative element to add

color where the saw-cuts were placed in the barbwire pattern. Where the pattern needed adjustments, participants removed the joint filler and replaced it with sanded grout in a terra cotta color.

Three other decorative elements were added: a stenciled, metallic Texas lone star, an engraved and stained Texas longhorn steer and a stained horseshoe.

Near the back wall of the room, the students used the engraving saw to carve several symbols that look like old-fashioned western cattle brands. The floor was polished to a 3,000 grit.

"At the main shelter," says CEO Owen, "this room is one of the two things that have received the most comments by the staff and the residents. I absolutely love how the cleaned and polished concrete looks."





Bicycle Entrance to the Men's Area

Course: Going Vertical in a Flat World Lead Trainer: Nathan Giffin, Vertical Artisans

Products and materials donated by: Airlite Plastics, Flex-C-Ment, Kingdom Products - 2014 Color Sponsor, Kraft Tool Co., Merit Trade Source, Preval and Smith Paint.

Throughout the project's two days, Nathan Giffin's work in an outdoor area near a men's entryway was the most observed. It was not unusual to find a group of residents and staff sitting at picnic tables under the building's overhang to watch him work. In the end,

he and his students transformed a plain doorway with a locking metal door surrounded by white-painted cement blocks into what looked like the entrance to a stone castle.

Giffin and his students first prepped the wall and sprayed it with mortar. When the wall was partially done, they added a curved Styrofoammolded bench complete with planters on both sides of the doorway. After carving this to mimic rocks, Giffin demonstrated various coloring techniques using water-based stains to make them look more realistic.







The Loft

Course: Advanced Coloring Techniques with Acid Stains Lead Trainer: Rick Lobdell, Concrete Mystique Engraving

Products and materials donated by: Airlite Plastics, Dustless Technologies, Engrave-A-Crete, FLOORmap Design Stencils, GranQuartz, HTC, Kemiko, Kingdom Products - 2014 Color Sponsor, Kraft Tool Co., Lyon Manufacturing, Midwest Rake, Merit Trade Source, MSA Safety Works and Preval.

The 1,500-square-foot loft is used as a day lounge for war veterans as well as an overflow sleeping area for homeless women. Its floor, like the hallways and most of the flooring throughout the building, was mechanically ground before an overlay was applied. Lobdell used a fresh, lighter color on the main floor and a darker border around the room's edges, using a 1:1 dilution of a black acid stain.

In the middle of the room, Lobdell and his students engraved and acid-stained an eagle with a 28foot wingspan. Owen says the new and improved loft doesn't look "so institutional" anymore. The eagle "has livened up everything."





The Crush House: Where seeing red isn't a bad thing

Gervasi Vineyard, Canton, Ohio

by K. Schipper

EOPLE who know Ted Swaldo weren't surprised last year when the Gervasi Vineyard & Italian Bistro began expanding.

Since opening in 2010, the family-run restaurant and winemaking operation in Canton, Ohio, has added a shopping experience, a conference center, lodging and a cooking school. During the same period, the demand for the company's 15 different wines has grown to 16,000 gallons a year, despite a winery with only a 5,000-gallon capacity.

Enter The Crush House, which Swaldo describes as "a factory for making wine." While it allows Gervasi Vineyard to increase its production capacity to 30,000 gallons, it also includes a 160-seat wine bar and eatery.

The factory description is quite appropriate, since, Swaldo says, "One of the things we were trying to capture is the



Project at a Glance

Client: Gervasi Vineyard & Italian Bistro, Canton, Ohio **Decorative concrete contractor:** G&M Concrete, Canton, Ohio

www.gandmconcrete.com

Decorative concrete supplier: Deco-Crete Supply, Orrville, Ohio

www.deco-cretesupply.com

Project description: G&M was hired to finish 10,700 square feet of flooring in Gervasi's new winery and eatery, The Crush House, as well as provide concrete sinks for four customer restrooms.

Timeline: G&M was on the jobsite for four weeks.

Tools and materials used:

Sinks: Hand-packed Duracast GFRC countertop system, Kemiko Black acid stain with Deco-Crete Color-Dye

Winery floor: Deco-Crete's Liquid Metals Cherry Pie metallic epoxy and HP Spartacote's Sparta-Flex sealer. G&M subcontracted a company to diamond grind both floors for prep; the colors and coatings were applied with rollers and squeegees.

Eatery floor: Black Kemiko acid stain and Deco-Crete Color-Dye in Walnut; sealed with Sparta-Flex from HP Spartacote.

look that we had built a restaurant in an old building."

That's where the concrete comes in. Not just on the floors, which would be natural for an old factory, but in the customer restrooms. There, Swaldo collaborated with Jason Geiser, owner of Orrville, Ohio-based Deco-Crete Supply, and Joe Gingerich, owner of the locally based G&M Concrete, to create sinks that leave guests talking.

Swaldo discovered both men independently of each other, although Gingerich and Geiser often work together when G&M is called upon to create the decorative and stamped concrete jobs that are its specialties.

"As I remember it, Ted came into our supply store," says Geiser. "Somebody had referred him. He explained what they were doing and I thought our liquid metals would be perfect for the winemaking floor."

While Geiser was making up samples for Swaldo to review, the owner of Gervasi Vineyard also contacted Gingerich. "I did

a countertop for the plumbing contractor on the job (for his) outdoor kitchen," Gingerich explains. "They were looking for something unique for sinks and the plumber suggested me."

Soaring imaginations

Gingerich says that Swaldo initially considered standard concrete ramp-style sinks for all the bathrooms, and ultimately 3-by-3-foot versions of them were installed in the second-floor restrooms. However, for the main floor, the men unleashed their imaginations.

During that same time, Swaldo also had another meeting with Geiser at his showroom, and the Deco-Crete owner showed him a special sink he'd done for his own mother. "That's when it hit me," says Swaldo. "I said, 'If you can do that shape, you can do a wine bottle."

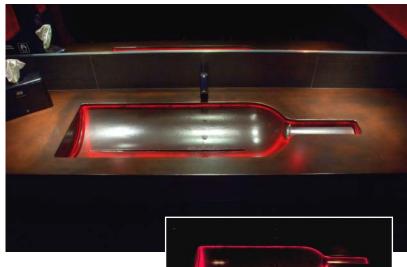
The end result: two 6-foot-long concrete sinks that look like wine bottles cleaved down the middle from top to bottom. If



Swaldo and Geiser came up with the idea for the shape, Swaldo gives Gingerich credit for coming up with the idea of lighting them. "I originally wasn't going to put in the LED lights," says Swaldo, but was won over after Gingerich showed him some lighting ideas.

Gingerich explains the sinks required a custom-made mold, and in order to install LEDs in them, he would need to create an overhang around the edge of the sinks where they could be mounted. "They had to be waterproof and low-voltage," Gingerich says. "They're totally encapsulated and designed for underwater use, and because they're mounted to the lip, if there are problems they're replaceable."

All the concrete sinks were cast in the G&M countertop shop,



and Gingerich estimates he had two men working for approximately a

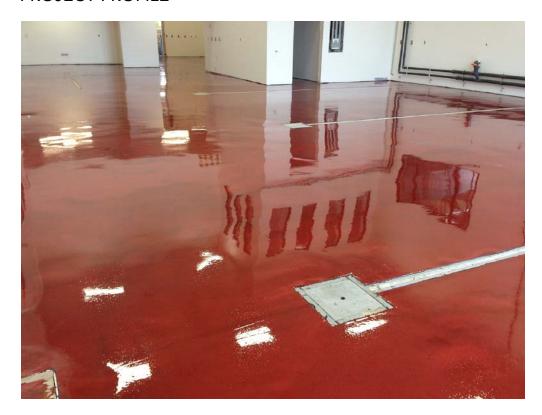
week on creating the sinks. Installation of the half-bottles required a crew of eight.

"The sinks were more concept and planning than actual production," he says. "That, plus finding a company that would make custom molds," while trying to keep the cost in check.

The ramp-style sinks in the second floor also are lit with integral fiber-optic lights. In all the restrooms, red lights are used to pick up on the major color of The Crush House.



PROJECT PROFILE





Industrial and safe

The color theme is carried over into the production area, where G&M installed a Deco-Crete brand red metallic epoxy, topped with Sparta-Flex, a polyaspartic concrete sealer from HP Spartacote.

"Ted liked the idea of having a seamless floor," says Gingerich. "He wanted something that would take the heat, and that's how we ended up with the metallic." For the restaurant area, Swaldo opted for a black acid stain, and Gingerich says the idea there was to give it more of a warehouse look. That, too, was topped with the Sparta-Flex floor coating. "It was also done during new construction, so the only problem we had was moisture being a little bit of an issue," says Gingerich. "However, we had full access to everything."

The floors each took a little more than

a week to complete, with most of that time spent applying the sealer. In the production area, that also included a traction additive for safety. Deco-Crete's Geiser says that's a fairly accepted approach to coating floors where food is being prepared.

One of the attributes of an epoxy floor is that it can be seamless, which winery owners may find attractive because it lessens their ongoing maintenance. "With tile you have grout joints where the bacteria can get in, but with this (type of flooring) there are no seams," he says. With Deco-Crete's Liquid Metals, "It's poured on, it self-levels, and it's easy to clean, which makes it excellent for food safety."

