

Pick-Up Your Image



Help your customers pick YOU out of the crowd.

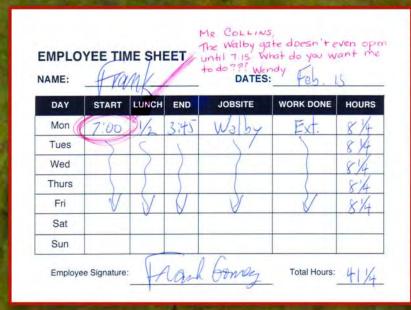
If your business has trouble differentiating itself, you need to take control of your brand right away. Get the power and resources of ConcreteScience® behind your business.

When you're ready to truck in a new image, look to ConcreteScience®. Call (800) 721-8074 today!



Business Development Services for Concrete Professionals

SOME CONCRETE WORKERS DON'T USE THE JOBCLOCK





THANKFULLY 40,000 OTHERS DO.



Jobsite Name:		Walby Residence Pool		Date Range: 2/9/2004 through 2/13/200			
Day Mon	2/9	Start 7:19 AM 12:40 PM	End 12:02 PM 3:39 PM	Activity Prep Prep		hours	7:42 hours
Tue	2/10	7:21 AM 12:37 PM	12:06 PM 3:42 PM	Formwork Formwork		hours hours	7:40 hours
Wed	2/11	7:16 AM 12:33 PM	12:04 PM 3:44 PM	Formwork Formwork		hours hours	7:59 hours
Thu	2/12	7:18 AM 1:05 PM	12:25 PM 3:42 PM	Texture/Seal Texture/Seal		hours	7:44 hours
Fri	2/13	7:17 AM 12:36 PM	11:50 AM 3:41 PM	Texture/Seal Texture/Seal		hours	7:38 hours

Rugged + Powerful + Reliable
Operates 24/7 + Attaches Anywhere

Call today 888.788.8463 www.jobclock.com

Dear Readers,

ell, I've got to hand it to you. You folks continue to amaze me with your downright great attitude toward work. While we may not know each other personally, I've got to believe that it's your attitude that keeps the industry clicking with the outstanding work you do.

If it wasn't for you and your drive to keep pushing the envelope on quality and creativity, there would not be the advancements within concrete technology or the beautiful developments in concrete finishes we have come to know as

decorative concrete. Such advances are now becoming recognized across the globe because of your exceptional efforts. More and more, the talents of contractors here at home are being exported to foreign lands so others can enjoy our workmanship or learn the skills for "building better."

Sharing these advancements through editorials in *Concrete Decor* allows for an enriched flow of communication that helps in its subtle way to contribute to these advancements.

A few weeks ago, the ASCC's Decorative Concrete Council (DCC) hosted its "Spring Fling" event in San Diego, Calif. I would like to tip my hat to Doug Bannister, DCC president, and the other organizers for making this industry event a productive and fulfilling learning opportunity.

Having the opportunity to participate, I was particularly moved by the energy and enthusiasm in this environment of learning. Even at night, when music and the charm of beautiful downtown San Diego was more than capable of relaxing everyone, still there was the inexhaustible drive among everyone at this event to share ideas and offer solutions pertinent to the business of concrete.

To this end, here's another cool edition of *Concrete Decor*. Enjoy it, learn from it, and thanks for supporting it.

Sincerely,

Bent Mikkelsen, Publisher

ONTHE COVER: Concrete homes are known for being durable, soundproof, energy-efficient and disaster-resistant. This home, in the Gifford Park development in Springdale, Utah, sits at the foot of the spectacular red cliffs of Zion National Park. Exterior walls were constructed with Insulated Concrete Forms, strengthened with rebar, and filled with concrete. The ICF walls boast an insulation value of R55. (Photograph courtesy of Allan Staker.)





