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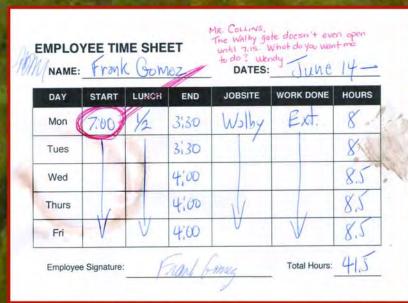
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|---------------|----------------------|----------|---|-----------------------|--|
| Day | Start | End | Activity | | |
| Mon 6/14 | 7:19 AM | 12:02 PM | Prep | 4:43 hours | |
| | 12:40 PM | 3:39 PM | Prep | 2:59 hours 7:42 hours | |
| Tue 6/15 | 7:21 AM | 12:06 PM | Formwork | 4:45 hours | |
| | 12:37 PM | 3:42 PM | Formwork | 3:05 hours 7:50 hours | |
| Wed 6/16 | 7:16 AM | 12:04 PM | Formwork | 4:48 hours | |
| | 12:33 PM | 3:44 PM | Formwork | 3:11 hours 7:59 hours | |

12:25 PM

3:42 PM

11:50 AM

3:41 PM

Signature Frank Gomez

7:18 AM

1:05 PM

7:17 AM

12:36 PM

Thu 6/17

Fri 6/18

Employee total

Texture/Seal

Texture/Seal

Texture/Seal

Texture/Seal

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7:44 hours

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CIRCLE #28 ON READER SERVICE CARD

Dear Readers,

ow can we use our talents to help others? Look for those opportunities this year and make them happen. A good example can be found in this issue on page 56, where you can learn a little about Carlton Concrete's volunteer work for Extreme Makeover: Home Edition.

Some of the saddest sights I see around my community and in many cities across the nation are churches without adequate care given to their maintenance. It seems that only the churches with members who can offer financial support enjoy a

house of worship that is clean, comfortable and inviting.

It's amazing how many people in our neighborhoods are involved in some form of construction-related trade, and yet important places like our neighborhood churches are in disarray.

When Doug Carlton called me and said they were going to be helping out on a show called *Extreme Makeover*, I said, "What show?" Well, the more I asked friends and neighbors about this show, the more I understood why people were flocking to the TV on a Sunday evening. It's about people helping people. How fulfilling. How rewarding. But better yet, how essential. Not because we have an opportunity to gain some notoriety, but because there's an opportunity to put our talents to work, unselfishly, for the sake of others.

Why take the time to write this letter? I could easily sell this space to an advertiser and earn money on the real estate rather than yak about life. No. What is essential in our lifetimes is that we help build each other up, encourage one another in order to make ourselves stronger as a family, financially, spiritually, morally.

This summer, take the opportunity to initiate some form of charitable giving through the skills you possess. While it is the busiest time of year for many, it's also the time when our best work can be accomplished for needy people. Like the people on *Extreme Makeover*, go out to help and enlist the help of others. If they don't show up like you hoped, go ahead and prove to yourself and your family that you can do it yourself.

Sincerely,

Bent Mikkelsen, Publisher

P.S. By the time you get this, I will have returned from a visit to Washington, D.C., where I attended the opening of an exhibit called *Liquid Stone: New Architecture in Concrete*. Organized by the National Building Museum, the exhibition presents architectural projects that use concrete in exciting ways as well as information about concrete's scientific properties, unusual concrete finishing techniques and advanced hybrid versions of the material. The exhibit will be on view until Jan. 23, 2005 (learn more at www.nbm.org). Watch for more on this in the next issue!

ONTHE COVER: Contractor Matthew Newman created this pool deck in Palm Desert, Calif., with Super-Krete's Stamp-Kote topping and Roman Slate and Random Stone stamp mats. Color was obtained with three colors of Super-Krete's water-based stains and the surface was sealed with Solvent Sealer S8300. Photograph courtesy of Super-Krete





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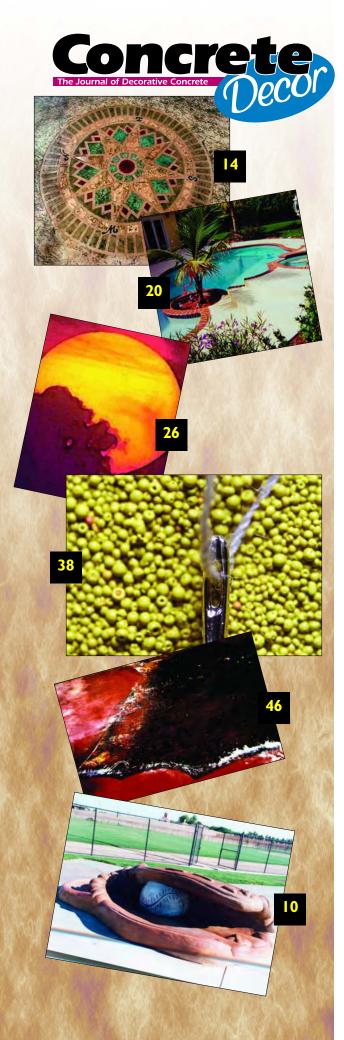
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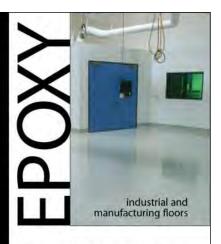
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CIRCLE #40 ON READER SERVICE CARD

DECORATIVE CONCRETE TIPS

Decorative Concrete Tips is a forum for readers to exchange information about methods, tools, and tricks they've devised.
Send details to CD Tips,
Concrete Decor, P.O. Box 25210,
Eugene, OR 97402.
We look forward to hearing from you!

How to stand out from the rest

o make your concrete more distinctive, learn to think out of the box. The trick is to make your work unique. Put a signature on it.



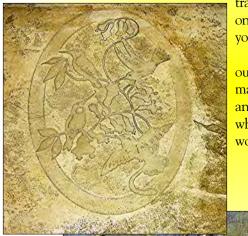
Think like an artist. Anyone can go to the paint store and buy paints — it's what you do with the paint that makes it different. You have to be willing to experiment. I probably pour 300 samples a year. I've used wallpaper, string, cardboard, metal cutouts, even my wife's wall hangings. Look around — there are a lot of different things that can work as stamp patterns or that will add interest to your finished work.

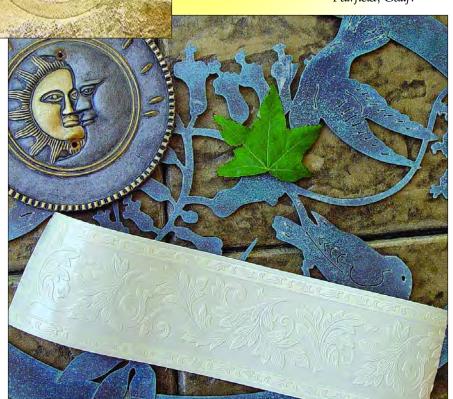
I've even tried grape juice as a colorant. It looked great to begin with, but after a while it turned black. You can get beautiful effects by using a terra-cotta base with a

translucent red or chocolate brown layer on top. It makes a rich, warm color that you can't get with straight integral color.

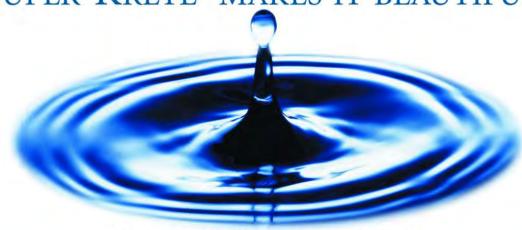
Art and design are everywhere. Get out of the store and look around. You may find that you like the business more and your clients like your work more—which means higher prices for your work.

— Lee Levig, Concrete Works Fairfield, Calif.





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Industry News

MAPEI celebrates 25 years in Canada

MAPEI is proud to announce that it has successfully completed 25 years of business in Canada. The parent company, MAPEI Group, was initially launched in 1937. In 1978, the company's owners, Rodolfo and Giorgio Squinzi, chose Laval, Quebec, as the site to establish MAPEI Inc., their first plant outside of Italy. From a handful of people in one location, MAPEI Inc. has grown to 335 employees in four plants across Canada, including the provinces of Quebec, Ontario and British Columbia, and serving more than 180 distributors all over the country.

"We want to thank our employees and clients for having faith in our company and for helping MAPEI Inc. grow into the leader in our industry," said Luigi Di Geso, general manager of the Canadian subsidiary.

To show its appreciation to "friends and family," MAPEI is sponsoring two free, private concerts for MAPEI employees and customers — one in Montreal and one in Toronto. The featured singer at both concerts is famous Canadian songwriter and vocalist Paul Anka, who has over 900 songs and 125 albums to his credit.

MAPEI has been supplying systems for tile and stone installation, floor covering installation and concrete restoration for over 65 years. Distributed in over 80 countries, MAPEI is a single-source supplier of flooring installation systems for residential and major commercial projects. The company is a registered provider to the AIA/CES program and offers training related to ceramic and stone tile, floor coverings and concrete repair. For more information, visit www.mapei.com or call (800) 42-MAPEI.

USG offers info on sustainable products

Responding to the construction industry's interest in sustainable construction, USG Corp. has expanded the Environmental Responsibility section of its Web site (www.usg.com). The expanded section includes a Product Sustainability Table that covers a wide range of products manufactured by United States Gypsum Company and USG Interiors Inc. The table features specifications on post-consumer and post-industrial recycled content, densities, volatile organic compounds, manufacturing efficiencies and raw materials for each product.

In addition, USG has developed specific answers to the ASTM's Standard Practice for Data Collection for Sustainability Assessment of Building Products as they apply to USG products, manufacturing processes, operational performance, indoor environmental quality and corporate environmental policies. This standard is frequently used as a guideline in answering industry questions about sustainable construction.

USG is a founding member of both the United States Green Building Council and the National Safety Council and has earned the Mine Safety and Health Administration's "Sentinels of Safety" award more than any other U.S. company. The company develops and manufactures products made from natural, recycled and recaptured materials.

Chusid named CSI Fellow

Michael T. Chusid, of Encino, Calif., became a Fellow of the Construction Specifications Institute (CSI) in April. Fellowship is among CSI's most prestigious honors.

CSI is a national association of specifiers, architects, engineers, contractors, building materials suppliers and others involved in nonresidential building design and construction. Although the organization has nearly 17,000 members, only 329 have ever been elevated to Fellowship in CSI's 56-

vear history.

Fellows are nominated by their colleagues and selected by CSI's Jury of Fellows in recognition of their accomplishments in advancing construction technology, improving construction specifications, educating people in the construction industry, or advancing the goals of the Institute.



Chusid is an architect, certified construction specifier, author, and speaker as well as president of Chusid Associates, an architectural technology and building-product marketing firm. He founded Chusid Associates twenty years ago to help building-product manufacturers develop and introduce innovative construction technologies, and to improve the effectiveness of their sales and marketing efforts. Since then, he has been a consultant to more than 100 building-product companies and trade associations in the U.S. and internationally. He is an active member of CSI's Los Angeles Chapter. Additional information about his accomplishments is at www.chusid.com.

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Industry Spotlight

Association News

AMERICAN SOCIETY OF CONCRETE CONTRACTORS

Ruttura returns as ASCC president

D. Thomas Ruttura, president, Ruttura & Sons Construction Co., Farmington, N.Y.,



has been re-elected ASCC president for 2004-2005. Michael J. Schneider, Monroe, Ohio, was elected first vice president. Paul A. Albanelli, Farmington Hills, Mich.; Clay Fischer, Jupiter, Fla.; and Donald Marks, Fort Lauderdale, Fla., were elected vice presidents. Glen Shamblen, Tampa, Fla., was re-elected secretary/treasurer. Frank Lewis, Bell Gardens, Calif.; and Thomas Zinchiak, Woodbine, Md., were elected as new members of the board of directors.



Bannister leads Decorative Concrete Council

The Decorative Concrete Council, a specialty council

of the ASCC, elected Doug Bannister, president of The Stamp Store in Oklahoma City, Okla., as council director. Bannister has been involved in concrete work since 1980 and is a nationally recognized expert in the industry

Alan Thompson, Dallas, Texas, was elected secretary treasurer. Clark Branum, Rancho Cucamonga, Calif.; John Evans Jr., Pottsville, Pa.; Jeannie Fields, Douglas City, Calif.; Joe Garceau, Aurora, Ill.; Joe Nasvik, Chicago, Ill.; Mike Tingley, Coventry, R.I.; Scott Truax, Atlanta, Ga.; and Wes Vollmer,

San Antonio, Texas, were elected as new members of the DCC board.