Swaldo agrees, saying the production floor still looks beautiful and is holding up well. However, he's noticed some wear to the topcoat in the dining area where foot traffic is heaviest. "We like the look; it was a look we were hoping for because I wanted to make it look aged," Swaldo says. "Maybe two or three years from now we'll reseal it, but I don't consider that a big issue."

However, it's the half-bottle sinks that really make the job for Swaldo. "In the restaurant business you have to have something that makes people say, 'Wow,' and restrooms are one of those things," he says. "I love to hear people come out of the bathrooms and say, 'You have to come see this."





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Spraying Stains and Sealers Can Create Issues

by Chris Sullivan

uestion: I recently received a phone call from a concrete materials distributor who was working with a contractor to install a concrete dye on a relatively new concrete slab. The concrete was a 3-month-old, 1,200-square-foot interior slab, finished without any type of a film-forming cure or sealer, and in good condition. Water soaked into the concrete within three seconds, and the contractor performed a mockup with a dark brown dye diluted in acetone that the owner had approved a few days prior. The problem occurred when they applied the actual dye to the slab. Although they followed the recommended coverage rate for the brown dye and applied it with an airless sprayer, it yielded virtually no color. Multiple applications provided the same result no color. Everyone was scratching their heads, including me — until we started probing a little deeper and looking at processes and equipment that are often overlooked.





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This was one of those decorative concrete "mystery problems" that occur every now and again with no plausible explanation – until you stumble upon something and have an ah-ha moment. After working through the standard protocol of questions, and then probing deeper, I was still stumped. This was an experienced installer who had many years and dozens of successful concrete stain and dye projects under his belt. I was also working with an experienced distributor who had more than a decade of product knowledge and training with these particular systems.

They followed all the proper procedures, and the concrete was in great condition. The dye tested fine when spot-applied with a brush and the application was sound, and yet no color.

I initially thought it could be a very porous concrete slab soaking in the color, but that just did not feel right for this situation. I know the suspense is killing you, so let's just jump ahead to what the problem was.

It turns out that when the installer went to apply the product he plugged his airless sprayer into an air compressor used by the framing contractors for their nail guns. The pressure was at or over 100 psi, which atomized the dye coming out of the airless sprayer so much that the color was lost to the atmosphere. The initial mockups had been applied with the airless sprayer at pressures between 25 and 50 psi, which yielded great results.

To be honest and provide full disclosure, it was the installer who discovered the issue by going back through his procedures and double-checking all of his equipment and processes.

I had seen this atomizing phenomenon a few times in the past, but it had always been with sealers being applied in the heat of summer or in windy conditions on an exterior slab. This was the first time I had seen the issue on an interior slab, which is why I did not even consider it as a possibility. The project was located in a high-altitude location in the arid southwestern U.S., which fueled the process of rapid evaporation of the solvent-based liquid dye. Factor in the ultra-high pressure of the airless sprayer, and the dye had no chance of ever reaching the floor in a liquid state.

To better understand why this occurred, we need to look at the evaporation rates of liquid solvents used in dyes and sealers, and the effect spraying has on them. All solvents (including water, which is known as the universal solvent) have a set rate of evaporation. These numerical rates are often calculated relative to the evaporation rate of butyl acetate at 20 Celsius. Using that measurement, the evaporation rate of acetone is 5.6, xylene is 0.6, and the evaporation rate of water is 0.3.

Don't panic if this is confusing. This simply tells us that acetone evaporates more than five times faster than water and xylene at standard temperature and pressure. This is a no-brainer for anyone who has worked with an acetone-based dye or sealer.

Taking this to the next step in regards to our problem situation,

we know acetone was used to dilute the dye, which means the liquid dye will evaporate very quickly. Spraying turns the liquid dye or sealer into millions of small droplets as they exit the spray gun. The pressure of the spray system, along with the size of the spray tip, dictates the size and rate of the droplets coming out of the spray gun. Changing the pressure changes the amount of the liquid exiting the spray gun, and more importantly, changes the size of the liquid droplet.

Raising the pressure decreases droplet size and increases the amount of material being sprayed (liters per minute). Lowering the pressure increases the droplet size and decreases the amount of material being sprayed. To better visualize what is occurring, imagine that under high pressure you create droplets the size of BBs and under low pressure you create droplets the size of golf balls. Under dry, hot or windy conditions the BBs are so fine they get carried away or evaporate into the atmosphere before hitting the concrete, reducing the amount of dye that can color the surface.

This is a simplified explanation of what can be a complicated mix of temperature, pressure, sprayer tip size, solvent type and other environmental factors. In this case, the pressure was three to four times higher than recommended, resulting in the acetone dye forming such small droplets that the dye was more of a fog than a liquid coming out of the spray gun. This fog of solvent dye evaporated in the dry atmospheric conditions before hitting the surface, resulting in a fine dusting of dye on the concrete, which as an end result produced very little to no final color in the concrete.

Once the problem was discovered, the pressure was reduced and the spray application produced the desired dark brown color on the concrete floor. The main point to remember is that raising the pressure has a major impact on the amount of dye hitting the concrete.

Fortunately this type of large-scale application failure does not occur very often. What I do see occur more often is lost product when solvent-based sealers are applied with an airless sprayer in an exterior environment. In many cases, applicators

are not even aware that they are letting money blow away in the wind, literally. If you apply any type of solvent-based sealer, dye or stain with an airless sprayer, I strongly recommend testing coverage rates and dialing in the pressure and spray tip to assure that all of the product is making it to the surface. Applicators could lose 20 percent of their sealer or dye to the atmosphere due to overpressure without realizing this was occurring. That is lost revenue and over time can add up to a pretty big number.

Chris Sullivan is vice president of sales and marketing with ChemSystems Inc. He has led seminars and product demonstrations throughout North America. Reach him at questions@concretedecor.net.



Make a Splash

Transitioning into pool construction

by Doug Carlton

THE success of your decorative concrete future hinges on one word: anticipation. The ability to anticipate where to find the potential buyers of services over the next year or two is one few professionals even consider. The fact that you're still reading after only three sentences makes you a visionary. Congratulations. The goal of this article is to define an upcoming opportunity for you and your business, explain why pool remodel construction is an opportunity of the future and, lastly, what it takes to remodel in-ground pools.

There are several million in-ground pools across the United States that are damaged or deteriorating to the point that simple repair will not be adequate. What these pools need is a complete remodel in order to function

properly and provide an aesthetically appealing part of an outdoor living space. Most pool owners have no idea what it will take to restore their backyard oasis and will eventually turn to a reliable business like yours for guidance.

Not a simple fix

It has been my experience that a majority of pool owners falsely believe the remedy for a damaged pool goes no further than replacing the pool's decking. This is the furthest belief from the truth. HomeAdvisor.com reports that the average cost to remodel a private swimming pool is approximately \$19,000. As you can see by this costly expenditure, the remodeling process goes far beyond extracting the old

decking and replacing it with something decorative and new.

Each week, numerous folks tune in and watch home-improvement television. They watch as "before" photos transition into works of art, all within a half-hour program. This exposure bodes extremely well for people in the pool construction industry, as each time they watch seeds of endless possibilities sprout into opportunities. The fact is, most homeowners will not tackle a pool remodel on their own. This means many of them will pursue the professional services of a company just like yours.

By far, most homeowners will look for a one-stop shop, one that has the means and experience to tackle a complete pool remodel. The decision to hire a company to remodel a swimming pool opens doors for that company to many other outdoor living scenarios and scenery. Why not propose an outdoor kitchen and barbecue area covered with a timbered pergola? Perhaps propose an added rock feature that cascades with the sights and sounds of a refreshing water feature? The possibilities are limited only to a customer's budget and your creativity in what you will propose to them.

Why not you?

Do you realize you are the perfect person to spearhead a pool remodel project? The pool deck might not be the only ingredient in a remodel project, but it is the most costly and visible portion. Less costly necessities are replumbing, rewiring, retiling and replastering. All first require removing the old decking followed by formulating a design for the new deck. Each step requires a necessary order. Each step also requires a necessary inspection by the city or county. Organizing each phase and the appropriate inspection is the duty of the remodeling contractor. A realistic timeline for such a pool remodel project is between 30 and

I can say after working around hundreds of pool remodeling projects that the key



to success is building the right team to perform each necessary trade. It is best to find subcontractors or skilled personnel who specialize in pool remodel or newpool construction. Access is usually limited around a backyard pool remodel and it takes a certain temperament to handle such a challenge. Some tasks require miniature equipment and plenty of handwork. Great attention to detail is not only expected but necessary. Using the same team from one project to the next helps create a consistent level of quality, unity and accountability necessary to build your solid reputation as the best pool remodeler in the business.

The pool's decking is your opportunity to shine. The decorative concrete trade offers many colorful options that coincide perfectly with a vast array of pool decking. Attention to detail is especially important when combining decorative concrete with a pool deck. The expectation level rises and imperfections that may be overlooked on a driveway or patio will be closely scrutinized around a pool. Plan your concrete placement appropriately by paying close attention to slope and drainage. Seal your colorful masterpiece with the addition of a non-skid additive to prevent slips and falls. The number of pools across America that needs to be remodeled are stacking up with each passing day. Go do your part to remedy this situation.