April/May 2004 • Vol. 4 No. 2 Issue No. 16 • \$6.95

Publisher: Bent O. Mikkelsen

Co-publisher: Ernst H. Mikkelsen

Editor: Rosemary Camozzi Circulation: Sheri Mikkelsen

Design and Production: Stephen Stanley

Web Design: Mark Dixon

National Sales Manager: Kathleen Goodman Western Regional Sales: Debbie Duhn (314) 367-1121

Writers:

Susan Brimo-Cox Christina Camara Bruce Hackett Stacey Klemenc John Strieder David Thompson Jeff Woodard

Editorial:

Professional Trade Publications, Inc. 3410 West 11th Avenue Eugene, OR 97402 Tel: 541-341-3390 Fax: 541-341-6443

Email: rosemary@protradepub.com

Circulation and Administration:

Professional Trade Publications, Inc. P.O. Box 25210 Eugene, OR 97402 Tel: 541-341-3390

Tel: 541-341-3390 Fax: 541-341-6443

Email: circulation@protradepub.com

Concrete Decor The Journal of Decorative Concrete is published six times a year by Professional Trade Publications, Inc. Bulk rate postage paid at Lebanon Junction, KY and additional mailing offices. ISSN 1542-1597

Subscriptions:

One year: USA \$21.95; Canada \$29.95; Other countries \$49.95. All funds in U.S. dollars.

> For Subscriber Services: Call 866-341-3703 Toll Free For Advertiser Services: Call 877-935-8906 Toll Free

© 2004 Professional Trade Publications, Inc.

www.concretedecor.net



Contents

FEATURES

14 Home Solid Home

Want to take on bigger projects? Demand is growing for durable, energy-efficient concrete homes. by Stacey Klemenc

20 The New Terrazzo

Terrazzo overlays — lighter in weight and less labor- intensive — are increasingly popular.
by Susan Brimo-Cox

26 School's in Session

With decorative concrete schools springing up around the country, training will put your company a step above the rest. by Bruce Hackett

30 Acid Staining

Customers are flocking to this unique flooring option. by John Strieder

44 Stone Effects

Synthetic rocks are cheaper, lighter and easier to work with. Here's a look at how it's done.

by David Thompson

DEPARTMENTS

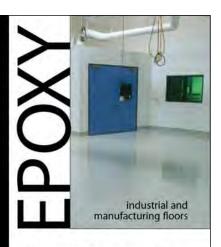
10 CONTRACTOR PROFILE: ConcretiZen

Dana Boyer: Concrete is her canvas, innovation her specialty. by Christina Camara

38 MANUFACTURER PROFILE: Super Stone

Unlike the many newcomers to decorative concrete, this company stands out with more than 40 years of experience. by Jeff Woodard

- 51 Advertisers Index
- 50 Classifieds
- 42 Concrete Marketplace
- 4 Decorative Concrete Tips
- 56 Final Pour
- 6 Industry News
- 8 Industry Spotlight Association News
- 52 Product News
- 36 Product Profiles
- 2 Publisher's Letter



We've been suppling Epoxy floor coatings for over 20 years!

These epoxy systems provide high build, maximum toughness, high gloss, excellent chemical resistance and durability. Available in a wide variety of colors and textures such as "liquid granite." The Life Deck Epoxy Systems are perfect for industrial floors in factories, schools, restaurant kitchens, hospitals, food processing areas, garage floors, dairies and warehouses.







Life Deck Specialty Coatings 770 Gateway Center Drive San Deigo, CA 92102

tel. 800.541.3310

www.lifedeck.com

CIRCLE #51 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!

Valuable tips from early issues of Concrete Decor



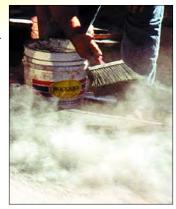
f you didn't know this trick already, you know it now. Strengthen inside corners by placing two 12" to 14" lengths of re-bar into the pour as shown. Inside corners are known for cracking and this reinforcement helps minimize the likelihood for cracks.