NATIONAL READY MIXED CONCRETE ASSOCIATION Redesigned Web site offers many features

The NRMCA has introduced a redesigned Web site — www.nrmca.org — that features a wide array of resources including News & Features, Conferences & Events, Concrete Industry, Products & Services, and NRMCA Committees. Members can access past industry articles, contact a specific association staff member, check state association news, take part in various surveys, examine industry research and much more. The site's new Grassroots page allows members to view summaries of key issues affecting the industry and to contact their legislators on these issues with the touch of a button. Browsers can also search for producers and suppliers throughout the U.S.

Former chairman honored for invention

Stephen Stepanian, chairman of the NRMCA for 1943-1944, was honored on the American Road & Builders Association's list of the Top 100 Private Sector Transportation Construction Professionals of the 20th Century. Stepanian, an Armenian immigrant, in 1914 designed the self-discharging, rotating drum mixer unit that revolutionized the concrete industry.

"Mr. Stepanian's genius and foresight has led to what is now the most recognizable piece of specialty equipment in the construction industry, says NRMCA president Robert Garbini." Today, thanks to our former chairman, more than 70,000 ready mixed concrete trucks travel every day throughout the U.S., making concrete the foundation of the nation."

Research agreement will benefit industry

A research cooperation agreement signed in May between the NRMCA and the University of Maryland's Department of Civil and Environmental Engineering will lead to the establishment of the Center for Concrete Research. The intent is to use the synergies of the academic community with the established NRMCA research laboratory to conduct applied research that benefits the industry. The results will enable NRMCA members to address and shape technical issues impacting their business. The project reports will be a valuable marketing and educational tool for members. The parties will also seek contracts to support the industry in routine testing and provide industry training through workshops, training courses and conferences on new stateof-the-art developments in the field.

AMERICAN CONCRETE INSTITUTE Fiorato to head ACI

Anthony E. Fiorato, president and CEO of Construction Technology Laboratories in Skokie, Ill., has been elected 81st president of the American Concrete Institute.

As a member of the American Concrete Institute since 1967, Fiorato has actively contributed to ACI's technical publications and committee work. He currently serves on ACI Committee 318, Standard Building Code, and is former chair of ACI subcommittee 318-A, which has responsibility for the materials and construction sections of the code. He has received numerous awards from ACI, including the Henry C. Turner Medal in 1997, Arthur J. Boase Award in 1999, and Henry L. Kennedy Award in 2002. Additionally, Fiorato actively



participates and serves in leadership positions at a number of professional organizations including ASCE, ASTM International, PCI, and PTI. For more

information, visit www.concrete.org.

Guide to formwork available

ACI has published the "ACI 347R-03 Guide to Formwork for Concrete." Highlights of this publication include a section on contract documents that explains what specification guidance the engineer/architect should provide for the contractor, and another section that advises the formwork engineer/contractor on the best ways to meet the specification requirements safely and economically. Separate chapters deal with design, construction and materials for formwork, with special considerations to architectural

concrete, bridges, shells, mass concrete and underground work. The concluding chapter on formwork for special methods of construction includes slipforming, preplaced aggregate concrete, tremie concrete, precast, and prestressed concrete. To purchase this publication, contact the American Concrete Institute at (248) 848-3800 or download it from ACI's bookstore at www.concrete.org.

CONCRETE SAWING AND DRILLING ASSOCIATION Standard explains, defines tolerances

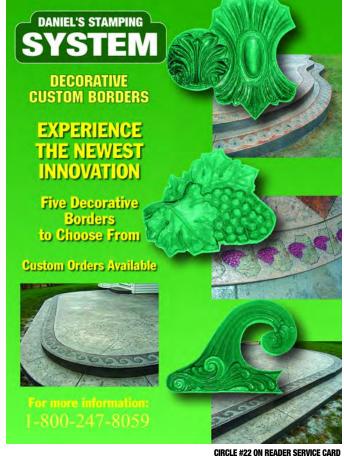
CSDA has adopted the International Association of Concrete Drillers & Sawers (IACDS) Tolerance Standard that was developed through the cooperation of sawing and drilling associations from Austria, Germany, Italy, Japan, Sweden, Switzerland, the United Kingdom and the United States.

The IACDS Tolerance Standard consists of nine sections that cover

reasons for issuing tolerances, definitions, and maximum tolerances for each sawing and drilling discipline, including core drilling, flat sawing, wall sawing and wire sawing. Also covered in this Standard are maximum tolerances for crushing and bursting. "The Standard is intended to separate the amateur from the professional," said Kaspar Disch of Switzerland, who was instrumental in the development of this Standard.

The tolerances for each discipline are defined by eight separate measurements including angle accuracy, directional accuracy, verticality, horizontal level, surface roughing, section width pocket hole depth or joint and evenness. The IACDS Tolerance Standard is available on both the IACDS Web site (www.iacds.org) and the CSDA Web site (www.csda.org).





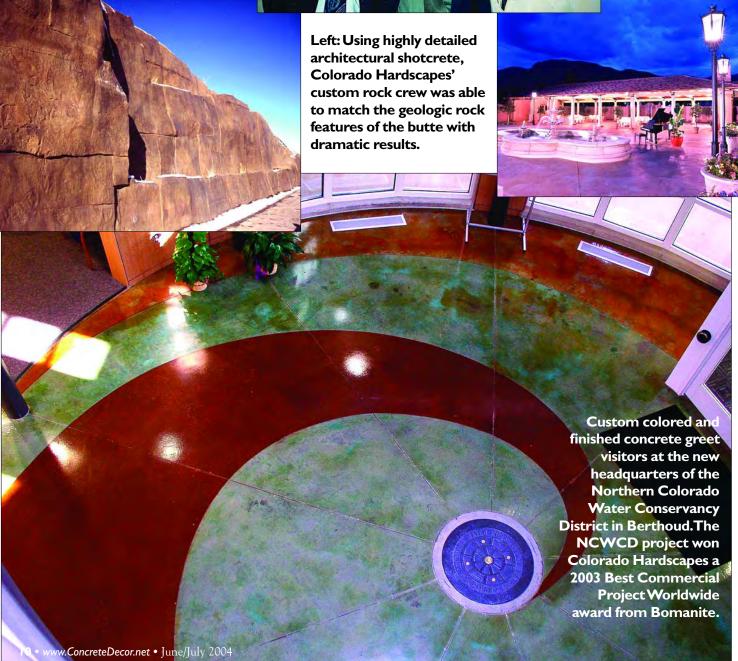


by Stacey Enesey Klemenc

Wendell Van Heukelem (center) founded the company more than 50 years ago. His son Calvin (right) began the company's involvement in decorative concrete and rock work, while grandson Vince (left) was the first to have the vision of a Concrete **Design Center.**



Below: The Broadmoor Hotel



or more than 50 years, Colorado ■ Hardscapes of Denver (formerly Van Heukelem Concrete) has made it its business to come up with concrete solutions for a wide variety of customers, both commercial and residential. What started out as Wendell Van Heukelem's one-truck venture dedicated to concrete flatwork has morphed into one of the country's leading decorative concrete contractor firms employing more than 100 people. With Wendell's grandson Vince now at the helm and his son Calvin chairman of the board, the thriving company handles everything from replacing worn out ordinary concrete to installing one-of-a-kind creations on floors, walls and even on the sides of mountains.

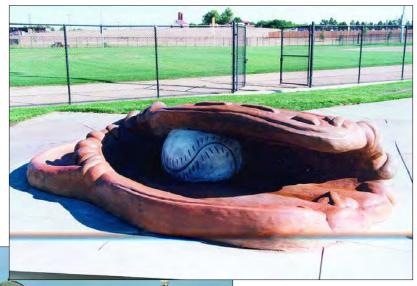
According to Jay Fangman, director of sales and marketing, the company's specialty areas include Bomanite imprinted concrete; custom exterior concrete involving special colors, textures and finishes; themed concrete rockwork; premium interior floors and themed walls created with formliners.

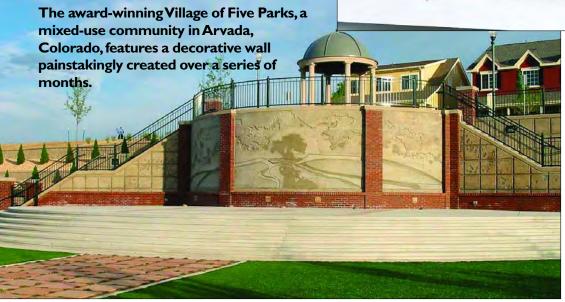
"We've been a Bomanite licensee for 20 years," Fangman says, describing the relationship as very strong. "They're very much new-product oriented, very cutting edge, and we're the kind of company that taps into new products all the time."

Most recently, Bomanite honored Colorado Hardscapes with three 2003 awards, including a Worldwide Award for Best Commercial Project for its work on the Northern Colorado Water Conservancy District headquarters in Berthoud. Other awards garnered this past year include a Subcontractor Project of the Year award from the



Colorado **Hardscapes** produced a stunning floor that appears to have a "leathery" texture for the **Kroenke Sports'** offices at the **Pepsi Center in Denver.This** project, which was achieved with Micro-Top, won the company a 2003 silver award from Bomanite.





Above: Working hand in hand with an artist, a Colorado Hardscapes crew used rebar, wire mesh and shotcrete to create this baseball glove in Aurora City Park.

Colorado **Hardscapes** used **Bomanite's** Micro-Top to achieve the stunning color the architect wanted with the kind of durability a high school needs.The wall seen here is part of Aspen High School.



Sandscape Texture, a new cast-in-place concrete with dozens of color options, was developed mainly for retail establishments and streetscapes. Colorado Hardscapes trademarked the finish last August and says it's gaining in popularity due to its environmentally friendly installation process.

See In n thei hom with near than clies

The premise behind the company's Concrete Design Center is straightforward: Surrounded by hundreds of samples of concrete concoctions, clients can quickly see that concrete will enhance and even transform their project in myriad ways.

Associated General Contractors of Colorado, an award for Unique Use of Concrete from the American Concrete Institute and an Outstanding Concrete Project award from *Colorado* Construction magazine, all recognizing the company's handiwork at the Village of Five Parks, a mixed-use community in Arvada.

Fangman says the biggest challenge that Colorado Hardscapes repeatedly encounters involves scheduling. "Generally, these large projects have a very defined time line in so far as completion is concerned. We have to finish large amounts of high-quality concrete work in a short period of time." And being able to deliver as promised is one of the company's strongest attributes.

Seeing is believing

In much the same way builders proudly display their craftsmanship and creativity in a model home, Colorado Hardscapes differentiates itself with its innovative Concrete Design Center. The nearly 15,000-square-foot facility is much more than mere office space or a showroom where clients and designers can check out hundreds of samples of the latest in decorative stamping, staining, stenciling, walls and rock work. Each sample is labeled and has accompanying literature and specifications so clients can get a full understanding of the product.

The center is also home to a research and development center. "Visitors can observe our

technicians behind a glass wall making samples and working with new products and new components," says Fangman. "The R&D facility is not just used to make samples, but our technicians also test new materials and try new combinations of colors, textures and finishes."

The company, which caters mainly to commercial and municipal customers, also encourages designers, architects and other visitors to explore the possibilities of not just the finished products but the components used to make them. "We're firm believers in educating the design community of the endless possibilities available to them," Fangman says.

Groups of designers are often invited for a hands-on evening where they literally take over the R&D bay. "It's kind of like an art class. If you have 10 kids and you throw a box of crayons on the floor and don't give them any instructions on what to make, you'll end up with 10 different things," he says. "We believe in giving our customers various components and then letting them devise the combinations to reach the

desired result. We try to give our clients the opportunity to have as much ownership in the final product as we possibly can."

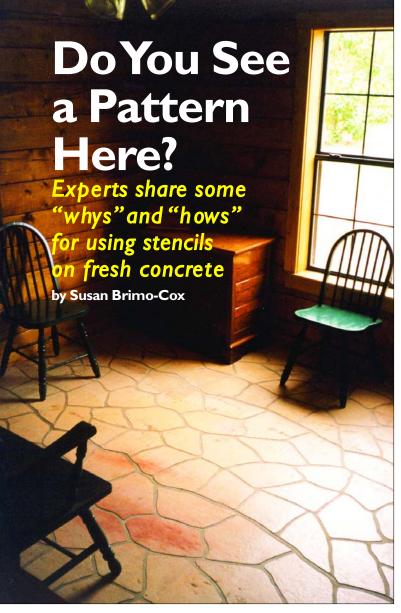
The importance of education

Colorado Hardscapes strongly backs education in many forms, from informal tours to structured talks. "We believe it's very important to share information about where concrete's been and where it's going," Fangman says. In fact, he says, the company will probably host about 80 architectural presentations this year on new concrete trends. It even holds AIA-approved seminars from which attendees can earn continuing education credits.