Doug Carlton is working on his third decade in the decorative concrete industry. He is the owner of Carlton Construction, located at the base of the Big Horn Mountains in northeastern Wyoming. Doug can be reached at carltondoug@sbcglobal.net.

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by Stacey Enesey Klemenc

■ HERE's a brew-ha-ha over craft beers these days. And no wonder — with an average of 1.5 breweries opening daily, according to the Brewers Association in Boulder, Colorado, it's not a stretch to say new ones are popping up faster than a fresh keg can be tapped.

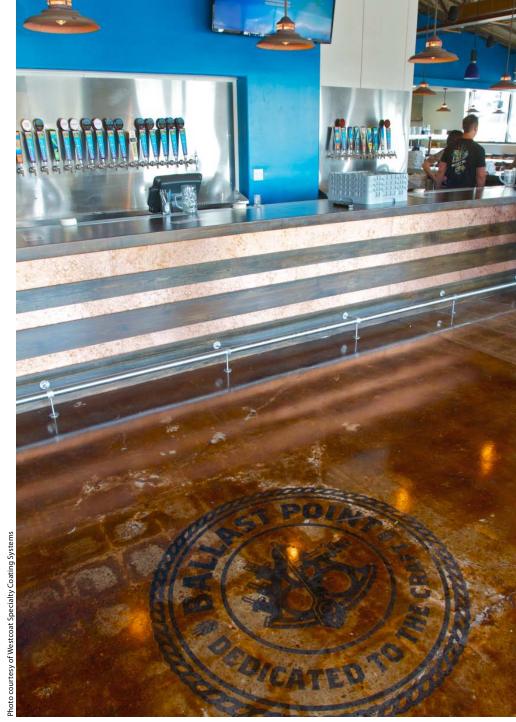
In addition to all the usual places breweries can be found—college towns, urban hubs and sophisticated cities-they're opening like nobody's business in rural areas and suburbs across the country. "It's definitely a national movement," says Bart Watson, stats geek, beer lover and the association's chief economist. "I'd say about 75 percent of legal drinking-age adults live within 10 miles of a brewery." These include microbreweries, brew pubs and regional craft breweries, many of which have been aesthetically improved with a new decorative concrete floor or bartop.

In 1978, there were less than 100 brewing locations in the United States, with the two oldest being Anchor Brewing and the now defunct New Albion Brewing Co., both out of California, says Julia Herz, craft beer program director for the Brewers Association. Today that number is estimated to be 3,100 and growing.

"Of that 3,100, 99 percent are small, independent craft breweries," she says. Small is defined as those that produce less than 6 million barrels a year (one barrel equals 31 U.S. gallons).

Besides established facilities, there are plenty more budding young companies in the wings, Watson says. According to his research, an additional 1,500 or so licensed small breweries plan to open soon, with





Ballast Point Brewing & Spirits' new restaurant in San Diego's Little Italy is done with brown Westcoat Fast Stain.

most of the activity in California, Oregon and Colorado. At last count, California, where it all started, was still leading the pack with 416 breweries (the 2013 tally was 381).

"Craft brewers tend to be countercorporate, counter-culture individuals who have multiple skills sets including brewing talents, business savviness and marketing prowess," says Herz. "They are in it to win it and put everything on the line," often second mortgaging their homes to help raise capital and getting support from a network of family and friends to get them to market.

As a whole, brewers tend to be very involved in their communities through philanthropy, product donations, volunteering and sponsoring local events. The hallmark of craft beer and craft brewers, contends the Brewers Association, is innovation. According to its literature, "craft brewers interpret historic styles with unique twists and develop new styles that have no precedent. They use traditional ingredients, often mixing them with interesting and sometimes nontraditional ingredients to produce distinctive results."

That said, it's no wonder brewers get along so well with decorative concrete artisans and others associated with the decorative concrete industry.



It's good to be green

Jonathan Haywood, vice president of EPIC Artisan Concrete in St. Petersburg, Florida, reached out to the owners of Green Bench Brewing last year via Facebook when he found out about the budding brewery. The owners are locals, he says, and very into promoting local events, people and history. Even the brewery's name reflects a popular meeting area some 30 to 40 years ago along St. Pete's Central Avenue that was peppered with green benches.

Being a fan of beer and anything craft-related, Haywood offered to make green benches in honor of the new establishment's namesake. They turned him down, but once they discovered his prowess in concrete countertops they hired him to craft a bartop for the brewery. It's not green, he says of the natural portland cement top, "It's steely gray."

But the relationship didn't end with the installation of the bartop. This past August, the two fledgling businesses got together, co-branded a beer and produced 25 kegs of EPIC Brown Hopper Ale, available locally until it's gone. To commemorate the event, Haywood cast a special tap handle out of concrete in an eye-catching green.

"Overall, I find it interesting that people involved with food and craft beer have a similar approach to work as I do," says Mark Melonas, owner of and lead designer for Luke Works in Baltimore, Maryland, "I consider the materials I use very carefully and am very thorough in my approach but I'm interested in trying experiments to see what materials can do and what combinations work best."

Craft beer brewers are interested in precision and careful craftsmanship, as are concrete artisans.

"It's an interesting parallel," he says. "They can mess up a batch of beer; we can mess up a mix design. I can relate to that."

Tasteful vs. tasty

Paul Koury, president of Westcoat in San Diego, started working with breweries five to 10 years ago, with business really hopping in



Beer City USA

anked No. 6 in the nation, Michigan has 154 breweries (as of Oct. 7), many of them in the western part of the state. In fact, Grand Rapids was named Beer City USA in 2013 by an online poll that involved 50,000 votes cast for 23 qualifying American cities. It also nabbed the title in 2012 due to the quality and quantity of its beer establishments.

According to Joel Baker, sales and social media manager of Decorative Concrete Resources in Byron Center, Michigan, near Beer City USA, "In downtown Grand Rapids, there must be a brewery every quarter mile," he says. "Depending on where you are, there could be 10 different breweries (within walking distance)."

Ever since the mid-2000s, DCR has supplied decorative products to numerous projects through their ready-mix producers, concrete contractor customers and brewery owners who often do some of the work themselves. Overall, the brewery work has involved acid-stained floors, integrally colored concrete (above) and epoxied floors, concrete countertops, and a stamped wood-plank concrete patio and sidewalk leading to a beer garden.

the last three to four years. As a craft beer aficionado, he says, he finds the whole movement really exciting. "The craft beer business is not so different from our business. There are a lot of parallels but our coatings aren't drinkable," he says with a laugh.

As a manufacturer and distributor of specialty coating systems, Westcoat caters to customers interested in higher-end finishes mostly geared toward specific uses. "We're not a one-size-fits-all coating business," he says. Just like a craft brewer, his company is very detail oriented when it comes to quality, and prides itself on being very hands-on and personal when it comes to customer support.

In general, brewers need a durable, easy-to-clean, sloped floor with a nonskid texture in the brewing room. The floor also needs to be chemical-, heat- and impact-resistant, Koury says. In most cases, a heavy-duty urethane cement coating is used with a polyurea topcoat. "It's fast drying so you can get the job done quickly," he says, with anywhere from one to three coats applied. "You can be on it the next day with a forklift."

Tasting rooms are often stained or dyed to create a more decorative



Not his cup of tea

Ithough Shawn Halverson, CEO of Surfacing Solutions Ain Temecula, California, doesn't personally care for craft beer, he's intrigued by the whole movement. "I love the entrepreneurship," he says. "It's making small guys into prosperous companies."

He says 10 to 12 microbreweries have popped up in his area in the last couple of years and he's done floor work in their patron areas for four of them. "I don't know if there's a direct correlation but most of my customers are pretty young guys who are not big on maintenance," he says, adding that maintenance for his polished floors only involves mopping and an occasional new coat of stain guard to keep them looking good.

"The floors are easy to take care of and present an opportunity to be different than a regular restaurant or bar," Halverson says. "It's a cool look."

But you know what he thinks is funny, he asks. "All that work and no one has offered me a beer, even when I've stopped by just to check on things."



To create a unique look that is also durable, some brewery owners, such as Hess Brewing, opt for a stain and epoxy sealer applied in their tasting rooms where medium to heavy foot traffic is expected.

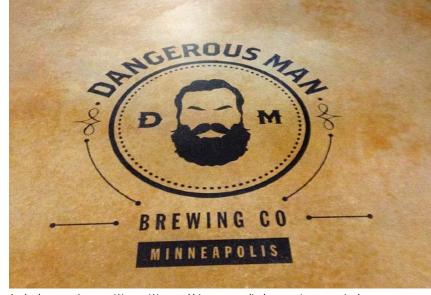
look. While aesthetics are important, functionality is still a big factor. Prior to staining, the concrete should be prepped by diamond grinding the surface to ensure proper adhesion, Koury says. Stained floors should then be finished with a polyurethane sealer to protect the surface from spills and foot traffic.

The biggest difference Koury has noticed is the caliber of craft beer clients he's dealing with today. "In the past, I did a lot of work for beer," he says, "because they were poor and I love beer. Now these little brewers have money and they're investing it to better their facilities."