— Doug Bannister, The Stamp Store, Oklahoma City, OK

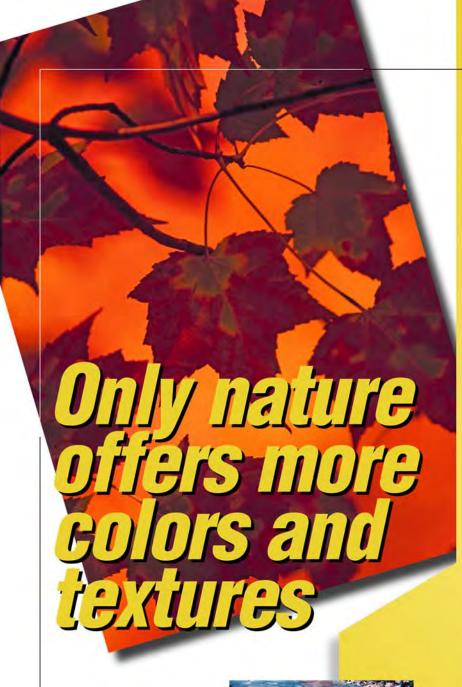
Throwing Release with a Brush

ow many times have you wished there was a better way to throw the powder release agent down before stamping ... besides by the handful?

Well, here's another way. Use a tampico mason's brush or cement-koter brush; the type of brush used for applying cementious slurry coats. Use it like a scoop and heap the release on the brush right out of the pail. With an outward flick of the wrist away from your body, cast the release out on the slab; just like you're casting out a line to catch that big fish. Watch where and how the release lands; with a little practice you'll be casting like a pro. And who knows... maybe you'll even want to do a little fishing when you're done!







For specs and beautiful details contact:





Beautification of concrete is our specialty. Broad selection of colors, textures, proven performance characteristics, ease of application and long-term customer satisfaction can all be yours.

PRO IMPRESSIONS™

A complete stamping system for coloring and imprinting patterns into concrete.

PRO POLY TOP™ A stampable overlay system for resurfacing existing interior and exterior concrete surfaces.

PRO INTEGRAL COLORS™

A line of liquid and powder color products for the integral coloring of ready mix concrete.

PRO PATINA STAINS™ Penetrating reactive stains for producing unique color effects on concrete surfaces.

PRO SURFACE™ A texturing system for resurfacing existing interior and exterior concrete surfaces.

PRO SEALERS™ A line of water-based and solvent-based sealers designed to seal and protect decorative concrete.



ndustry News

ISPC expands to new markets, rebrands Sawtek

International Surface Preparation Corp. is expanding sales of its portable surface preparation equipment in Latin American markets, including Mexico, the Caribbean, South and Central America.

In other news from ISPC, the Sawtec line of surface preparation tools designed for professional contractors has been rebranded under the Blastrac name. Products include concrete grinders, crack chasing and joint cleanout saws, masonry saws, concrete polishing tools, dust collection systems, hand tools, diamond blades and other consumables. The change allows Blastrac to provide a complete range of surface preparation tools. For more information, call (800) 256-3440.

Gillespie, of Sika, is new Fellow at ICRI

Sika Corp. is pleased to announce that the ICRI Board of Directors has voted unanimously to grant Tim Gillespie the position of Fellow of the International Concrete Repair Institute. Gillespie was honored for his significant contributions both to ICRI and to the concrete repair industry. The special membership classification was created in 1998 to recognize individuals who have made outstanding contributions to the concrete repair industry. Candidates can be nominated by any five association members, by a chapter or by the Fellow Committee. For more information, visit www.icri.org.

Design center showcases decorative concrete

Colorado Hardscapes unveiled a completely remodeled Concrete Design Center Showroom in February for the monthly meeting of the Colorado chapter of the American Society of Interior Designers (ASID).

Emphasizing floors and countertops, the 4000-square-foot showroom boasts new concrete floors throughout, including sections of reactive stain, concrete overlays, and imprinted overlays. New countertops and samples, a tree, and a rock water



feature were also added. Signage and samples were arranged with the appropriate floor sections to educate about different concrete applications.

A ten-foot screen was also included in the remodel to allow for presentations, association meetings and educational seminars for which the space is also designed. Colorado Hardscapes plans to offer the complimentary use of the Design Center for professional association and educational meetings and functions. Colorado Hardscapes also encourages design professionals to hold client meetings in the showroom or sample courtyard. For more information, call Teresa Unruh at (303) 750-8200 or email tunruh@colorado-hardscapes.com.