"With the speed at which concrete technology is changing, we think education is critical for our architectural base," Fangman says. "We place a high premium on developing presentations to help our clients keep up with the many changes, new products and new ideas in the marketplace. They need to know what's available now and what opportunities are in store for tomorrow."













tenciling concrete is frequently relegated to renovation projects, because stencils work well with overlays and spray applications. But, as many contractors in the know will tell you, stenciling gives a more detailed and realistic finish to fresh concrete than stamping alone. And there are other advantages to stenciling, as well.

Doug Burgan, president of Spray Pave Utah in Roy, Utah, says the primary reason he prefers stencils over stamps is that "we can do large areas — different patterns all at the same time, not in different pours." Also, he prefers the shallower grout lines created by stencils. Stamps leave deep impressions, he points out, which collect dirt and can trap moisture.

Contractors who use stencils on fresh concrete agree that the process isn't difficult; rather, it is all a matter of timing and technique. If you've not tried stenciling on fresh concrete, the following tips and tricks may open a whole new world of decorative concrete for you.

Sizing up the job

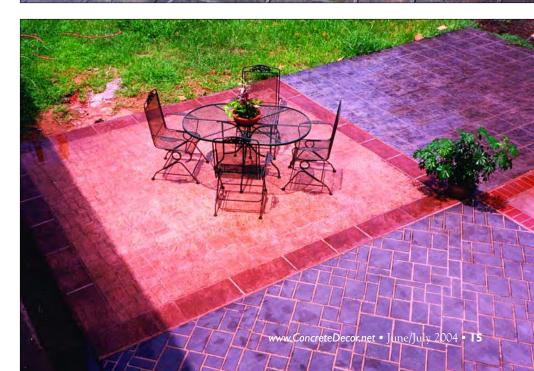
It may seem elementary to say, but make sure you are familiar with your stencil patterns and how they will lay out ahead of time. Some patterns have more waste factor than others; some will be more difficult to place than others. Some contractors do a dry run. Jim Mullins, director of training for Artcrete Inc., in Indianapolis, sums it up well: "The layout should be examined before you have the wet concrete on the ground."

Burgan says that for large projects, he rolls the stencil out in the grass, lines up the patterns and overlays the seams, and then staples it together. That way the stencil is ready and there will be no surprises during placement. Lining up of patterns is very important, he says. "You can tell if [a stencil] wasn't placed properly if you see extra large grout lines."

In Noblesville, Ind., Steve Vande Water, managing member of ArtistiCrete L.L.C., recommends, "If







you're working up against a wall and it's an odd pattern — like a European fan or flagstone pattern that's not square or doesn't have a straight edge — lay [the stencil] on the ground and snap a chalk line. Then cut it to create a straight edge to go against the wall." And the main thing for rectangular patterns, he adds, is to make sure ahead of time that the corners are square.

Laying the stencils

When you should place the stencils is a judgment call, but most contractors advise placing them as soon as possible.

Conditions at the job site and weather factors such as wind and temperature play a role in the timing. The surface should be firm but creamy, without standing water. Bleed water means the concrete is too wet and causes several problems.

Embedding stencils too deep is the most common mistake. "If it's too soft it's easy to bury [the stencil] into the cream," observes Burgan. If the stencil is embedded too deeply it will allow the color hardener application to build up too much and crust over the stencil, or the stencil will be difficult to remove.

Bleed water will also cause color hardener to penetrate under the stencils, a situation you want to avoid.

But don't wait too long to lay your stencils, either. If you do, you won't get good adhesion. Remember, the stencils should be laid consistently for an even appearance.

When laying the stencil, roll it off the top of the roll so the curl goes towards the concrete, advises John Klug, estimator with G.R. Trumble Construction Co. in Florence, Ky. "That way you won't be fighting it trying to roll up on itself."

Also, watch out for kinks in the stencil. "If the stencils have a lot of bends and other distortions due to improper handling, throw that piece away and get farther into the roll where the stencil is fresh and undistorted," Mullins says. A distortion can cause a stencil to allow color hardener underneath, which defeats the purpose of using the stencil in the first place: the creation of a nice grout line.

For fresh concrete applications, paper stencils are the popular choice

Stencils are generally made from either paper or plastic, and are cut with dies that stamp out the pattern in a consistent manner.

Paper stencils are usually thin pressed cardboard and are waxed, either on one or both sides, to resist moisture. Paper stencils come in rolls of varying sizes, such as 500 square feet and 1,000 square feet.

Plastic (or vinyl) stencils come in sheets, such as 4-by-5 or 4-by-8.

Plastic stencils do have advantages over paper, reports Jerry Atwater of Universal Templates Inc. in Pequot Lakes, Minn. "Plastic templates/stencils have an advantage over cardboard because they will not delaminate when they get wet. Delamination causes a major problem on the job because the material has to be picked out of the joints." Plastic stencils also are reusable, though he says "sometimes cleaning and storing them are just not worth the labor."

Despite these advantages, plastic stencils may not be the best choice for new concrete applications.

Jeff Hartzog of Specialty Concrete Products Inc. in West Columbia, S.C., points out, "Plastic stencils are really designed for renovation work," such as overlay or spray applications. "They are difficult to float in new concrete applications," he reports, adding, "picking up and moving them is very difficult if not impossible [in new concrete]."

Another disadvantage to using plastic or vinyl stencils on fresh concrete is the cost, reports Greg Chapman, director of training and technical assistance at Elite Crete Systems Inc. in Merrillville, Ind. "When you stencil wet-pour concrete you need enough stencil to cover the whole pour." If you have to have many sheets of plastic stencil for large pours it could get very costly. On the other hand, he says throw-away stencils — at, say, 23 cents per square foot — can be factored into the job.

The matter of cost also comes into play if you have areas in which you need to trim or cut the stencil. You wouldn't necessarily want to do that with an expensive plastic stencil.

No matter what type stencil you use, be sure to take proper care of it. Jim Mullins, director of training for Artcrete Inc. in Indianapolis, recommends, "Care should be taken not to get folds and crimps in the stencil during storage and transporting to the job site. This will affect how the stencils lay on the freshly poured concrete."



Different contractors use different methods to lightly stick the stencil to the surface of the concrete. Some prefer rollers, either napped or closed loop, while others use a bull float. The aim is to just tack the stencil to the surface.

The key to this step, Burgan says, is to "always start in the middle and roll out" in each direction.

Greg Chapman, director of training and technical assistance at Elite Crete Systems Inc.'s training office in Merrillville, Ind., says, "If you start from the left or right, it'll push the stencil. [Working] from the center stretches the stencil properly."

Tips for challenging areas

There will always be a job that has a tricky area, either odd-shaped or up against a wall. These are instances when a contractor needs to be creative.

Vande Water explains, "If the area is walled on two sides, you may have to walk into the concrete and bull float your footprints out before you continue laying stencil."

Sometimes you may have to think like an engineer, Mullins says. "The slab can be spanned with a pick or walk board, allowing the contractor access in these cases. ... [Or it] could be necessary to break the pour down into more manageable sizes, implementing border and band type patterns, such as cobble headers and soldier courses of brick."

Burgan suggests always having a sharp pair of scissors on the job so that you can modify the stencil to make it fit and look natural.

And if you need a grout line that doesn't exist, Klug says, use a piece of paper and make your own.

Coloring and texturing the surface

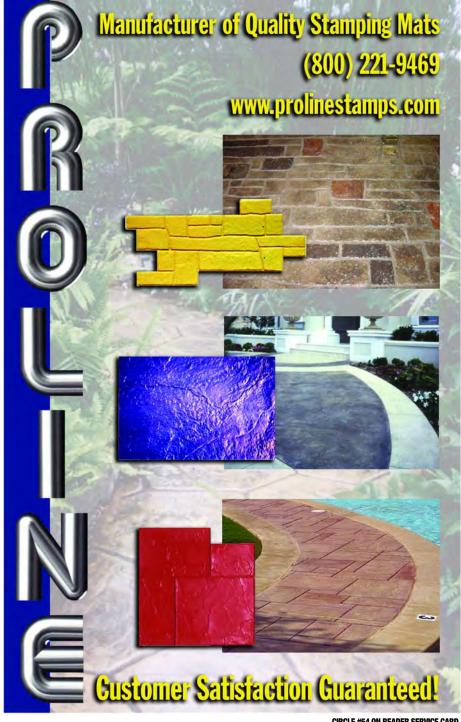
Contractors who strive for realism will combine color hardeners and surface textures. "Using stamps mats with stenciling in new concrete gives real nice, authentic detail," says Jeff Hartzog, sales and marketing manager for Specialty Concrete Products Inc. in West Columbia, S.C.

"A lot of jobs we do have three to four colors [that we] throw in different areas," explains Vande Water. On those multi-colored jobs you have to blend the colors into each other, but "mottled colors look more natural," he adds.

Burgan suggests starting with the lighter colors. "If you go too dark [to start] it's always harder to come back. Sometimes you can work the concrete to bring the gray concrete back up, but it's very risky."

One possible fix after the concrete is dry is use acid stains, but Burgan cautions to always do a test in a discrete

Sometimes, you can make dark colors work for you. Need black letters or a logo outline? Klug says they used the following technique to create their company logo: Black was used to color



CIRCLE #54 ON READER SERVICE CARD





Stenciling fresh-poured vertical surfaces

If you are stenciling fresh-poured concrete there may be vertical surfaces you also want to stencil, such as step fronts or the lips around the edge of a patio where you may want the pattern to roll over the edge. Various contractors use different techniques to tackle these challenging surfaces. Here's a sampling:

"For step fronts, sometimes we'll staple a double thickness [of stencil] to the inside of the form. Then, when you strip the forms away, the grout lines are there. Then you can color the face with a slurry of color hardener applied with a paint pad."

— Steve Vande Water, ArtistiCrete L.L.C., Noblesville, Ind.

"[We] put on a parge coat, then apply stencil that has an adhesive on the back. Or, apply a wet coat and apply the stencil, but you have to be pretty good to do that. [Then] apply a color hardener top coat — a pretty thin layer — and texture it if you want."

— John Klug, G.R. Trumble Construction Co., Florence, Ky.

"[Vertical surfaces] are tricky. You have to be able to pull the face form at the right time to get the stencils in and the colors up. [You don't want the face to fall, so] timing is very, very critical. If you're getting into this for the first time, you want to practice. You don't want to try it out on a paying customer."

— Doug Burgan, Spray Pave Utah, Roy, Utah









the background, the stencil was laid on top, and then they applied the other colors they wanted. "When we pulled the stencil we had the black letters and the black outline," he reports.

With detailed stencil patterns you may need to be creative in applying the color. For a five-color compass, Klug says they used a teaspoon to apply the color hardener. "It allowed us to apply it with more control."

After the color hardener is broadcast, a release agent is applied and texture mats or texture rollers are used to add realistic detail to the surface. Vande Water uses mats on small areas and a roller on large areas because it is faster.

How deep should the texture be? The answer, says Burgan, will often depend on the customer. "Some want light texture for patios; some want more aggressive textures."

Removing stencils

Anyone experienced with stenciling new concrete will tell you not to wait too long to pull up the stencils — and for good reason! If the concrete gets too hard the stencil will be difficult to remove. As Klug explains, "We made that mistake one time and it's amazing how hard the color gets. [We] wound up pulling stencil in two-inch pieces."

Vande Water reports he avoids this problem and creates a better look by

pulling stencils right after the surface is textured. "Most people wait longer, until the concrete is set up.

you wait] is you get a slick grout line. ... When we pull [the stencil off], the mortar joints have a sandier-looking appearance that's more natural."

What happens [if

But Burgan says his experience is that if you pull the stencil too soon you'll wind up with jagged grout line



edges. Test-pull in a discrete area to check, he advises.

The keys to success

Stenciling fresh concrete may seem daunting, but it is simply a matter of developing a little finesse with the process.

As Mullins points out, "The big secret to a successful decorative job is to keep everything consistent: the slump of the concrete, the application of color hardener and your finishing process."