The Dangerous Man brewery's barroom features polished concrete colored with AmeriPolish SureLock dye in Caramel and densified with DyeHard Technologies Densifier CS, a colloidal silica-based concrete hardener.



At the barroom's entry, Warren Wert and his crew applied a one-time-use vinyl stencil of the brewery's logo so, he says, "all the patrons entering this unique craft brewery would recognize the 'dangerous man."

In the family way

Still, not all small brewery owners have fat wallets. Like Herz pointed out earlier, many rely on the support of family and friends to help their businesses get off the ground. Such was the case of Rob and Sarah Miller, owners of Dangerous Man Brewing Co., a brewpub in a 100-year-old bank building in the northeast art district of downtown Minneapolis that opened in 2012.

The young couple has Warren Wert, or in this case "Uncle Warren," to thank for the custom-blended broadcast flake polyaspartic flooring system in the brew room, which is "easily repaired if required." Wert, who with partner Matthew Taylor owns Concrete Flooring Associates in Houston, Texas, says he also installed SpeedCove cove molding along the brew room's perimeter, which

waterproofs the floor 4 inches up and meets health inspection requirements. "It helps my nephew maintain a bacteria-free environment which is very important in the beer-brewing process," he says.

"The patron area where customers loiter, mill about and commune is terribly simple but simple sometimes is best," Wert says of the polished floor in the taproom. "The floor complements, not competes with, the environment. Many times we do too much to get a wow factor and lose sight that everything should work together to create an enjoyable environment."

Wert's favorite part of the job is the logo at the entryway, which he had to persuade his nephew's design team to let him install. And, he's proud to point out, it's one of the most recognized logos in

Minneapolis today. "You have to walk over the 'Dangerous Man' to enter the taproom," he says about the logo, which reflects his nephew's likeness. "It's very cool."

The Dangerous Man brewpub is a very community-oriented gathering place for people of all types and ages, Wert says. "It's a place where you go to socialize and appreciate the taste of a craft beer, not drink five or six to catch a buzz. The whole feel of the place is like being at home. It's very unpretentious."

Making it happen

Most of the small, independent brewers today are very hands-on when it comes to business, from personally brewing the liquid gold to crafting the brewery itself. And more often than not, unconventional means are



The coasters Mark Melonas custom-made for Union Craft Brewing last fall were such a hit they sold out by Thanksgiving. He's got a fresh batch ready for this year's holiday season.



The Luke Works crew, along with the brewery owners' family and friends, had a cast party to batch and cast the four concrete sections for Union Craft's tasting room's bartop. The center section is made from reclaimed oak, steel and copper.

what get contractors the work they covet.

Take Melonas of Luke Works, for example. After buying some Union Craft Brewing beer, he approached the owners about casting a countertop to replace a tired laminate one that looked out of place in the old, reclaimed factory surroundings. They thought it was a great idea . . . but time lapsed with no word from them.

So Melonas called one of the owners and suggested they have a "casting party" where family, friends and investors could help the Luke Works crew batch and cast all the different pieces for the new bartop. "It was a blast," Melonas says about the weekend event. "Of course, they brought the beer."

As part of the festivities, Melonas made a few rubber molds for coasters. "So if they weren't helping with the counters, they were casting coasters," he says. The new bartop was installed in time for the brewery's first anniversary party.

With this ring

Besides bartops and floors, breweries are also incorporating other decorative concrete touches into their facilities. Boulevard Brewing Co. in Kansas City, Missouri, for instance, hired Dave Root of Atlas Archimedes Design, also in Kansas City, back in 2006 to build rings for the brewery's five tanks. "I'm not super-knowledgeable about brewing, but each tank has a specific function in the brewing process," he says. The biggest one, he adds, is almost 25 feet in diameter. Each ring has a brass nameplate. The tanks, mounted on the floor below, come up through the second floor where brewers can see down into the tanks through portholes.

Besides the precast rings, Root says he also made concrete furniture for Boulevard Brewing. The circa 1989 brewery, he adds, was sold last year to Duvel Moortgat, a Belgian brewing company founded in 1871.

Although he's only done work on the one brewery, he'd welcome work from others. "I think craft beer fills a niche in the market because people like things that are local and handmade," he says, especially considering that the big, traditional domestic beer companies have been bought out by foreign conglomerates. "It's kind of an every-person drink, much more so than wine. Craft beers are more acceptable to regular people with regular money and I think the market will continue to grow."

And as it does, Root predicts the small



Back in 2006 for Boulevard Brewing, Dave Root estimates he used close to 650 square feet of precast material to make five rings that encircle steel tanks, three extra-large reception desks and a few table tops. The rings, he says, comprised about half of the total footage but about 75 percent of the effort.

craft brewers will continue to seek out other artisans who are good at their craft — not only decorative concrete specialists but also stone carvers, carpenters, painters and sculptors — who can add to the artisan atmosphere and help make a brewery unique. "I think the future bodes well for those of us in a more craft-oriented trade."

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- www.brewersassociation.org
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Nine Novice Stamping Mistakes

Familiarity breeds success with these materials

by Gail Elber

ovice stampers are prone to making a few common mistakes. Some have to do with planning the job. Others have to do with misunderstanding the materials, while still others are simply a lack of familiarity with manipulating stamps and skins. Here's an opportunity to learn the easy way.

Begin with the basics

Tim Frazier, head trainer at The Stamp Store in Oklahoma City, says stampers need a command of the fundamentals of slab design before they start stamping. "Is it going to be indoor or outdoor use? Will it be driven on or walked on?" he says, of important questions to ask before starting out. "Does it require a vapor barrier, and did you put the correct amount of sand on the vapor barrier so the water can evaporate in all directions? Do you have a quality mix, matching the psi and the thickness with what kind of work is being done on it?"

The fewer variables influencing your job, the better. For a predictable mix on slabs he'll be stamping, Ron Heck of Ron Heck Construction in Indianapolis uses



Real blocks don't have a mortar joint on the outside. Plan the job so it looks realistic.



only limestone aggregate, not pea gravel or other rock. Because it's uniform and doesn't absorb water, the more expensive material is worth it.

Communicate with the customer

Watch out for overselling. No stamping job is perfect, and Steve Harriman of Harriman's Bomanite in Spencer, Indiana, says he doesn't push to sell the product. Instead, he lets customers make the decision. Going hand-in-hand with that, though, is encouraging customers to be well-informed.

"You have to have a good, frank discussion with them about what they're going to get," he says. "They're not going to get a flawless piece of work. There might be some cracks. There might be some imperfections. And they need to know that upfront, so they're not going to be surprised at the end when they see some things that aren't perfect."



Excess charcoal release lifted off when the sealer failed, leaving a blotchy surface.



These sharp little fins appear between the stamps when stamping is done too early or the edges are tamped too hard.

Once customers have picked out colors and patterns, bring them 2-by-2-feet samples, and don't bring just one, Harriman suggests. "Bring one that the customer thinks they want, one you'd like to see them do, and slight variations on what they want, maybe one darker and one lighter."

If a customer wants something that's a bad idea in your climate, don't be afraid to say no, says Heck. In his area, which is prone to many freeze-thaw cycles, he won't do overlays.

Don't create slippery surfaces

When you're designing the job, make sure you're not creating slippery slopes, Harriman says. "We're tearing out a slab that is too slick, and the people couldn't walk on it," he says. "The slopes were too strong, and when it got moisture on it, the people were falling."

To avoid creating a slip hazard, a sloping path may need to be designed with steps or a new contour. But the surface needs enough slope for good drainage, so that algae and moss won't thrive. Good drainage requires at least 3/16 inch per foot on a textured surface.

The choice of a pattern also affects traction. "You don't want to have anything that doesn't have much relief to begin with, because by the time you put the sealer on, it will be too slick," Harriman says.

When it's time to seal the concrete, a penetrating, water-based sealer creates a less-slippery surface than an acrylic coating does, Harriman says. But in the shade, that porous surface also harbors moss and

algae, which can make the surface slippery. Harriman suggests adding a slip-resistant additive, such as H&C SharkGrip from Sherwin-Williams, to a coating.

Don't overpour

Trying to pour a slab that's too big to handle at one time is a common beginner's error, says Heck. "I have a crew of four guys plus myself," he says. "Yesterday we poured 6 1/2 yards of concrete, about 440 square feet. You want to max yourself out at no more than 7 yards at a time." Heck says when a crew is stamping a very large slab, the stamping may start off looking good, but by the end it's difficult to get an impression.





On this job, the orange release almost entirely covers the base color.



A proper amount of release was left on this job, so the dark walnut color remains only in the joints and depressions and the high spots show only the base color.

"Don't pour more than you can handle and have plenty of help," says Harriman. "Weather plays a huge part in how much you're able to do. On a decent weather day, maybe 75 degrees, if you pour in the morning, if you have a complicated pattern, you might be able to do 400 to 500 square feet. If it's going to be hot, you might have to reduce it to 300 to 400. That's a hard lesson to learn."

Don't go near the water

Another newbie error is adding water to colored concrete in the truck to try to extend the working time. "Don't tell the driver to give it 2 or 3 gallons to make it a little bit wetter, because there will be a color difference," Heck says. "Once you start pouring, add no water to your concrete."