Concrete Decor article nabs first-place award

Susan Brimo-Cox, a writer for Concrete Decor and PaintPRO magazines, received nine awards in the 2004 Communications Contest sponsored by the Pennsylvania Press Club. Brimo-Cox received a first place award for an article on concrete countertops that appeared



in the October/November 2003 issue of Concrete Decor and a third place award for her writing for PaintPRO. The Pennsylvania Press Club is an affiliate of the National Federation of Press Women.

ADFIL launches USA operation

ADFIL USA Inc. has been launched by UK-based Anglo-Danish Fibre Industries Limited (ADFIL) to meet rising demand from US companies for its patented polypropylene construction fibers.

The high-performance fibers are mixed with traditional concrete and used in both above and below ground projects to provide increased durability and fire-resistant properties. ADFIL USA has opened an office in Marlton, New Jersey, and is currently looking for a network of quality distributors to supply its products throughout the United States. Once the brand is established, the company is planning to use its base in the United States to target Central and South America. ADFIL is already market leader in the UK, supplying the majority of major ready-mix concrete producers such as Tarmac, LaFarge, Aggregate Industries Hanson and RMC.

With a production plant in Varde, Denmark, ADFIL has also established itself in Europe and has seen great success over the past couple of years in the Middle and Far East.

The company is leading studies into the use of the fibers in fire-resistant construction through the Eureka

initiative, a European Government-funded program to research advanced technology.

ADFIL USA's product range includes Fibrin XT, which are extremely fine (22 microns) fibers designed to enhance the durability of concrete against abrasion, impact and freeze/thaw damage. The company has also pioneered the design of fire-resistant monofilament polypropylene fibers for use in tunnels and bridges to prevent structural explosion in the event of a fire. For more information, email james@citypress.co.uk.

Dealership opens in Vietnam

Multiquip's first dealer in Vietnam opened its doors in April. General Import & Export Co. in Hanoi carries a full line of Multiquip light- and medium-sized construction equipment, including dewatering pumps, concrete and masonry saws, Whiteman screeds, walk-behind and ride-on trowels, and Mayco concrete pumps. The dealer is expected to add Stow Construction Equipment products to its inventory in the near future. General Import & Export, operated by director Tran Ngoc Khiem, sells equipment primarily to contractors and the government.

General Import & Export Co. is scheduled to open another Multiquip dealership in Ho Chi Minh City, about 700 miles south of Hanoi, in the coming months. In late

March, Multiquip Construction Equipment Pvt. Ltd. opened in Mambai, India, serving the needs of construction professionals across the Indian subcontinent.

Multiquip Inc. is headquartered in Carson, Calif. For more information, call (800) 421-1244 or visit www.multiquip.com.

Countertops — from A to Z

The Concrete Countertop Institute offers comprehensive, engineering-based training for concrete countertops. Jeffrey Girard, licensed professional civil engineer and founder of FormWorks Concrete Countertops, will teach every aspect of making concrete countertops, from templating to installation.

The Institute's mission is to raise the standard for concrete countertops through in-depth training and technical support. "There is a huge demand for concrete countertops, and concrete professionals are desperate for knowledge about how to make them," Girard says. "The Academy will give them all the details: the right mix design, how to reinforce, and how to finish them to provide a beautiful, durable surface."

The academy is offered monthly, and the next session is June 21-24. For more information, visit the website at www.concretecountertopinstitute.com.



Industry Spotlight

Association News

PORTLAND CEMENT ASSOCIATION Decorative concrete manual updated

The latest publication from the Portland Cement Association, "Finishing Concrete with Color and Texture," is a basic guide for planning and constructing decorative surfaces on concrete slabs. This second edition includes a completely new chapter on white concrete and significantly enhanced coverage on staining and painting. Guide specifications assist in developing specifications for decorative concrete projects, and a partial list of manufacturers and service providers is included.

While intended primarily for concrete contractors, "Finishing Concrete with Color and Texture" also will be useful to concrete finishers and apprentices, homebuilders, general contractors, architects, engineers, landscape architects, homeowners, vocational education students, specification writers, and inspectors, among others.

This publication is available online at www.cement.org/bookstore or by phone at (800) 868-6733. Cost is \$30.