Burgan says to take the following factors into account: how detailed the project is, the weather, the size of your crew and how experienced your crew is with decorative concrete. "You may have to break a large job up into sections," he says. "Take the time to cut the stencil where needed to make it look natural. That's what's going to give you a great-looking job instead of an OK looking job."

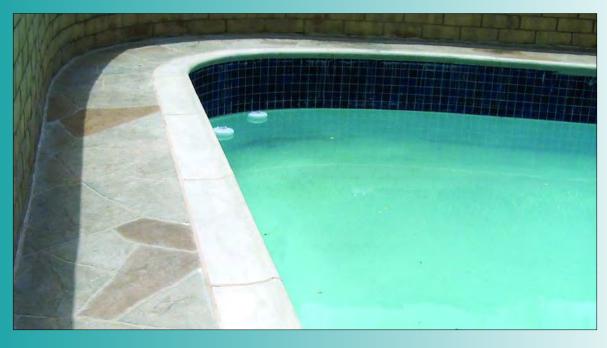


CIRCLE #30 ON READER SERVICE CARD



Put your decorative skills — and your imagination — to work.

by David Thompson



hen Chris McMahon sets out to rehabilitate a worn-out pool deck, he's not satisfied with merely jazzing up the old slab. He likes to reinvent the entire swimming pool environment, using color, texture and elevation.

"We're known for our imagination, and a lot of times our imagination involves removal and replacement of portions of the deck to change the overall appearance of the pool," says McMahon, president of Architectural Concrete Design in Levittown, Pa., which does some 500 pool jobs a year. One of McMahon's current commercial jobs involves putting a "beach entry" into a pool, in which a gradually sloping deck will descend into the water. The deck will resemble rippled, windblown sand. "We're pouring new concrete and imprinting it with sort of a rippled texture, and then we'll sandblast it and put a sand-rich mix of concrete over it," McMahon says.

Whether the job calls for a sweeping overhaul a la Chris McMahon or simply a tinted overlay that adds some splash to a dull deck, decorative concrete has become a standard feature in swimming pool makeovers.

Common coatings

In recent years, the two perennial favorites in concrete decking, spraydeck and kooldeck, have been joined at poolside by the new generation of stamped overlay systems. Stamped systems offer a vast array of looks, from tile to stone to brick. Spraydeck and kooldeck, on the other hand, offer skid resistance and cool-on-the-feet surfaces that are hard to beat. Sometimes the old and the new coexist side-by-side, with spraydeck or kooldeck put closest to the water while stamped flatwork holds down the outfield.

Spraydeck is a generic term for a wide variety of acrylic- or polymer-modified cementitious coatings that bond well to cured concrete. They typically get a knockdown finish, which results in a skid-resistant surface that won't fry your toes. A common alternative is the orange-peel finish, in which the coating is sprayed on and left as is, untroweled. Either finish can be modified as the coating is sprayed in place by altering the amount of air shooting through the hopper. More air results in smaller particles and a finer texture, while less air results in clumpier particles and a coarser texture. Spraydeck can also be rough toweled rather than sprayed on, which makes it suitable for light stamping, hand carving or texturing with a skin.

Kooldeck is the generic term for skid-resistant, coolsurfaced coatings consisting largely of portland cement and marble dust, with no binders. Kooldeck is most often used in new construction, as a green-on-green overlay, but it can be used on older substrates with a bonding coat. The same sprayon textures attainable with spraydeck apply to kooldeck.

Deck prep

Sometimes a pool deck rehab calls for a tear-out of the existing deck. But often an overlay will do. As with every overlay, preparation of the substrate is critical. "It doesn't





matter if you're doing a pool deck, a driveway or your kitchen floor, surface preparation is the key to any decorative concrete overlay," says Jim Morgan, president of Texas-based Golden Look International. "There are more failures in decorative concrete overlayment due to poor surface preparation than to anything else."

Methods of substrate prep run the gamut of chemical, mechanical and abrasion techniques. Some contractors swear by acid etching, while others rely on diamond grinding, while still others prefer shot blasting or sand blasting. And some, such as south Florida contractor Austin Parker, owner of Tropic Surfaces, have found that a thorough pressure washing will often do the trick, so long as the cementitious substrate doesn't have paint or oil on it. "I do millions of square feet of decking a year, and I've never had a warranty issue," Parker says.

Morgan prefers acid etching. But instead of the muriatic acid solution that is most commonly used, he likes to use an acid gel. "It looks just like shaving gel," he says. "I like it because it gives a consistent etch across the entire surface, and it doesn't brown out the landscape or burn the flowers. You can wash it off without neutralizing it first. With muriatic acid you need to come back and neutralize it first with baking soda or vinegar."

Tom Pennington, production manager for Renew-Crete, in Orlando, Fla., likes to combine sand blasting with acid etching. "Generally I do both, just as a precaution for myself, because the worst thing that could happen is delamination," he says. "Acid etching makes for a good, porous surface, but it doesn't do well at removing a previous surface like mechanical or abrasion techniques do."

Dealing with cracks

Proper prep also involves the removal of spalling, leveling any depressions with a mortar coat and addressing cracks.

Fixable cracks are typically opened with a diamond-blade crack chaser, then filled with a flexible joint compound and broadcast with silica to give the surface some grab. If the crack is moving, a control joint should be cut nearby, or better yet, the section of concrete can be cut out altogether and replaced. McMahon, who has to contend with Pennsylvania's harsh winters, has a zero-tolerance policy for all cracks. "We just cut them out and replace the section of the deck," he says. "We have so much freeze-thaw here that with all the lifting and dropping, any crack you tried to bridge will come back."

If a deck doesn't have expansion joints to control cracking, they should be cut every 12 feet or so, says Mike Meursing, president of Versatile Building Products in California. And if a deck does have expansion joints, it's crucial to maintain them through the overlay, he says. "Covering over expansion joints is probably the biggest mistake amateurs make," Meursing says. "A month later they get jagged cracks where the joint used to be."

One creative way to deal with cracking substrates is to incorporate the cracks into the final pattern of the deck, allowing them to serve as their own control joints. "You let them exist where Mother Nature says they should be and make them part of the design," Meursing says. After coating the deck, reopen the cracks with a crack chaser, then continue the cut to make a flagstone pattern.

Stenciling

Stencils can also be used to achieve flagstone patterns, as well as brick patterns, fan patterns and a wide array of other looks. Templates can be used, or grout lines can be taped by hand. Parker uses strapping tape to create a variety of grout-line patterns, such as diamonds and stars. He prefers to lay his own lines because it gives him more control over his designs. "A lot of times a living room opens right out on the pool deck, and you want to match the deck pattern to what's going on inside the house so that when you look out the sliding glass door you see a continuous flow," he says.

Often Parker uses different integrally colored mixes of concrete to alternate colors between shapes within a pattern. Sometimes he mixes colors within a shape. "I'll have three hopper guns going at one time, all with a different color," he says. "Maybe one color will be terra-cotta, and that fills 70 percent of the square. The second gun will have maybe a lighter terra-cotta, and that's spraying about 20 percent, and then maybe 10 percent will be a light tan color. You get sort of a mottled look. It looks nice."

Coping with coping

Overlayments are usually feathered up to the edge of the pool's coping, leaving the coping itself uncoated. On cantilevered decks, overlays generally wrap right around the overhang. Many contractors tape a grout line eight inches or so from the end of the deck and leave a smooth edge where people can sit.

Sealing the deck

The use of sealers is critical for ensuring long life for any decorative concrete. Morgan recommends using three coats



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Trouble can arise when working beside a filled pool, in all sorts of ways. BBs from a shot blaster, for instance, can get into the water and leave rust stains. To protect pools, some contractors fashion floating drop cloths. Bubble Wrap taped to the tiles can do the trick. Other contractors prefer working on emptied swimming pools.

Ken Tyson, owner of Tyson's Complete Repair in Hawaii, usually has his customers drain their pools before he begins work. He figures he's going to have to clean up after he's done anyway, and cleanup is just easier in a dry pool.

Emptying a pool isn't always feasible, though. Such was the case on a job Tyson had working on bridges over a hotel's dolphin pool, in which the dolphins remained at home the whole time. Tyson fashioned a drop cloth by wrapping plastic sheeting around children's elongated floats. "It worked fine," he says. "Although the dolphins weren't happy with us being there at all."

of sealer on pool decks — two tinted coats and one clear coat for uncolored concrete, and three clear coats for integrally colored concrete. Resealing every one to two years is essential,



he says. "You can tell it's time to reseal when you start to see splotchiness," he says. "It will start to look dull in some areas. Water will run off easier where the sealer's left, and it will soak in where it's worn off."

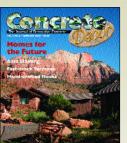
Combinations of colored sealers can be used for creative effects. Grout lines, for instance, can be achieved using a colored sealer applied with a ketchup bottle and toothbrush, says Alex Metrovich of Innovative Concrete Technology.

Unfortunately, sealers have a tendency to slicken concrete surfaces. But non-skid admixtures can offset the problem. "If you don't incorporate a non-skid into the sealer, you can have a beautiful job but a very slippery surface," Metrovich says. "Unless you have a very good knockdown finish, I would recommend a non-skid as a safeguard. It's a cheap insurance policy."

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The Concrete

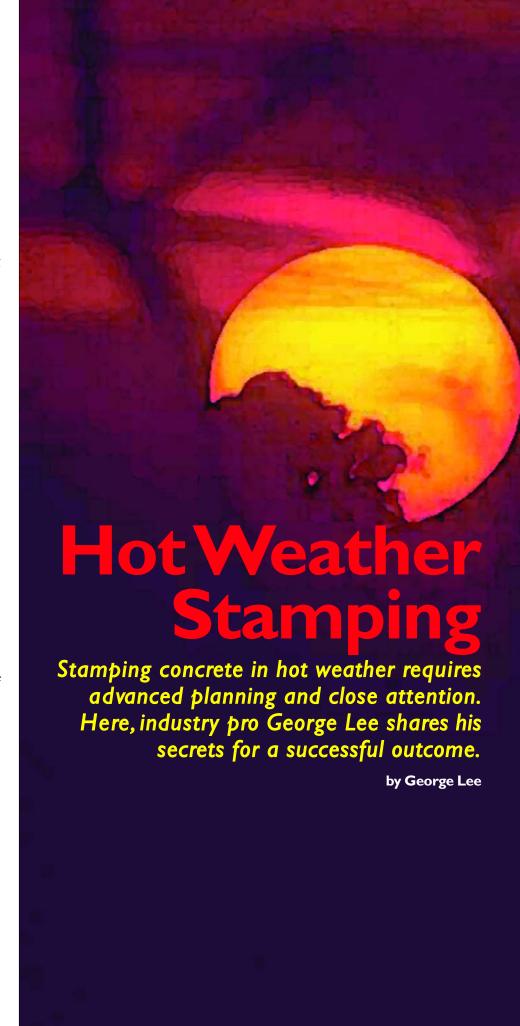
Concrete is the most important variable in hot weather stamping. When hot weather arrives, most ready mix suppliers start adding retarders to the mix. But how much retarder is a good thing, and what do they bring to the party? Are there better alternatives?

Your objective in hot weather is to get the concrete placed as quickly as possible. Let's face it, that last "lump" of concrete out of the truck after sitting onsite for an hour is NOT the most user-friendly concrete in the world!

Later, you are faced with the daunting prospect of determining when the concrete is ready to stamp. A false "set" or "crust" often means that stamping operations begin too soon. The top seems ready but the body of the concrete is still like Jell-O! This leads to sloppy impressions, "squeeze" (concrete oozing out at the edge of the tools), and poor release from the slab, in effect pulling the surface up with the mat or skin. Set controlled retarders are available, but what are some other methods for controlling slump and set time?

Let's take a look at a load of concrete batched out of the plant at a nominal 4" slump with retarder added. By the time it arrives at the site and/or passes through the pump line, it may be closer to a 3" slump! What are your options? Unfortunately, most of you are raising your hands to give the truck driver the thumb-in-the-mouth "More Water!" signal! On commercial projects, jobsite-added water, or water of convenience, is tightly monitored to prevent low concrete strength and excessive shrinkage cracking. But I believe water is just as important on decorative concrete projects — for the same reasons and a few others.

Let me tell you about an integrally colored and stamped patio I was called out to look at last week. The first truckload of concrete was delivered as batched from the plant. To maintain the flow and placeability of the



concrete, the pump operator added 22 gallons of water to the second truck. The third truck received 15.5 gallons of water.