Instead, he says, use admixtures, which don't change the color. "They have these packets called Mini Delayed Sets," he says. "One packet at 70 degrees Fahrenheit buys you 30 minutes of time. Once I've got five yards down, I give the driver these packets and have him throw them in the truck."

On dry, windy days, Heck uses a sprayon surface retarder to avoid shrinkage cracks that can appear after a linked mat is tamped. When he does get shrinkage cracks, he rolls them closed with a paint roller dipped in release. Pay attention to those cracks because water can get into them and freeze.

Don't stamp over release too soon

Heck describes a problem related to overpouring. "So often, subs, when they throw a colored release down, are stamping too soon. They're impacting the release into the concrete. When you come back the following day to wash off the release on the area that was softer, the release is actually impacted into the concrete, and you can't pull it up."

The result is more release embedded in the surface where you started the job, less where you finished and a non-uniform color over the slab.

If you need to pour a big slab in one go, use texture skins instead of linked stamps, says Heck. "I tell my clients, you can pour more concrete at one given time using a texture skin because there's no method to placing them," he says. "I might be able to get away with 8 yards with a texture skin pattern, versus no more than about 6 with the linked patterns."

Heck uses Shoe-In Texture Shoes from Butterfield Color to get out on the slab a little earlier. "Whenever we do texture skins, the stamp isn't as thick as your linked pattern stamps, so I use texture shoes, which are like snowshoes, instead of our work boots. It disperses your body weight so you don't create birdbaths where your feet are. It lets you get out there earlier."

Another way to start texturing early is to put down plywood or Masonite to walk on, suggests Frazier of The Stamp Store.

Use a light hand with release

Heck says some contractors leave too much colored release on the surface. He doesn't like that for two reasons.

The first reason is aesthetic. After the

release is removed, "I like to see only 20 (percent) to 25 percent of release over the whole project," he says. "You want to see the primary color; you don't want to see 30 percent of primary and 70 percent of release."

The second reason is practical. Release contains fatty, waxy materials that prevent sealers from adhering. Washing off excess release with a pressure washer isn't enough. Heck sprays the surface with a 1:15 mix of muriatic acid and water to get the color the way he likes it and to allow the sealer to adhere.

Timing and positioning are important

Making a preliminary layout and making sure everyone on the crew understands how the stamps go together will help the crew apply stamps correctly, Frazier says.

When is it time to stamp? "If you have high winds or sun, it can mislead you because the surface dries out faster," Frazier says. "But, in general, when you can touch the concrete and not have any sand on your hand, it's about time, when that laitance is crusted enough, to put a release agent on there. Generally, it's within an hour or two."

Frazier recommends getting enough stamps to cover at least the width of the slab.

Stamping too early and tamping around the edges of linked mats produces "squeeze," the sharp little fins between the patterned areas that are the calling card of inexperienced stampers. "You're popping the paste off down to the aggregate, so a texture wheel can't address that adequately," says Heck. "You look at so many jobs that you can see the stamp seam lines in them.

So many people will bring a grinder the next day and grind those seams down, but then you lose the surface color," he says.

When using texture skins, inexperienced stampers move the skin after they put it down, creating a blurred double imprint. Or they don't bottom out the pattern on the skin, leaving a vague image. Or they fail to give the stamps a quarter turn before moving them to the next spot, creating a repeating pattern. Or they don't overlap them by the recommended 6 inches, Frazier says.

Don't overseal

Finally, don't assume customers know how to maintain your concrete. "People put too much sealer on," Harriman says. "They think they need to do it every year. That's a huge mistake because after four or five years, the concrete is not able to breathe anymore and that creates clouding issues."

Harriman tells his customers they'll need sealer every two to three or three to four years. "But when you think it's ready to be sealed, do it next year because you want that previous sealer to be pretty well gone." In fact, he recommends his customers call him when they think it's time to seal, so he can look at the slab and tell them if it's necessary.





Hands-on Grinding & Polishing Tips

New Uses for Milk Crates and Bar Soap

by Bryon "Bru" Bruington

Do a paid demo for polishing jobs

When bidding on a job for polished concrete, always look to do a paid demo. This will give your team an opportunity to survey the jobsite before the job begins so they can note anything that could hinder their job performance. Being able to get a feel for the concrete being used in the project will help to determine which diamonds to use and which matrix bonds you will need for the job. Based on this, you can more accurately calculate the amount of time you will need to spend grinding and polishing the concrete to achieve the spec the bid calls for.

Choosing the correct diamonds also will ensure your final bid number is more accurate. All of these factors will help in zeroing in on a solid, fair number for doing the job. The last thing it will do, and probably the most important thing, is help manage the customers' expectations on the final product.

Make pool deck cleanup easier with poly protection

Here is an old trick, but one that is still very helpful. A lot of pool deck jobs are done during the height of pool season because of the good weather. If you find yourself doing one of these jobs, you can use a 6-mil poly to protect the pool water when working on the pool deck.

Lay the poly directly on the water, like placing a bed sheet on a bed, tape the edges to the pool and cut away the excess. This will help catch debris from the job and help keep the water clean. At the end of the job it will take several hands to lift the poly with the debris. This will help with the pool cleaner cost before the job is turned back over to the customer.

Try higher-grit diamonds for hard-to-remove epoxies, sealers

Having a hard time removing an epoxy or hard sealer? When your removal job has gone bad, try a higher-grit metal-bond diamond abrasive. Although everything you know says to use an aggressive, lower-grit diamond to remove the stubborn coating, a higher-grit diamond will add more raw diamond content to the floor.

With the raw diamond being smaller in size, it will dig in a little deeper and run at a much cooler temperature during the process. Try using a 70g or 80g metalbond diamond next time. The results may surprise you.

Store tools in milk crates

We all have experienced headaches over how to store, move and keep our diamond abrasives and tools together. The simplest method I have discovered is to use old milk crates. These have built-in handles and can be stacked very easily.

Milk crates are constructed from a very thick and durable plastic that can stand up to the abuse of jobsite conditions and employees who can be rough with them while working. I also have found they can be screwed into wood stringers on the inside of a truck or trailer and used for instant shelving.

Have a problem with stuck screws?

Who hasn't had a problem with getting the screws out of tool plates? These could be screws that secure diamonds, PCDs or carbide inserts. My solution? Bar soap.

Go to a local store and get a small plastic bar-soap holder and a cheap bar of soap. When you change out a tool, take the screw and scrape a little bar soap on the tip and securely screw it into place. The soap will coat the threads, making removal much more manageable. No more stuck and rusty screws. (Note: For those of you who use a commercial-based thread-locker product on your tooling, please follow all manufacturer specs and instructions.)

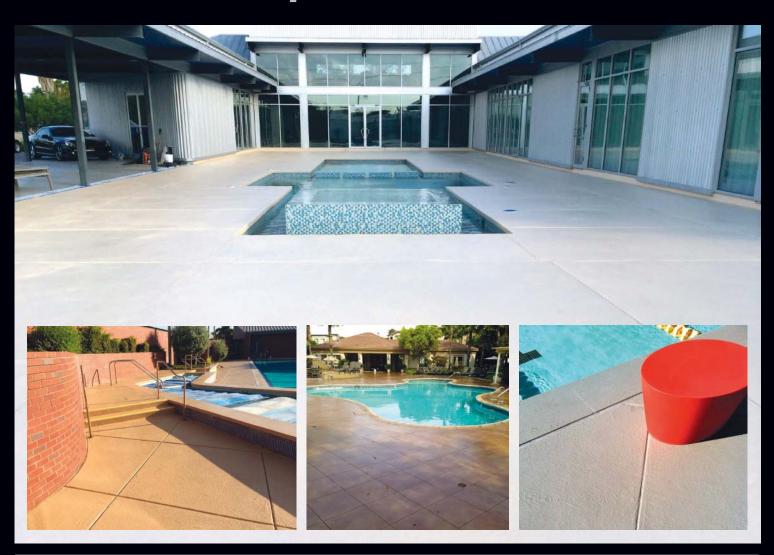
A clean mop and bucket works every time

If you use a sodium- or potassium-based densifier, you understand how important the cleanup process is after densification. A clean commercial mop and bucket can be used to dilute the reaction at the surface. especially along the edges. It is essential for you to clean hard-to-reach areas and the edges where the concrete and walls meet. Do not rely on a squeegee and shop vac. A mop and bucket is a crude but very effective tool.

Bryon "Bru" Bruington is technical sales director for KutRite, a producer of products for the concrete grinding, polishing and scarifying industry. Email him at b_bruington@kutritemfg.com.



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The Polishing Consultant

Maintenance from a Customer's Perspective

by David Stephenson

AINTENANCE. This one word has become the driving factor for growt in the decorative concrete industry become the driving factor for growth and at the same time is the most frustrating issue I deal with regularly. I have read many articles that give different opinions about how to maintain polished concrete. What I have not read are articles that approach this issue from the customer's side.

As a consultant, I spend most of my time managing polished concrete programs for retailers. Both large and small retailers experience similar issues related to maintenance. Let me take you through this issue from a different perspective. My goal here is to broaden your view and perhaps allow you to approach this issue differently.

Sweep, scrub, burnish

The maintenance for polished concrete is simple. Basically, you sweep it regularly, scrub it on a schedule with appropriate cleaners and burnish it a few times a year.

This sounds simple, right? In some cases, this works out perfectly. In others, not so much.

What I see in the field, especially with larger retailers, is that most janitorial contracts are outsourced. There are multiple layers of separation between the polished concrete installer and the nightly janitorial work. You remember the game "Telephone" from when you were a kid, where a story starts at one end of a line of people and is retold? It always changes by the time it goes through several people. Maintenance is like that as well.

A polished concrete contractor places the floor and provides the GC with his or her version of maintenance info. The GC shares it with the architect, who shares it with a project manager for the customer/owner. This PM shares it with his or her boss in the construction division who then sits in a meeting and shares it with the operations group. An operations manager shares it with a maintenance manager, who gets it to

a regional maintenance PM. This PM then shares it with his or her prime janitorial contractor who then meets with and shares it with the owner of the small janitorial company who is in charge of maintenance at the store. This manager then shares the information with a crew leader who takes care of the store overnight.

If you have not been keeping track, that is 11 degrees of separation between the installer and the person actually taking care of the floor. That is, if the smaller janitorial contractor hasn't subbed it down one more level. In that case, add two more people to the party. You can imagine how much the requirements change from one end of this string to the other.

Changes add up

I see several common denominators regularly misinterpreted or modified that significantly impact the life of polished concrete floors. First, the soap being used changes. The best cleaners for polished concrete are made by chemical companies in the polished concrete industry. The only issue with this is sometimes these chemicals. are harder to find or buy for a janitorial contractor who doesn't know these industryspecific companies. The chemicals aren't sold at most janitorial supply houses, so getting the right cleaner is the first obstacle.

What generally happens is that a wellmeaning chemical sales representative who services the janitorial contractor doesn't want to lose any revenue, so he tries to find a compatible cleaner in his arsenal. Sometimes it works, but more often it does not. I can go through project after project where an amazing array of cleaners has been used. I have seen everything from water on one end of the spectrum to a cleaner made up of boric acid and alcohol on the other end.

Good polished concrete cleaners lift the dirt without leaving a residue or etching the surface. The best cleaners have some densifier and stain protection built in. These

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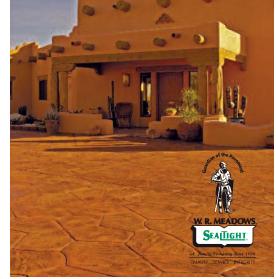
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help the floor get stronger and more stain-resistant over time.

I routinely see projects being etched or have a film buildup on them. These issues are most common when a separate maintenance contractor is doing the work. I believe some of this is caused by janitorial field employees trying to do what they feel is correct, but I also think cost is a factor just as often.

The janitorial contractors are not helped when they move from a VCT floor to a polished concrete floor. The labor hours go down significantly, a lot less chemical is used so they lose their markup on the chemicals, and they lose some of their bulk discounts because they are buying less product. Additionally, the twice-annual strip and wax is gone, so that is a big hit right there.

Consequently, it is better for a janitorial contractor if polished concrete does not become the standard. There is not a lot of incentive to closely follow a maintenance program. Retailers get frustrated by this, but it is something our industry will have to deal with for the time being. These things are important to think about as you are installing a polished concrete floor.

You can help

There are some things contractors can help with. As the project is wrapping up, ask your customer who will be doing the maintenance. For some contractors, this may be a source of ongoing revenue if they can take care of their own floors for the customer. Whoever is doing the actual, daily maintenance work should attend a meeting between that person, you as the flooring installer and your owner.

Walk through the steps needed to take care of the floor. This way at least no one can say you did not pass on the information. Provide a written copy of the maintenance procedures. This is especially important on commercial projects where you have a one-year walk-through. If the floor is maintained poorly, the shine could decrease rapidly.

Many times, this is put back to the contractor who installed the flooring as a statement of poor workmanship. If you can avoid this by simply discussing the issue, you are doing yourself, the customer and the industry a huge favor.

Combat poor maintenance

There are a few things I suggest to combat poor maintenance. First, I help the owner establish a supply link for good-quality, appropriate products. This is imperative. I always recommend owners purchase all chemicals and supply them to their janitorial staff. This takes the opportunity away from the contractor to change products.

Second, I provide very specific written instructions to the GC and the end-user. Third, I show customers how to measure gloss and, based on other projects, give them an average range the polishing will decrease each year as long as the floor is maintained correctly. The customer then can monitor this in-house or regionally.

When the simple process for maintaining floors is followed, the project stays in good shape for a long time. I recently visited a facility where I polished the concrete as a contractor about 12 years ago. Since then, they have followed the original maintenance instructions I gave them. I performed gloss testing and the floor averages a 51 gloss after 12 years of mid to heavy foot traffic. This is better than most projects I have seen, but it is a good demonstration of the benefits of correctly taking care of floors.

Maintenance is an issue that every manufacturer, distributor

and installer has to address. The industry needs to get together and provide a solution that's similar from one manufacturer to the next. Manufacturers need to accept that their regular customers are not the best distributors of janitorial chemicals.

If and/or when these things start to happen, maintenance will no longer be a double-edged sword. Instead, it will become the club by which the polished concrete industry beats back the competition by forcing massive additional growth.

Think about this: Polished concrete is supposed to be a longlasting flooring solution. If, because of poor maintenance, this proves not to be the case, how long do you think interest in polished concrete will continue?

Installing a polished concrete floor without a good maintenance plan is like building a car without providing maintenance schedules or manuals. Very soon, parts will start to wear out and the car will break down. The polishing industry cannot afford to have breakdowns just as we are building good momentum. Please provide every customer with a good maintenance plan and think about ways to ensure the work is being done correctly.

David Stephenson owns Polished Concrete Consultants, based in Dallas, Texas. As a consultant, he offers decorative concrete programs for retailers and troubleshooting for a wide range of clients. Contact him at david@polishedconsultants.com.



The First Cut

Your first decision dictates appearance and overall satisfaction

by Jennifer A. Faller

HEN starting the first cut on a concrete slab, everyone wants to know how it will look when finished. Professionals know each concrete slab is different. The sheer numbers of variables mean no two pours or slabs will look the same. Although we cannot control the mix or surface porosity, we should still be able to take the slab we've been dealt and make it meet the customer's expectations.

Recently, I have seen projects and photos that made me wish the polishers had paid attention during the first cut to get the floor uniform. With just a bit more time and attention, we would not see those characteristic rows, the light and dark marks left from areas where the cap was not cut through, the surface scratches from when something was dragged and the haze from the laitance still visible.

The first cut creates the foundation, palette or canvas for our finished floor to shine. It takes time to ensure that the first cut turns out to be uniform. Some contractors will go to any means to speed up the first cut, including starting with a higher grit, "getting by" with a single pass, allowing barely minimal overlap, cutting dry or walking too quickly. This is unfortunate, since given the state of the industry today, we have enough tooling and chemical technology to overcome almost any obstacle.

Make the best choice from the beginning

Select the most appropriate diamond grit and bond to ensure your first cut will be easier, more refined and uniform. Some polishers struggle to choose the right bond and grit level, even though most understand the need for "soft bond for hard concrete and hard bond for soft concrete." To make the right call, start by running with medium-bond metal diamond tooling under your machine. Observe how the concrete opens, and adjust as needed.

The use of different hardness bonds is standard practice in the stone industry, due to the opposite tooling needs when



CPAA's Aggregate Exposure Class C-Medium Aggregate Finish, above, shows a small aggregate exposure plus a 100 percent sand reveal. To achieve a full salt-and-pepper finish with small to medium aggregate randomly throughout, make sure there are no areas of cream. Err on the side of exposing more aggregate.

polishing soft limestone and hard granite. However, when diamond tooling was first manufactured for concrete, the emphasis was on the grit and not the bond, as if concrete were all the same hardness just because it's concrete.

Concrete is highly dependent upon the slab's individual blend of variables, including mix design, finishing skill and techniques (including whether water was used as a trowel aid), proper curing methods (or lack thereof) and environmental conditions, such as wind, sun, precipitation, humidity and temperature. The importance of proper concrete curing is a lesson our colleagues continue to learn even today.

The industry's gap in understanding the different characteristics of hard, medium and soft concrete arrived as a big "aha!" moment for the concrete polishing industry approximately 10 years ago. At that time, Mohs hardness kits became more accessible

to concrete polishers, and in turn the diamond manufacturers responded with hard, medium and soft metal bonds. Now, manufacturers may offer as many as seven bonds in all metal grits. What stops us from taking advantage of these tools?

No cutting corners

We all know some polishers who barely have a full set of each grit, with no chance of finding multiple bond options of the same grit in their diamond cases. They turn up at the jobsite and hope for the best. If they are running two machines, they can barely supply both machines with the right diamond tooling. They also tend to be the ones who have lost or never learned the idea of using water to either damp or wet cut when needed. Don't be that contractor who just uses whatever tooling is on the truck in order to complete the job quickly! "Down and dirty" work may be faster, but it could

cost you repeat business.

Prove to your customer that you are the best polisher for their job by selecting the right bond and grit to match the slab, by adjusting your machine's speed to run smoothly according to the levelness of the slab, and by identifying the optimum walking pace.