Now we all know that concrete is colored by the color pigments surrounding all of the ingredients in the concrete — cement, sand, and aggregate. But what we forget is the influence water has in diluting the tinting strength of the color. Suffice it to say that on this patio there were at least three different shades of color — obvious to Mrs. Jones and her concrete contractor — by the end of the day!

Of course on a color hardener job, the underlying color is not an issue, but compressive strength, shrinkage cracks, and durability in freeze-thaw conditions certainly are. And we still haven't improved placeability — moving 4" slump mud in the heat of the day is still a time consuming and back-breaking job. Nor have we solved that pesky issue of set time — how long will that concrete wait for your crews to catch up with the color, release and mats? What about score lines and detailing?

A better way to maintain placeability — without the delay caused by retarders or the damage caused by excess water — may be to use a fast-acting superplasticizer. While normally added at the plant, several of these can be added at the job site, as needed, by the ready mix driver or even by the concrete contractor himself. Mixing one of these products in the truck for five minutes can save hours of placing and finishing time compared to using retarders or adding water.

Eucon 37 by Euclid Chemical and Supercizer 1 by Fritz-Pak are two such admixtures. Used at a dose as low as 8-10 ounces per sack of cement, the concrete can be taken from the unplaceable 3" slump it arrives at to as much as an 8-10" slump! Think how quickly your crews could place concrete that is almost self leveling! Since the concrete snaps back to normal set in about an hour, consider

how much more concrete can be stamped before the Summertime Dragon saps the strength from your job. And compare 3.5 gallons of liquid per truckload to the 15-22 gallons of water we looked at previously. On-site dosing is safe and allows for flexible control throughout the day, from truckload to truckload as the slump, temperature, travel time, standby time, etc. vary.

The Plan

Quality concrete imprinting always requires planning and skill — that's why good contractors are successful and always in demand. But hot weather stamping requires special planning and preparation in order to meet the rapid changes brought on by temperature, wind, rain showers, etc.

The "plan" should include a sketch showing the sequencing of stamping operations — what has to happen first, second, third — and where the operations are to occur. This may sound silly when you (the owner, foreman, superintendent) are in complete control of a jobsite, but when you have to delegate, or a problem arises in setting a form, repairing the canyons dug by the tires of the ready mix truck, concrete scheduling, a sudden concern of the owner, or a thousand other things that demand your attention during a pour, you should be able to trust your second and third in command to figure out the answers to most questions by consulting "The Plan."

Your "plan" will address how many workers are needed — and what special skills each must have — to get the concrete placed, stamped, etc. And you will call for a miniature "pre-job" meeting right there on the site BEFORE the concrete arrives and all heck breaks loose. When temperatures soar, the wind kicks up or a rainstorm blows in — failure is not an option! (Or is certainly a very expensive option.)

Consider whether segments of the slab must be poured separately in order

to achieve special effects such as rosettes, brick pattern borders, or multiple applications of color hardener, etc. Marking and cutting score lines so they don't get "lost" is important. The bags or buckets of color should be laid out and clearly labeled — colors can look the same in the heat of the moment. You really don't want to be scraping color hardener off of an area already prepared to receive release powder because somebody grabbed the wrong bucket!

Do you have enough mats and skins? Are they clean? Can they be kept clean as placing, dusting and stamping operations continue from one end of the job to the other? If you are using liquid release, plan on needing more than the normal amount as effective open time is decreased by rising temperatures. Sprayers should be clean and well marked for release, evaporation retardant, or cures.

The Tools

Strangely enough, the "Tools" include some of the things we have already talked about — the concrete mix design and the "Plan." But consider the following "tools" for hot weather decorative concreting that are different than for normal slabs and driveways.

WATER. The color hardener broadcast on the surface of the concrete is bone dry, and may have been sitting in the hot sun at surface temperatures of over 100 F. Where will the water required to combine this dry powder into the surface of the slab come from? Ideally, it will come up from the freshly placed concrete. But did you remember to saturate the compacted substrate just before you poured? Or are you hoping that the sprinkling you did the night before is sufficient? If not, the water in the concrete will be sucked right down to the base rock and not be available for your color hardener.

FLOATS. What tool would you normally use for your floating operation? If you said "wood bull float"

you've been there and done that before! Using a steel fresno, funny trowel, or edger can close off the surface of the concrete, locking the moisture away from the soon-to-beplaced shake-on hardener. Yes, we want to keep moisture in the slab, but not just yet. The wood float helps keep the surface open and porous so it can absorb the color hardener, making it part of the slab.

Once the powder has absorbed the moisture and darkened significantly, you can float it in (if that is part of the process used in your part of the country) with the wood bull float, or this time, if you prefer, a magnesium bull float. In either case, since it is hot, and surfaces tighten up more quickly, consider using lead weights to help drive the color into the slab. This allows longer, more even strokes that don't tear the surface and "bury" the hardener, causing uneven color and streaking. Closing up the slab with steel at this time can cause blistering

and pop-outs. This is especially true when placing lighter colors at higher rates of application. Piles of color hardener that have not become wet all the way through will be sealed in and not hydrate properly. These areas will be soft and subject to scaling, freezethaw damage, and poor abrasion resistance.

GROOVERS AND SAWS. For joints and score lines, many finishers prefer the "Torpedo Groover" by Slip Industries over a smaller, wider, traditional grooving tool. At 56" long, they tend to be heavier and they cut better through color hardener. The relatively narrow design of these aluminum tools leaves clean, easy to detail joints. Soff-Cut saws and other tools for cutting contraction joints and decorative score lines can be used after the concrete has hardened if temperatures cause the concrete to set too quickly or you require special timeconsuming efforts because of the patterns being stamped.

EVAPORATION RETARDANT. Not to be confused with a surface retarder for exposed aggregate, the manufacturers describe this liquid as a "monomolecular" film that slows down evaporation due to sun, wind, and low humidity. Products such as Eucobar by Euclid Chemical and Confilm by Master Builders are well known in the industry. These products can be applied several times during the course of a pour. Apply to the screeded concrete if there is going to be a delay in applying the shake-on hardener, but remember that another pass with the bull float prior to application will be necessary to completely break the surface tension created by the evaporative retardant and allow the color hardener to "wet-up."

Apply after the shake-on hardener has absorbed moisture from the slab and has been floated to keep the surface from drying out while waiting to begin the stamping. Procedure. Finally, apply after stamping if using a





liquid release and there will be a delay in curing the slab. One word of caution — these products are still water-based. Over-application, just like spraying water from a hose, can weaken the surface significantly, causing dusting, cracking, and discoloration. This applies to broom finishes as well as to stamp pattern finishes. Use a pump-up sprayer with a fan tip and don't saturate the slab with these products.

CURE-SEAL. Consider using a high quality cure-seal product at the end of the day if you are using liquid release. This will seal in moisture and allow for proper hydration, which is important for a strong durable surface with a minimum amount of cracking, checking or curling. Use a product that is advertised as compliant with ASTM C-309, and that is non-blushing, and non-yellowing. If using a water-based product, use a sprayer with a fan tip (not an adjustable tip) that is kept pumped up, and apply a very thin coat (see leff Patterson's article on water-

base cures in the Dec./Jan. issue of Concrete Decor magazine). Do not apply these products if you are going to do post-pour accenting (such as acid staining or other finishing techniques).

COMMON SENSE. If you normally pour 800-1,000 square feet in a day, consider cutting back to 600 square feet. Or do the back yard one day and the driveway the next. Marathon pours will wear out your crews, cause sloppy work that will never be your best—and may cost you money!

George Lee is a manufacturer's representative for Euclid Chemical and QC Construction Products. He has been servicing the concrete industry for over 20 years and has been involved with product placements from back yard patios to millionsquare-foot distribution centers. He can be contacted at george912@earthlink.net.





CIRCLE #24 ON READER SERVICE CARD

PRODUCT PROFILES



AWARD WINNING DESIGNS ARE EASY WHEN YOU HAVE THE RIGHT TOOLS... STEGMEIER WALL CAPS & STEP LINERS

Stegmeier Corporation's Wall Caps and Step Liners transform simple pool decks into an intricate part of the architectural design. These versital, foam forms are available in many profiles and at an affordable cost. Contact us and we will show you how.

- · Cast on site
- Flexible
- · Versital
- Economical
- · Easy to install



STEGMEIER CORPORATION



CIRCLE #72 ON READER SERVICE CARD

Concrete Color Maintenance System

he Concrete Color
Maintenance System, from
Newlook Coatings and Stains, is a
solid-color, water-based stain that
penetrates the surface of porous
concrete to stain it to almost any
color desired. "It's like integralcolored concrete, only more
perfectly colored," says Sonny Baird,
a partner in Newlook.

The product, applied with just a bucket and an applicator, is specially designed to solve problems in concrete such as oil and/or rust stains; old and faded concrete; discolored concrete; matching new to old concrete and more. "It's like mopping on water," says Baird. "It goes right into the concrete and stains it."

Unlike paint, the product has no mil. If you don't like the color, you can change it at any time, and no matter how many times you recolor it, it will never build up a layer, Baird says. "Every time you do it, it makes it stronger."

The Color Maintenance System is used only on porous concrete, such as patios, driveways, walkways and pool decks. It is not suitable for impermeable concrete, such as garage floors, unless the surface is profiled. Many colors are available, from bright reds, to blacks, to greens. Newlook will also create custom colors for specific projects.

Newlook's Concrete Color Maintenance System will wear just like normal concrete. However, specially formulated sealers in the product assist in keeping the concrete clean. The product can be maintained with regular periodic cleaning, even with a pressure washer. The product is completely breathable, so the concrete will never build up hydrostatic pressure.

For more information, visit www.newlooksystems.com or call (408) 661-1699.

Urethane finish for concrete surfaces

ulti Surface Urethane #275, from The Goodstuff Products, is a water-based, low-odor, low-VOC, clear urethane finish. Easy to apply and fast-drying, this high-quality finish works well on concrete countertops, floors, ceramic tile, vertical surfaces and other interior and exterior surfaces, including wood and some natural stone.

Solvent-free and meeting environmental regulations in every state, Multi Surface Urethane is an excellent choice for "green" buildings or buildings that have tenants in residence.

The finish comes in high gloss, satin, or low sheen. It goes on best with a sprayer and you can use the same tips you would use for water-base paint when using an airless. Spraying with an HVLP sprayer will give you a superior finish on concrete countertops.

Multi Surface Urethane cleans up easily with water. Typical dry time to touch in ambient conditions is 10 minutes. It is ready for light handling in 15 minutes and sandable in 30 minutes. Use the product for both the sealer and the finish application for best results.

For more information, call (866) 583-7083.





Manufacturer Profile: SuperKrete

International Inc., El Cajon, Calif.

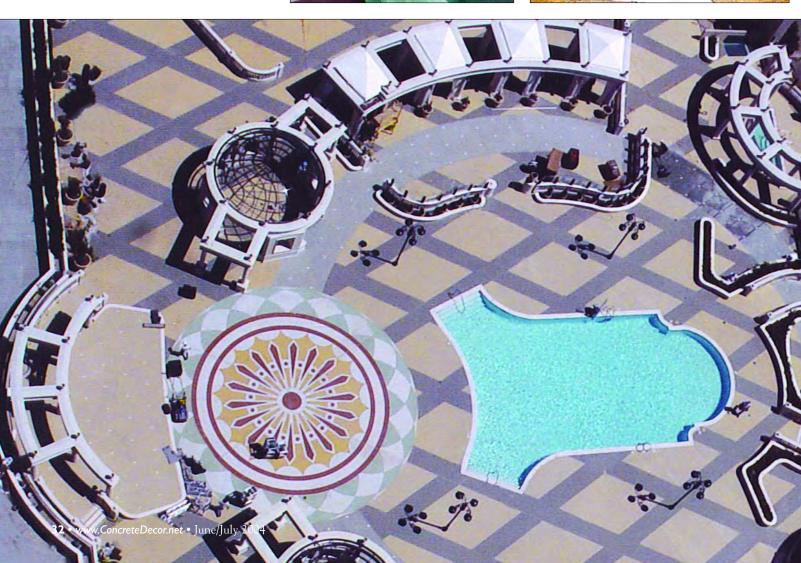
by Bruce Hackett



Stacey Holwitz and father John Holwitz.







ne could say that Super-Krete International, a significant player in the decorative concrete products industry, was born on the tennis court.