Recently, I instructed a polisher to do a reveal on a surface with a salt-and-pepper, speckled appearance that looked granular, like sand at the beach, with some mediumsized aggregate exposure and a consistent, medium-level shine — the standardized CPAA "Class C-Medium Aggregate Finish with a Finished Gloss Level 2-Medium Gloss Appearance." The project design was a clear span of exposed slab without cabinetry, fixtures or tables. Hiding was not an option as this floor was designed to be seen. I recommended cutting aggressively. The owner's expectations were medium aggregate randomly throughout and no cream visible on the surface.

When I arrived at the site, the crew was almost three-fourths of the way through the first cut, running dry with a typical 30/40 medium hardness metal bond. Where each machine operator started, the diamonds had removed the cap and started exposing sand. But from then on, they were simply removing the sheen from the hard trowel but not aggressively revealing sand. Why did this happen, and why did no one else notice?

It turns out that the bond was wrong it was simply too hard. The metal bond is supposed to wear away quickly enough to continually reveal fresh, sharp, diamond edges. Instead, the metal was overheating from friction between the tool and the hard concrete. The diamonds were glazing and losing their cutting power. These diamond tools were cutting just fine at first, because the diamonds were still sharp and the metal bonding was still cool enough to wear properly.

The lead operator and I inspected the floor and tooling, and decided to try cutting damp to keep the diamonds cooler and allow the slurry to help keep the diamonds open. Think of this like using automotive rubbing compound before waxing a car the rubbing compound breaks the surface tension, so the next step can really shine. The concrete slurry is similar in that it assists the cutting and will allow for quicker refinement even with the wrong bond.

The damp cut helped, but with the wrong

bond, it was simply not enough. We crosshatched and damp cut again. The "right answer" would have been instead to simply switch to a 30/40 soft metal bond. But by now you should have guessed they did not have the other bond options, and since they felt schedule pressure, they kept cutting. Not much was completed by the end of a frustrating day.

The next day, the crew lead agreed to bring the correct diamond tooling from their consignment cage. Several days later, the GC called me to report the owner

was unhappy about the level of reveal. I was surprised since I knew the crew had the correct metal bond diamond tooling. You should have guessed it again — the contractor did not want to invest in two additional sets of 30/40 soft-bond tooling, so the crew was forced to work with what they already had.

The job was stopped, and a meeting was held to discuss the owner's concerns. In a nutshell, the polishing contractor explained to the GC that the crew would have to start over to get the level of reveal specified by



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the owner. The GC did not want to hold up the job, so the polishing contractor and the GC agreed to let it go this time. The owner's representative and director of construction was unaware of their agreement and was greatly displeased upon visiting the site three weeks before opening.

Think things through

Why do so many polishers end up in these situations, despite many options for diamond tooling and chemical technology? Like so many contractors, this polisher got caught up in several perceived issues:

- 1. Cost of the tooling inventory
- 2. Cost of the extra labor to do that first cut correctly
- 3. Tight timelines and fast-paced, pressured schedules

The job described here was the first store of a national account and the whole deal could have been lost. Thankfully, the director of construction was a reasonable and seasoned professional who values relationships and quality work. That might not always be the case. To keep the business you have, invest in the extra time, materials



Seen here is a salt-and-pepper reveal with no small aggregate. There must be small to medium aggregate exposure or it is a CPAA Aggregate Exposure Class B-Fine/Sand Aggregate Finish.

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and labor by making sure the first cut is the right cut.

If you cannot take the time to do it right, surely you cannot afford the expense to do it over. The quality of work in this particular job ultimately was excellent, it just did not meet the owner's appearance expectations. In the end, a promise was made to the director of construction to send him a photo for approval after the first cut on all future jobs to avoid this situation from happening again.

Today's tight production timelines and schedule-pressure often doesn't allow for doing work over again, so it is more important than ever to get it right the first time. Invest in the range of diamond tooling bonds and chemical technology needed for your projects, and make sure your first cut comes out right by keeping your eyes open and watching the concrete while you cut. The concrete does not lie.

Jennifer A. Faller is vice president of the CPAA board of directors and serves on the executive board, and DCOF subcommittee. She is Diamatic USA's national account director for ULTRAFLOR architectural polished concrete system. Contact her at jennifer.faller@diamaticusa.com.

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Achieving Winter Durability

Dealing with climate and attacks on colored concrete

by Bart Sacco

■ E'RE in the middle of another winter season. While it's not predicted as harsh as last year's "polar vortex" season. While it's not predicted to be winter, we still need to be thinking about all the possible causes and sources of winter damage and eliminate them.

A couple of recent articles in *Concrete Decor* have addressed this topic, but there's still a lot more that can be said about how concrete holds up in winter. Freeze-thaw cycles, damage from salts and de-icers, and physical abrasion from plows, shovels and the like all take their toll. A report issued by the Minnesota Department of Transportation in August 2014 brings new fat to chew on: That report says colored concrete crosswalks, sidewalks and medians are deteriorating faster than plain gray concrete. That's a blow to the heart of the decorative concrete industry, so we'll look at what that actually means.

Before the pour

If you really want to control winter durability, you have to be aware of numerous factors:

- The concrete's mix design,
- The slump of the placed concrete at the time of the pour,
- Properly preparing the subbase,
- How the concrete is worked in the finishing process, and
- How the concrete was cured in its first few days.

The weight of the concrete as it settles onto the subbase could result in cracking if the subbase is not properly prepped. Make sure the base is adequate for the job. When pouring in cold weather, do not expose the concrete until it develops at least 500 psi. It's not easy to test for this, so use reasonable judgment to keep it covered and protected.

For concrete exposed to freezing and thawing temperatures in a harsh winter environment, and with possible exposure to de-icers (like from salts splashing up from slushy snow along roadways and driveways) the maximum water to concrete ratio by mass should be .40, with a minimum psi strength of 4,000.



This lower-strength concrete mix was also poured wet, making it especially vulnerable to salt damage from de-icers on the highway. The concrete disintegrated where the car was parked on a regular basis.

The 'slump' of freshly mixed concrete is a measurement of consistency tallied in inches. Increasing the slump is typically done by increasing the water in the mix. Slumps greater than 4 inches will prolong the curing time, which you want to avoid in winter.

How the concrete is worked in the finishing process is important. Overworking the slab would cause the air entrainment at the surface to deplete, leading to possible surface issues. To avoid further problems, avoid premature troweling with a steel trowel. You do not want to trap moisture directly under the surface by steel troweling to avoid blistering.

Air-entraining creates tiny air bubbles in the mix that help reduce or absorb stresses from freeze-thaw cycles, so depleting this air entrainment would be a bad idea. Extended travel times of the fresh ready-mix concrete would deplete the air entrainment in the same manner. Damaging the air void system along the top surface also increases the risk of scaling.

Even if a contractor does all these things correctly, concrete can still be very easily damaged in the first year due to someone dumping de-icers onto its surface. After concrete has weathered a season or two and has gone through complete winter cycles for at least a year, it will naturally become more durable and resistant to de-icers.

No de-icer of any kind should be used on first-year concrete. Even if concrete was installed in April and sat all summer long, it will not gain the strength needed to resist the de-icers the first year. After year two, it will be more resistant.

Beware of freeze-thaw

Concrete seems like a dense material but in fact it is quite porous. As I said in my article from January, it's helpful to think of concrete as a giant sponge, continually taking in and emitting moisture.

When concrete is saturated with water from rain or from snow piling up on it overnight and then melting during the day, ice crystals will form inside the concrete.



Water from freeze-thaw cycles and damage from de-icers have weakened a joint and deteriorated the concrete.

When a small crack forms in concrete, water gets into it and it expands during freezing, making the crack just a little bigger so that more water can get into it next time.

Shoveling the snow off your driveway as soon as possible can help prevent this. Get that pile of wet, cold stuff off your concrete and let the sun dry it out and warm it up whenever it possibly can. Not to mention, this often makes your wife happier.

Use care with sealants

Sealants are designed to penetrate into the concrete to fill and seal the porous surface of the material. A good sealant job using silane or siloxane components will prevent water from reaching the inside of the concrete and will reduce much of the damage we just talked about.

However, that snow shovel or plow could abrade the surface, scraping off the sealant or exposing tiny cracks, so use care when using any hard, sharp tool on your concrete.

Climate change?

I know the debate is going on about whether climate change is real or not. I'm not a scientist but I do deal with a lot of science and chemistry in making sure my concrete is durable. An article published on Oct. 12, 2014, in The Boston Globe suggests climate change will mean that concrete has a shorter lifespan.

Northeastern University studied the issue and reported its findings in September in the journal *Urban Climate*. These researchers believe rising temperatures that are projected due to global warming will cause concrete to begin failing sooner than expected.

The building codes many of our modern city buildings were constructed under did not take this accelerated decay into account. So even high-quality buildings built to code will possibly be vulnerable sooner than expected.

These researchers calculated that structural trouble with concrete could start appearing as much as 25 years sooner than if global warming was not happening. The risks are greatest for buildings built in the 1950s and 1960s. Because they're older and made from weaker concrete than we use today, they will be more vulnerable to freeze-thaw.

So what do we do? Researchers suggest increasing the thickness of concrete applied to buildings by 3 to 12 millimeters, which would be enough to offset enhanced decay rates. That would also increase

building costs. The American Concrete Institute has not made a decision on this issue yet. Members and staff are currently reviewing guidelines, they say, to take these concerns into consideration.

Decaying decorative?

Now, about that Minnesota study. Full-depth colored concrete that's part of street and roadway projects in Minnesota is deteriorating faster than expected, particularly near contract joints. The report says many projects exhibited panel cracking, either as a result of possible thermal expansion restraint or potentially some related expansive materials issues.

The researchers observed a significant number of projects with joint distress. Their investigation concluded "typical placement and finishing practices during construction were not a principal cause for the observed deterioration." So what's going on here? And is this an issue caused by the fact the concrete is decorative, or is something else causing the decorative concrete to become defective?

Strength testing of hardened colored concrete did not reveal significant differences from standard concrete. The team took core samples of the most distressed colored concrete and found a few key things. Air voids were adequate, however, a majority of the air voids near the joints were completely filled with mineral crystals, thus rendering the voids unable to provide freeze-thaw resistance. (Ettringite is a relatively new problem that affects portland cement. The mineral compound is formed in hydrated portland cement as a result of the reaction of calcium aluminate with calcium sulfate.) Also, the water-to-cementitious ratio was between 0.44 and 0.50, which exceeds the maximum of 0.45 for freeze-thaw resistance. A







Marywood University in Pennsylvania liberally de-ices its stairs, shown here. The concrete is breaking down from repeated freeze-thaw cycles. The white film is salt leaching into the concrete.

higher water-to-cement ratio correlates to higher porosity of the paste portion of the mix, which allows more moisture to penetrate the concrete.

Other projects showed joint distress that appeared to be associated with thermal expansion forces. Temperature measurements showed that darker colored concrete experienced up to 18 percent greater expansion than non-colored slabs. (That seems like a high percentage, but that's what they measured.) They recommended designers place more emphasis on accounting for thermal expansion, particularly when two differently colored slabs are being laid out right next to each other.

Other recommendations included producing mixes with a lower water-to-cementitious ratio (≤ 0.43) and increasing consolidation of the mix during placement. Does that sound familiar? That's what I recommended at the beginning of this article. Don't think if you're just "a little bit off" it won't make a big difference. I always tell people that failing to prepare is the same as preparing to fail.

The researchers also recommend using a vibrating screed to level and consolidate the mix, but to be careful not to over-vibrate, as this may alter the entrained air system.

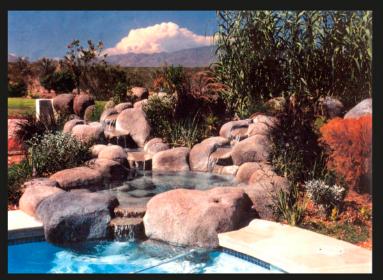
Take steps to keep colored concrete cool while it is curing, by providing shade or scheduling pours during times of minimal sun exposure. In winter, protect it from freezing and premature frost. Common curing materials for colored concrete include color waxes and clear compounds, both of which lack the heat-reducing reflectance provided by white pigmented curing compounds.

All in all, the report is an eye-opening look at how the elements we deal with on a daily basis, namely water—both in the mix and in the environment—and sunshine can have head-scratching effects on the material.

Access the Minnesota report here:

www.dot.state.mn.us/research/TS/2014/201426.pdf

Bart Sacco is president of Kingdom Products and owns and operates Concrete Texturing Tool & Supply and the Concrete Kingdom Training Center in Throop, Pennsylvania. He can be reached at bart@kingdom-products.com.







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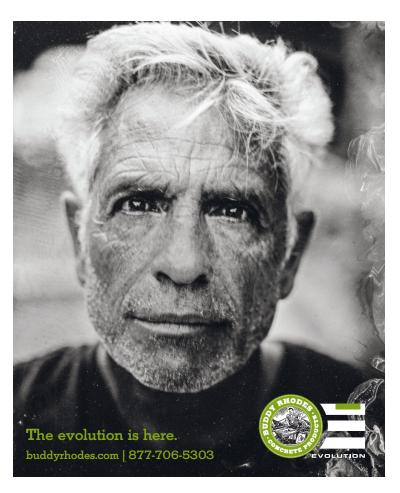


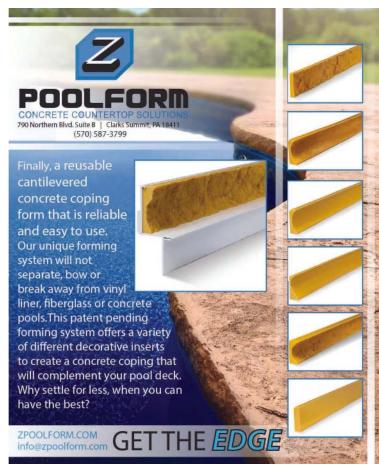


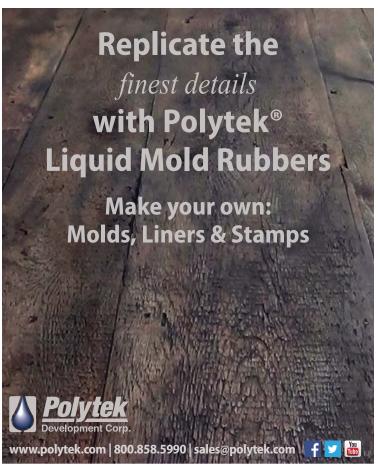














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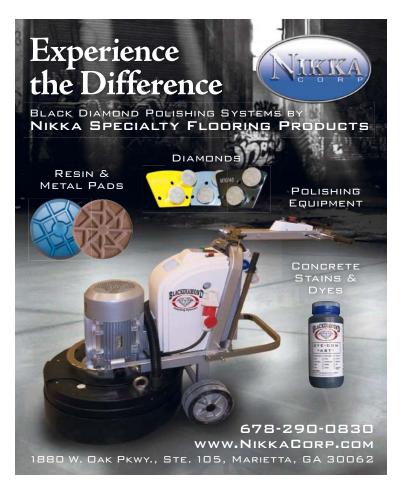


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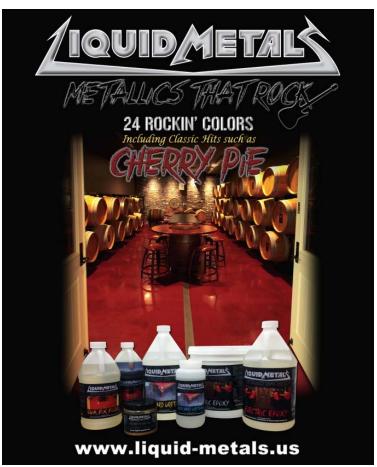








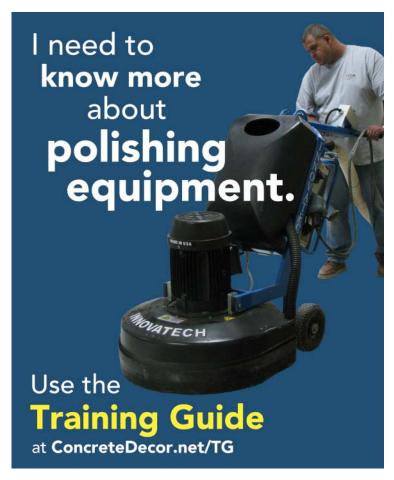


















Cool Kidz Cuts

Kid's hair salon awash with artistic touches

by Vanessa Salvia

TERRY Keener Jr. of TNT Resurfacing Concrete in Lodi, California, helped oversee the decorative transition of a children's hair salon in Chico, California. When he started the job, the salon's existing 1,900-square-foot floor was vinyl composite tile. After five days of work, it was transformed into a sea of polished concrete complete with flowing ribbons of color and lively hand-painted sea

First, the VCT was removed and the floor was ground to remove the glue. The holes in the floor were patched and the spalls, joints and cracks filled with Westcoat TC-26 Gray Self-Leveling Cement. The floor was then polished to 200 grit.

"The owner of the salon, Wendy, is also an artist," says Keener, "so she played a big part in the design. The half of the floor with the ribbons and the store logo was done by me and my guys, and she and one of her girls that worked for her hand painted all the rocks and sea creatures.

"We helped them and we did a lot with them but none of us are artists!" says Keener. "When the designs were what she wanted, we polished to an 800 grit."

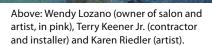
The crew ran into a head-scratching problem when they tried to get the excess dye off the floor. "We ran the auto scrubber over one side of it and it smeared," he says. "Luckily, we had started against the wall where the cabinets go. These things make for a good story right? They weren't a good story at the time!"

He then applied Westcoat's lithium densifier without cleaning the floor, which is not standard. "We tried to lock the color in and then ran the auto scrubber over it and it still smeared," he says. "At that point four guys with rags and buckets of water individually cleaned every detail in the floor. It took about 12 hours in

the middle of the night." After the floor was properly cleaned, "we polished it out and applied Westcoat's PolishGuard," with good results.

www.tnt-concrete.com







Photos courtesy of Westcoat Specialty Coating Systems



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