Ask those who play tennis regularly and they'll confirm that tennis courts are subjected to a great deal of punishing foot traffic as well as wear and tear. One of the major pet peeves among tennis players is when court surfaces are marred by cracks, bumps and other imperfections that can affect the path of the ball and potentially cause injuries.

Nearly 25 years ago, Super-Krete founder John Holwitz was a successful general contractor based in the San Francisco area, specializing in tennis court construction. He understood and was sympathetic to tennis players' frustrations because he was often called upon to repair and restore aging courts where the concrete coating had failed.

In collaboration with chemists, he developed Super-Krete Liquid Concentrate, a coating product designed to withstand the test of time and last through extreme weather conditions. "We developed a coating that would be more durable, more flexible, and last far longer with better bond strength than existing coatings at that time," Holwitz recalls.

Over time, through his various contracting projects, Holwitz successfully used his product in other applications, including bridge decks, roadways, industrial flooring and dozens of other concrete surface areas. At the same time, he continued to work on developing additional nontoxic, environmentally friendly products for concrete restoration and repair, including sealers, degreasers, water-based color stains, overlayments and acrylic/urethane paints.

Addressing moisture problems

Perhaps his most noteworthy product development was Pene-Krete, which, he says, addresses the fundamental issues of vapor transmission and alkali buildup better than anything else on the market.

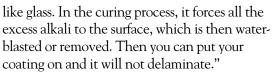
"Everybody in the industry had been trying to make products which would bond better to the concrete," he says, "but ironically, the products were bonding almost too well. These coatings basically trapped the vapor transmission and alkali underneath, and eventually they would cause the top layer of concrete to delaminate and disintegrate, and the coating would come off.

In response, the company developed Pene-Krete, which can penetrate up to 8½ inches into the concrete. "The water and alkali pull it in, and it fills all the voids in the concrete with a crystal-







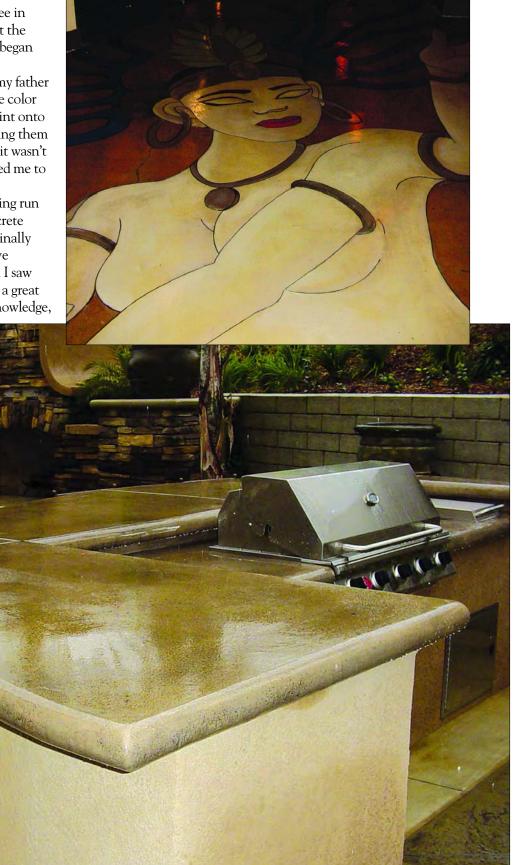


Meanwhile, Holwitz's daughter, Tracey, had been working for her father's home-based business during the summer months since she was a fifth grader, learning about the products and their uses. After graduating from college with a degree in business management in 1998, she bought the Super-Krete business from her father and began focusing its marketing efforts.

"I've spent every summer working for my father since I was ten," she reflects. "I created the color charts by hand, painting the Ure-Kote paint onto sandpaper and cutting them out and placing them on color charts. I'll never forget that. But it wasn't until I graduated from college that he asked me to come work for him full time.

"At the time, the company was still being run from home, just as a side thing to his concrete contracting business. It wasn't what I originally intended to do, but by then, the decorative concrete market was really taking off, and I saw the potential in that trend. It seemed like a great opportunity. I knew he had a wealth of knowledge,

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and I thought I could help by bringing my education into his business. So my cousin John and I purchased the company from my father."

Market focus

One of the first things Tracey Holwitz did was to fine-tune the market and focus the company's efforts. "Because there were so many uses for the products, we had to advertise in so many different trade publications to reach the various people who were buying them," she explains. "We decided to focus primarily on the hot niche of decorative concrete repair and restoration, which represents the majority of our business now. Our products are still used to restore industrial surfaces, bridge decks, roadways — particularly overseas — but we're not necessarily targeting those markets here in the U.S. at the moment."

Her father, who was born in New Jersey and raised in Guam, had planned to retire when he moved to Guam a few years ago, but he continued to get numerous calls there about problems with concrete coatings failure. "Super-Krete has come this far, I think, because of our proven ability to solve problems," he believes. "When I'm called, I identify the problem, try to solve it, recognize the

need in the market, and then develop a product for that problem. I try it out for a year or two to make sure everything works, and then turn it over to Tracey for manufacturing and marketing."

New product development plays an important role in Super-Krete's current and future success, Tracey Holwitz notes. "Super-Krete is constantly working on the development of new products that will save time, labor and money for the concrete contractor in the long run. For example, we're going to be introducing, probably in the fall, a single-component stamp overlay coating application. Right now, you have to put down a bond coat surface as well as a stamped surface on top of that. We're going to eliminate one step completely by making it possible to stamp over an existing concrete surface in just one application. So that's very exciting for us and our customers."

Emphasis on education

Holwitz is a strong believer in the need for training, education and certification. The company holds two-day seminars every month on how to successfully and profitably install Super-Krete products, and is thinking about extending them to three days. "We really encourage all the installers to











attend our training programs and seminars to learn the proper installation techniques for Super-Krete products and systems," she says. "Explaining how Pene-Krete addresses the moisture problems is a big part of our training program."

Super-Krete is also working to develop a basics class and an advanced class, she says. "The people who are coming to us have a wide variety of experience. Some have been pouring concrete for many years and want to get involved in the decorative niche. Others are brand-new to the industry and are attracted by the art deco applications. We're tailoring our programs around that reality."

Super-Krete, now based in El Cajon, Calif., is enjoying a growth spurt that looks promising. "We're not working out of our home anymore, that's for sure," Tracey Holwitz says with a chuckle.





CIRCLE #66 ON READER SERVICE CARD

CIRCLE #06 ON READER SERVICE CARD

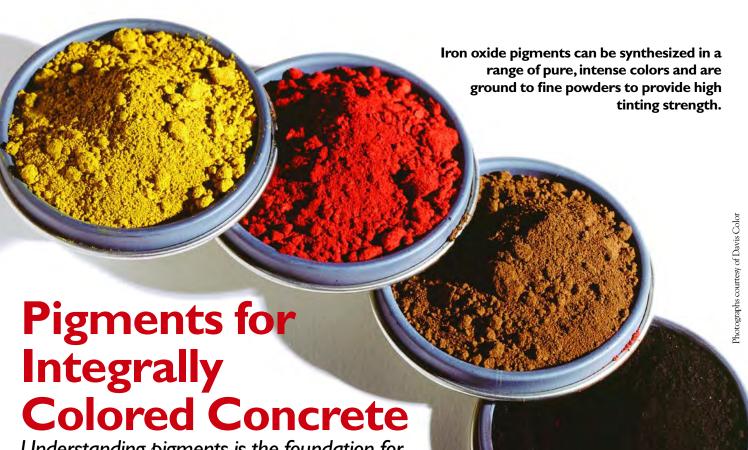


The company's products are being sold and successfully used in a wide variety of geographical markets and climates, from Mexico to Canada, New Jersey to New Mexico, from the Pacific island of Guam to the Czech Republic in Eastern Europe. Satisfied clients range from TRW to Dole, from Disneyland to Starbucks, and from the Hong Kong Airport to Guam Air Force Base.

"We're adding many more employees, we've established sales territories across the U.S. and all over the world, and it's been very exciting watching the company grow," Tracey Holwitz says. "It has been gratifying to take this wonderful system of products Dad created and make another whole business out of it."



CIRCLE #62 ON READER SERVICE CARD



Understanding pigments is the foundation for successful decorative concrete.

by Michael Chusid

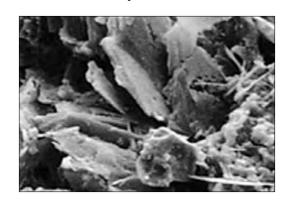
igments are finely ground colored particles that, when blended into a concrete mixture, infuse the concrete with their shade. Humans have been using pigments since Paleolithic times, when pulverized minerals and charcoal were employed in cave paintings that have retained their vivid coloration for as many as 30,000 years. While today's pigments contain some of the same mineral oxides and carbon black compounds our ancestors used, synthesized pigments have substantially replaced pigments refined from naturally occurring mineral deposits. The new processes have resulted in pigments that have greater tinting strength and are more consistent and economical to use.

Not just any pigment can be used in concrete. The alkaline chemistry of portland cement plus long-term exposure to sunlight and weather can cause all but the most inert colorants to fade. In addition, concrete colors have to be wettable so they can disperse readily throughout a concrete mixture. And pigments must not interfere with the workability or structural characteristics of concrete. ASTM C979 — Pigments for Integrally Colored Concrete summarizes these requirements and should be the basis for colored concrete specifications.

Color concepts

Pigments should not be confused with "dyes"; while both are colorants, pigments are insoluble whereas dyes can dissolve and are not suitable for concrete. The optics of pigments are based on the spectral characteristics of light. When exposed to light, pigments create color by absorbing certain frequencies of the visual spectrum and reflecting others. Red pigments, for example, absorb blue and yellow light

These electron microscopic images, shown at approximately the same scale, illustrate how small iron oxide pigments are in comparison to crystals of hydrated concrete. The pigment particles become permanently bound with the concrete matrix for the life of the structure. The needle-like pigments shown are characteristic of yellow iron oxide.





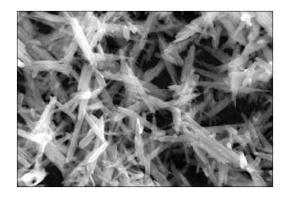
Adding powdered pigments to mobile mixers has been simplified by the use of repulpable bags that can be tossed into a mixer without opening or pouring. The bags disintegrate as the concrete mixes, reducing jobsite problems with colored dust and empty bag disposal.

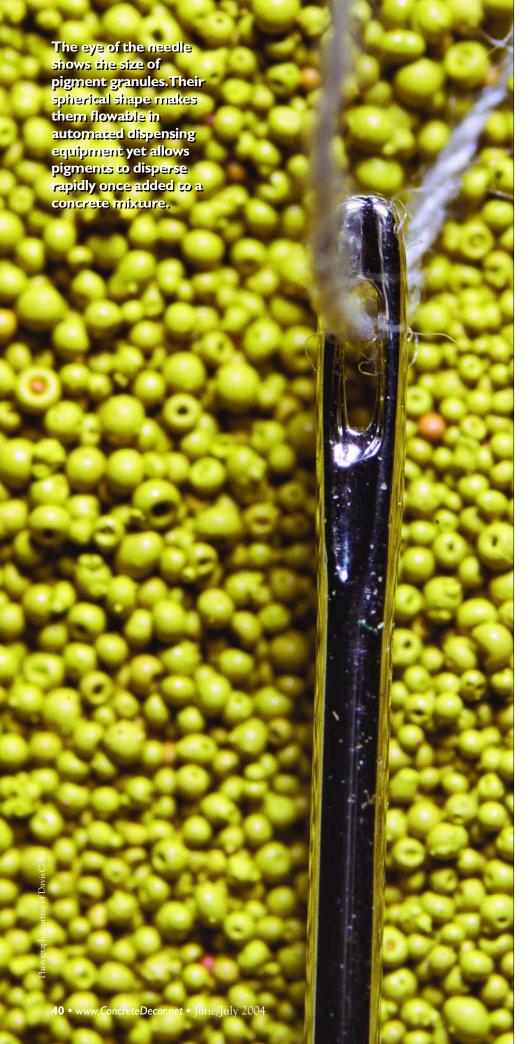
and reflect light at the red end of the spectrum.

In addition to color or hue, pigments also differ in tint strength, the relative ability of a pigment to impart color. For example, it could take ten pounds of a low tint strength pigment to equal the color achieved by just four pounds of a pigment with high tint strength. Taking this into account, a pigment with low cost per pound but low tint strength may be less economical than a somewhat more costly pigment with higher tint strength.

Designs for colored concrete mixtures include a pigment dosage rate expressed as the required weight of pigment per "sack" of cementitious material or, sometimes, expressed as a percent by weight of the cementitious material. Cementitious material includes the weight of cement, lime, fly ash, and other pozzolanic or supplementary cementitious materials in a mixture, but not the aggregates or water.

Dosage rates as low as ½ pound per sack of cementitious material can have a pronounced impact on concrete, creating subtle shades that harmonize concrete with other building or landscaping materials. Increased dosage rates create more intense colorations. Above a certain dosage rate, however, pigments achieve color saturation and the addition of additional pigments will not intensify color. While the saturation rate of colored concrete varies with the pigments used, most high-quality pigments achieve saturation at dosage rates of about 5 or 6 pounds per sack of cementitious material. This is well within the 10 percent dosage rate limitation imposed by the ASTM standard; higher dosage rates could affect the





strength and water/cement ratio of concrete.

While pigments have the most conspicuous impact on concrete color, other factors must be considered. Portland cement, for example, comes in a wide range of shades — from gray or buff to white — that darken or lighten the overall appearance of colored concrete.

Aggregate color is also a consideration. As cast, a thin layer of colored cement paste covers aggregate particles. When aggregates become exposed — deliberately due to sandblasting, abrading or other finishing processes or because of wear and erosion of the concrete surface — the aggregate's color combines with the color of the cement matrix to create the overall appearance of the concrete.

Mixtures with high water/cement ratios will appear paler than mixtures with less water. The texture of a concrete finish impacts color, with broomed or other rough surfaces appearing lighter in color than smooth trowel or form finishes. Note, too, that rough textures can often minimize the visual impact of minor blemishes in concrete. Finally, concrete lightens in color as it cures, so samples or installed work should be allowed to cure 28 days prior to making final evaluations of appearance.

Pigment choices

The pigments most widely used in concrete are mineral oxides, particularly iron oxide, the same compound known as "rust." While we typically think of rust with a reddish orange color, there are actually several variations of iron oxide, each with their own hue. These include: red iron oxide (Fe₂O₃), yellow iron oxide (FeOOH) and black iron oxide (Fe₃O₄).

This palette is expanded by chromium oxide (green) and cobalt oxide (blue). These pigments are significantly more costly than iron oxide and increased care must be exercised when handling them due to health risks associated with long term exposure to heavy metals.

Titanium dioxide, a white pigment, can be used in concrete but has limited application since it is generally more effective to brighten concrete with white portland cement or white pozzolanic materials such as high reactivity metakaolin.

Carbon black, the pigment found in soot and charcoal, is an economical black colorant with high tint strength. Ordinary carbon black pigments can leach out of concrete exposed to repeated wet/dry cycles unless the concrete is well sealed; the same problem can occur in browns and tans blended with ordinary carbon black. New formulations, however, have resulted in carbon blacks that bond permanently in concrete. Carbon black can interfere with air entraining admixtures and requires special consideration when used in freeze-thaw conditions.

A broad spectrum of concrete colors can be produced by blending these "primary" pigment colors. For example, blending yellow, red and a hint of black creates tans and buffs. The shades available for integrally colored concrete are generally considered earth tones; this should come as no surprise since the pigments used in concrete are some of the pigments used throughout nature to color rocks and soils.

Naturally occurring pigments, such as ochre, umber and natural iron oxide are used primarily for reds and browns with low tint strength.

How pigments are made

The chemical engineering used to synthesize pigments is beyond the scope of this article. It is interesting to note, however, that the feedstock for the manufacturing processes includes recycled iron and steel from post-industrial sources. This makes colored concrete compatible with sustainable construction practices such as the Leadership in Energy and

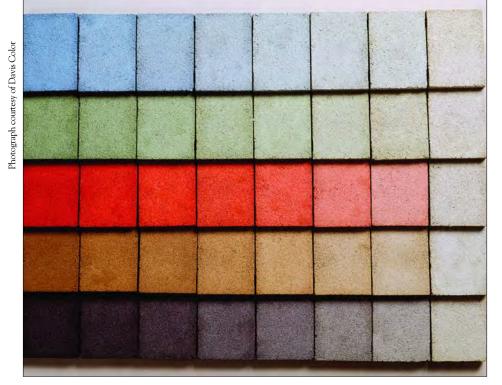
Environmental Design (LEED) program.

Optimum tint strengths of mineral oxides are achieved when pigments are ground to a fine powder ranging from .05 to .10 micron diameter. This is about one-tenth the size of typical portland cement particles and small enough to get permanently bound into the interlocking crystals of hydrated

cement. Powders are available in bulk or a variety of package sizes. For ready mix applications, powders are can be packaged in repulpable paper bags that can be tossed unopened into mobile mixers to simplify handling, reduce dust, and eliminate the need to dispose of empty bags.

Increasingly, pigment producers are processing powder pigments into





These concrete samples show the impact of pigment dosage rates. The chips on the right are plain, uncolored concrete while the chips at the left are approaching the color saturation points of the pigments. Even low dosage rates can make a profound difference on the appearance of concrete and are an economical way to add value to decorative concrete.

granules or liquid slurries that are compatible with automated color metering systems. Granules are used extensively to produce concrete masonry units and other zero-slump concrete products where very low water/cement ratios are required, and liquid colors are rapidly gaining acceptance among ready mix concrete producers.

Powders are typically factoryblended to create a color producer's standard shades or custom colors. Automated systems, on the other hand, typically use just a few primary colors (e.g., the various hues of iron oxide) to blend the required shade at the concrete producer's plant. In the same way that paint stores offer their customers an almost unlimited range of options by mixing colors on demand, the automated systems offer many benefits: Contractors are assured of getting the color they need without

worrying if the concrete producer has a particular blend in inventory. Designers get to select just the shade they want without being limited to the options on a pigment manufacturer's color card. Concrete producers reduce labor costs associated with manual coloring. And everybody benefits from better quality control since the chances for human error are reduced. colors are added at the same time in every batch for consistent mixing time and greater batch-to-batch uniformity, and the automated systems prepare batch tickets showing precisely the colors added.

Using pigments

PCA (www.cement.org) offers guidelines for successfully placing, finishing and curing colored concrete, and PCI (www.pci.org) offers a helpful set of color prints showing the appearance of many colored concrete finishes. Pigment producers are also an excellent source of design ideas for and technical information about colored concrete.

When mixing colored concrete onsite, ingredients must be placed into the mixer in sequence to assure pigments disperse fully. With powdered colors, put pigments into the mixer along with aggregates and approximately half of the required water and then mix; follow this by adding cement and sufficient water to obtain desired consistency or specified slump. With liquid colors, place approximately half of the required water into the mixer, add pigments and mix; then add dry ingredients and mix while adding the balance of required water.

Pigments for integrally colored concrete should not be "dusted" onto the surface of concrete. Dust-on colors or "color hardeners" are preparations of cement, fine sand and aggregates blended with pigments so they become monolithic with the concrete surface.

Concrete is a natural material and subject to mottling and color variation whether pigmented or not. Before construction, take the time to make sure designers and building owners have realistic expectations about the appearance of a proposed project. Final selection of pigments should be made after viewing properly cured samples or mock-ups produced with the materials and techniques proposed for the project.

Following these guidelines will help assure that the colored concrete designs you create are as functional and durable as they are beautiful and inspiring.

Michael Chusid, an architect and Fellow of the Construction Specifications Institute, is a consultant to Davis Colors and serves on ACI Committee 124—Concrete Aesthetics. He can be reached at www.chusid.com.

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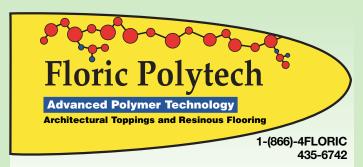
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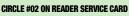
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tripping sealer off concrete is, as Steven Hicks puts it, "nasty."

It involves strong-smelling, caustic chemicals. It fouls up your equipment. It can burn your skin and pollute your client's groundwater. "It's not an easy process," says Hicks, president of ConcreteScience International LLC, a Minnesota concrete contracting firm with franchises across the country. "We avoid it like the plague. You could probably make a living stripping sealer off concrete, but nobody wants to do it."

It's not exactly a cash cow either. The going national rate for removing sealer is \$1 to \$2 per square foot, Hicks says. That's still only about break-even. "I will not allow any of my company's locations to do stripping work for under a dollar. You just cannot make money on it."

But when a contractor is hired to renovate a dingy-looking slab of concrete, removing sealer is often part of the job.

Sealers can be removed with mechanical means such as sandblasting or grinding. But for many contractors, it's a last resort. It destroys the original surface, exposes the aggregate and is a mess to clean up.

Use the alternative — chemicals — and you can find yourself glove-deep in methylene chloride, which can be so strong that the vapors will burn you simply by creeping between your skin and clothing.

If you want to avoid the scarier stuff, Hicks says, you're left with strippers that work very, very slowly

Then there's the dissolved sealer itself, "snotty-looking nasty stuff," according to Hicks. You have to wash it off. And because it's too toxic to wash down the drain or onto a lawn, you have to collect it.





"It's a matter of, do you want to deal with dust or do you want to deal with fumes?" says Larry Good, chemical engineer with Specialty Concrete Products Inc.

In Good's experience, stripping is not that common. "There are pigmented sealers on the market that can be used without having to completely strip," he says. "Depending on the surface, that could be much cheaper."

Gary Henry, business communications specialist and technical writer with Prosoco, says that only film-forming (topical) sealers typically need to be removed. "You should be able to put compatible coatings over penetrating sealers," he says.

At the end of a sealer's lifespan, recoating may suffice, Henry says. If you're applying the same sealer and the old coat is not worn or damaged, you may not need to remove the previous layer.

"They wear off typically," Hicks says. "If you're taking it off, you're taking it off for a reason."

In some situations, stripping is unavoidable. Maybe the coating is irreparably yellowed, peeled, cracked, blistered or "blushing" from trapped water vapor. Perhaps some areas are more worn than others. The new sealer may not be compatible with the original. The floor may already bear so many coats of sealer that it is dulled or discolored. A fresh layer of solvent may not have allowed the newly wet layer underneath to dry properly, leaving a surface that is easily marred and prone to clouding. Or, maybe the client just doesn't like the way it looks.

"I should think the most common is, it's just time to replace coatings," says Henry.

Choosing a stripper

Different kinds of sealers respond to different kinds of stripping chemicals. Generally, like strips like.

Alkaline water-based strippers are effective on one-part waterborne acrylics and some urethane-acrylic one-part systems, says Mark Granados, a chemist at Surtec Inc. Solvent-based strippers attack tougher waterborne sealers, waterborne urethanes and one-part solvent-based acrylics. High-performance coatings, such as two-part urethanes and epoxies, often require methylene chloride-based strippers. Methylene chloride blisters a sealer off the concrete instead of dissolving it into goo like a typical solvent stripper.

So, which remover should you use?

Test six or seven kinds on an inconspicuous part of the floor. "Start with the mildest you can find and work up to the heavy artillery," Henry says.

Specialized goggles will help a contractor inspect the effects on a test patch beforehand. "I put the owner of the floor right there with me," Hicks says.

Napier Environmental Technologies Inc. makes a water-based acidic stripper that the company says will remove any paint or sealer while etching the surface at the same time. It is nontoxic and biodegradable, and it won't burn the skin. "As far as I know, no other stripper on the market will remove paint and etch at the same time," says Nadia Bernard, Napier sales and marketing analyst.

Good, of Specialty Concrete Products, favors a semipaste product that uses methylene chloride as its active ingredient. "You can let it dry, scrape it up," he says. "Once it's dry, it's no longer considered hazardous. It can go in the dumpster."

Most cleaners work by being applied, scrubbed in, then washed off. "After awhile it's going to be saturated and gummy," Granados says. "Just move it around until you see no activity at all. Then it's time to collect it and start again."

Allowing insufficient dwell time for the stripper is a common problem, Granados warned, as is lingering sealer in expansion joints, saw cuts and low spots.

To draw sealer from below the surface of the concrete, he suggests a wet vacuum or sandblaster. "I highly recommend investing in a hand-operated rotary floor machine with drivers to accommodate both scrubbing pads or brushes and a wet-dry vacuum, or a walk-behind automatic scrubber," he says.

Good recommends using a finish sander to buff away any remaining bits of sealer. Hicks touches up with a scrub brush. His company has developed a machine that pressure-washes and vacuums all at once. "Water seems to be the best way to get the snotty concoction loose," he says. "It's just like stripping varnish off wood."

Henry recommends using a poultice made with cleaner and a clay base (cat litter will work) to draw residual sealer out of concrete. The poultice is covered with special paper that protects the paste and keeps it wet. As it dries, it draws the contaminating particles out of the pores.

Generally, chemical stripping will not affect the pH of concrete. But residual alkaline cleaner might. A thorough rinse and vacuum will remove the residue. Also, Hicks says, a manufacturer may not honor the warranty on a new sealer unless the contractor neutralizes the slab with baking soda, vinegar, or another effective substance.

Finally, every expansion joint and saw cut of the slab must be completely dry before new sealer is applied.

Protecting color

Sealer removal may attack the color of the slab as well. "Testing should always be the first thing you do," Henry says "to see how the remover affects the stain."

What's more, aggressive scrubbing to remove the sealer can wear away colored substrate, Granados says. "Proper testing to select the appropriate stripper and allowing the stripper to do the work with a bare minimum of scrubbing will protect the decorative concrete surface."

For Hicks, the most colorful element of a stripping job is managing customer expectations. A contractor who takes on a stripping job is, by definition, already dealing with an unhappy customer, he notes. "You're solving somebody's problem, which means you're in the middle of a negative situation instead of a positive one. If there's ever a time for expectation management, it's stripping and resealing."

Take care of this problem in the testing phase, he advises, particularly if restaining or resealing is involved. Testing only one area encourages the false impression that every other spot will turn out exactly the same way, he says. So do two or three. You'll likely end up with two or three different shades. "Have the guy settle for a range, instead of a single sample," he says.

Also, test the most difficult spot on the floor, not one that seems to be average. When he bases his estimate on the most difficult areas, the job can only go better than expected, he says.

Review the Material Safety Data Sheets and directions for each product. Runoff control options include oil absorption pads and a "vacuum boom," a drilled half-pipe attached to a wet-vacuum.

Technical service is essential, Henry says. Detailed literature and a toll-free phone line are signs the company can offer guidance in a pinch, he says. Otherwise, shop elsewhere. "Don't try to handle it alone. Chances are you may just make it worse."





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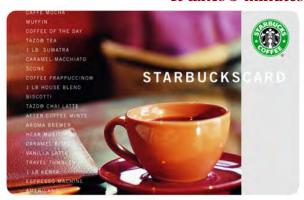
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CIRCLE #36 ON READER SERVICE CARD

Product News

Extra-wide floats cover more surface area

Marshalltown has released an entire new line of tough, lightweight magnesium hand floats. Called "The Hog," these new floats feature a massive 3¾-inch wide blade that covers more surface area and wears longer. They vary in length from 12 to 24 inches, with each model available in the DuraSoft or wood-handle version.

The Hog magnesium floats produce a smoother finish than wooden ones. They are also designed to offer superior handling due to the large blade and positioning

of the handle to give the tool excellent balance. The handles are designed with torque pad screws that will not back out over time. They are especially



They are especially good for preparing

air-entrained concrete for troweling. For more information, visit www.marshalltown.com.

Mixer fits in the trunk of your car

The new Mix-N-Go mixer from Multiquip is ideal for a variety of job applications, including small footings and bases, binding block and concrete patching. The portable mixer, which is available with a thick polyethylene or steel drum, is small enough to be easily transported in the trunk of a car yet sturdy enough to mix up to 3 cubic feet of material.

The mixer is available with both gas and electric engine options. It can be powered by standard household

electrical voltage. It has gears submersed in oil for reduced friction and longer gearbox life. It can also be installed on a stand where the drum rotates 360 degrees for discharging material in any position. Other improvements include replaceable blades that are bolted to the drum and a water-resistant and dust-proof on/off switch.

For more information, call (800) 421-1244 or visit www.multiquip.com.

Overlayment sets fast, takes colors well

Concrete Canvas, from Specialty Concrete Products, is a self-leveling, polymer-modified overlayment that is designed for fast-track resurfacing of concrete surfaces. Available in White or Gray, Concrete Canvas readily accepts acid stains and acrylic shading materials to provide a wide range of color effects. It sets quickly and can be acid stained or shaded in as little as 24 hours. Concrete Canvas reaches 5,030 psi in 28 days, and when properly sealed and polished, provides a low maintenance, economical flooring alternative. For more information, call (800) 533-4702.



Grinding system ideal for small spaces

With Edco Shield — a hardening and densifying agent — and the company's convenient and easily maneuverable floor grinders, you can refurbish, seal, protect and polish smaller spaces up to 2,000 sq. ft. Hallways, small rooms, tight spaces, garages, basements and retail spaces are just some of the areas where the Edco Floor Grinder is ideal for refurbishing and polishing a concrete slab. Edco's grinders have been around for 45 years and can now be equipped with different accessories

to refurbish and/or polish concrete surfaces. For more information, call (800) 638-3326 or visit www.edcoinc.com.

Lightweight trowel works fast

Wacker's new concrete ride-on trowel with electronic steering offers an effortless alternative at an exceptional value. Because this ride-on trowel is lighter than its competitive hydrostatic counterparts, it is able to get onto the slab faster, making more productive use of manpower and equipment. Another plus is that the CRT-ES's lighter weight allows the unit to be used on elevated deck pours.

The powerful 31-hp gasoline engine, coupled with a high-efficiency variable drive transmission, provides the highest performance at a fair value when compared to less efficient, heavier, more costly machines. The mechanical transmission allows the rotors to be timed in an overlapping position for seamless finishing and makes the CRT-ES the only overlapping power steering ride-on trowel in the industry. An onboard computer allows the operator to direct the trowel through the use of two joysticks. The system allows the operator to identify the changing conditions of the slab and work through them smoothly without physical fatigue. For more information, call 262-255-0500 or visit www.wackergroup.com.

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Eliminate the dust and turn concrete surface preparation into a "healthy" experience.

For additional information on Shave Away's line of dust collection products, call 619-223-2154.

CIRCLE #119 ON READER SERVICE CARD

Polaroid photos provide job record

The new Polaroid One600 JobPro camera features simple point-and-click operation and includes new AutoSharp technology for capturing detailed shots as close as two feet. The camera is an ideal tool for capturing works in progress, creating before and after shots, and taking general job site photographs. It incorporates all the features and benefits of instant photography, along with a rubberized finish for an easy grip and exposure control to capture critical details. Additional features include: auto flash; digital frame counter; red-eye reduction; self-timer; tripod mount; and viewfinder dust shield.

Photography needs vary from job to job, but according to Polaroid, 92 percent of users take instant photos to record "before-and-after" results of their work. Other common uses include: using photos as a tool to sell products and services by showing examples of work; documenting claims and protecting against potential liabilities; recording work in progress or work completed; using photos to explain and discuss design ideas; job estimating; and keeping communications clear with clients.

"Instant photography cannot be tampered with or altered during processing, making it the only method of photography that can be trusted to be 100 percent accurate," says Jeff Hopper, vice president and chief marketing officer for Polaroid. For more information, visit www.polaroid.com/jobpro or call (800) 662-8337 ext. C009.

Hat helps you keep your cool

The new Performance Work Hat, from Gorgonz Performance Work Gear, uses patented Hydroweave and Coolmax fabrics to keep you cool and dry while working in warm weather. The hats' Hydroweave technology uses



the power of the sun to cause evaporation and keep your head cooler than most other hats. To use, allow the fabric to absorb moisture by running cold water over the hat and allowing it to soak through for five minutes. Then wring it out and wipe down the inner lining and outer shell. As the sun strikes the hat, the water evaporates, creating an airconditioning effect that keeps you cool.

The Coolmax technology moves perspiration to the outer layers of the hat for quick evaporation. It's uniquely shaped fibers boast great breathability, even when wet. For more information, visit www.gorgonz.com or call (877) 725-4386.

Vacuum designed for concrete dust

The Blastrac Turbo-Vac II dust collection system is designed specifically for the concrete market. This very maneuverable, 68-pound vacuum uses twin 1 kilowatt motors for the highest



pulling power available in its class. It handles dust generated during concrete grinding, planning, cleaning or cutting with ease. The system features a durable, molded plastic debris bin that holds 40 to 50 pounds of concrete dust. A multiple-stage filtration system lengthens filter life. Options include kits for wet applications such as vacuuming rinse water from decorative concrete staining applications. For more information, call (800) 256-3440 or visit www.surfacepreparation.com.

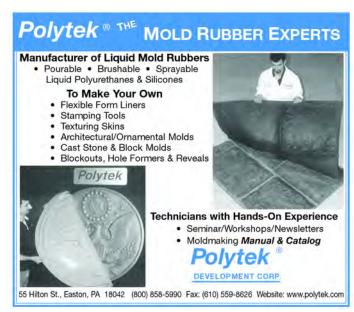




Crack chaser provides tight turning radius

The Sawtec CC-100 crack chaser is a high-productivity, walk-behind saw that cuts concrete or asphalt to a 1inch depth. The unit cuts 6 to 8 feet of crack per minute, or up to 3,000 feet per day,

depending on the material being cut. It features a swivel caster and a retractable control handle, and uses 6-inch diameter dry diamond blades in three different widths. The smaller blade allows a tighter turning radius, making it easier to follow cracks. The saw is available in gasoline or electric models and controls dust when connected to a separate Sawtec Maxi-Vac dust collector. An optional catalytic converter kit reduces gas exhaust emissions. For more information, call (800) 256-3440 or visit www.surfacepreparation.com.



CIRCLE #52 ON READER SERVICE CARD





CIRCLE #86 ON READER SERVICE CARD

The Final Pour

Extremely Involved

t was just a quick phone call, but it sure changed the life of Carlton Construction Company, located in Visalia, Calif.

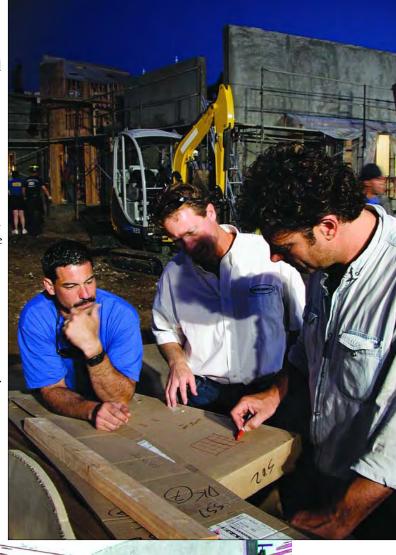
Asked to do the decorative concrete work for an episode of Extreme Makeover: Home Edition, cousins Doug and Scott Carlton thought it sounded like a worthwhile project. Their work on the show, seen by more than 13 million viewers, led to a flurry of media attention in the state of California — and an invitation to participate in four of next season's shows.

Doug Carlton says that the show's producers were thrilled to discover decorative concrete because it can have so many different looks. "Decorative concrete is coming into its own," he says. "We're proud to be representing the industry."

Carlton Concrete did the work on a volunteer basis — part of the complete refurbishing of a home for eight kids whose parents had both recently died. "We got to visit the family afterwards," Carlton says. "As we walked up the driveway, I looked at the front steps we had poured and there were eight pairs of white tennis shoes sitting there.

"I have young children too. It does make you feel good to be part of this."

For a slideshow of the Extreme Makeover project, visit www.concretedecor.net, click on the current issue of Concrete Decor, then click on Final Pour.





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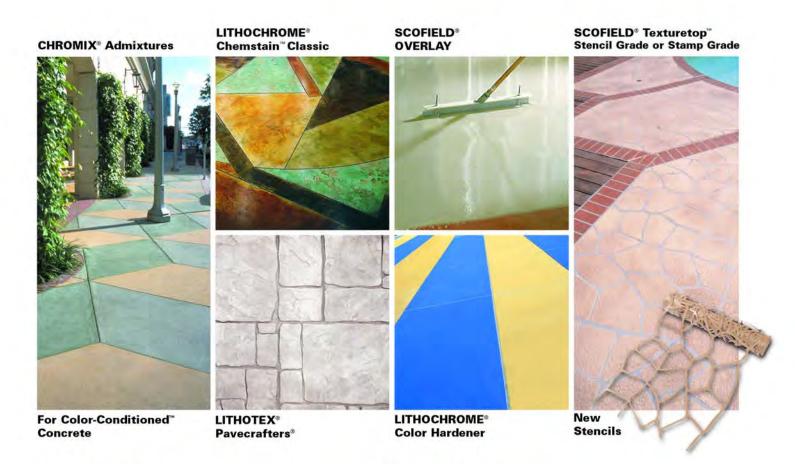


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