Schulz to direct market research

PCA has named Craig A. Schulz as director, market research, with responsibility for identifying cement and concrete usage, trends, problems, and opportunities.

Schulz comes to PCA with a wealth of experience in marketing, research, and economics, including several years with various trade associations. Prior to joining PCA, Schulz founded CS



Market Insight, a market research and economic consulting company. Previously, he was vice president of

marketing for the Steel Service Center Institute from 1995-2001. He holds an MBA from the University of Chicago and a B.S. from the University of Illinois at Urbana-Champaign.

CONCRETE SAWING AND DRILLING ASSOCIATION CSDA elects board of directors

The CSDA has elected six new members to its board of directors, as follows: Tim Beckman of Cutting Edge Services Corp., in Cincinnati, Ohio; Patrick Harris of Concrete Renovation Inc., in San Antonio, Texas; Bennett Jones of Advanced Concrete Sawing, Roseville, Minn.; Jeff Keeling of Precision Demolition Systems, Overland Park, Kansas; Steven Lisowski of Advanced Coring & Cutting, Freehold, New Jersey; and George Major Jr. of Holes of San Antonio, San Antonio, Texas.

INTERNATIONAL CONCRETE REPAIR INSTITUTE New officers and directors at ICRI

The International Concrete Repair Institute (ICRI) membership elected Robert Johnson, The Sherwin Williams Company, as its 2004 president. To support Johnson in 2004, the ICRI membership also elected the following officers:

- President-Elect Robert Pusheck, C.A., Lindman, Inc.
- Vice President Dennis Pinelle, Simpson, Gumpertz and Heger, Inc.
- Secretary Monica Rourke, DryWorks, Inc.
- Treasurer Marty Sobelman, Atlas Restoration, LLC

2003 President Allen Roth, P.E., Joseph B. Callaghan, Inc., will continue his service on the board as Immediate Past-President.

In addition to the president and officers, the membership voted in five new board members, who will serve a three-year term beginning January 1, 2004:

- Garth Fallis Vector Construction Group
- Katherine Klosowski DeNeef Construction Chemicals (US) Inc.
- Michael K. O'Malley Concrete Protection & Restoration Inc.
- Rachel Stiffler Advanced Polymer Technology
- Stephan Trepanier Halsall Associates Ltd.

Interest high in ICRI

Membership in the International Concrete Repair Institute reached 1,700 during World of Concrete 2004 in Orlando. ICRI welcomed 21 new members during the four-day event and anticipates signing up many more interested attendees through a follow-up mailing.

ICRI has enjoyed high membership retention and continued growth in challenging economic times. Since January 2002, the Institute has seen a 15-percent increase in membership and chartered four new chapters.

Anyone interested in learning more about ICRI membership should visit www.icri.org or contact Chris Jorgensen, marketing/chapter relations coordinator, at (847) 827-0830 or e-mail chris.jorgensen@icri.org.

NATIONAL READY MIXED CONCRETE ASSOCIATION Johnson elected president

The NRMCA has elected Hardy Johnson as chairman of its board of directors. Johnson, president of the Florida Business Unit of Tarmac America in Deerfield Beach, Fla., has a long history of service to the industry and the association, having served most recently as first vice chairman of the board of directors. He is a member of many of NRMCA's committees, including Membership, Government Affairs and Concrete Promotion.

In addition, three other new officers were elected to the board. Hale D. Ritchie, Ritchie Corp., Wichita, Kan., is the new First Vice Chairman. Peter Brewin, Cemex Inc., Ontario, Calif., was elected Second Vice Chairman, and Mark Stiles of Trinity Industries, Dallas, Texas, is the new treasurer.

Lemay to oversee applied engineering

The NRMCA has also hired Lionel Lemay as senior director of applied engineering. A structural engineer by training, with design practice experience, Lemay most recently was managing director, market promotion at the Portland Cement Association after a long stint heading PCA's residential concrete promotion efforts. At NRMCA, he will assist with the Prescriptive-to-Performance (P2P) initiative, with a focus on design engineers and architects. He will also be responsible for advocacy/representation on structural design and construction issues affecting the ready mixed concrete industry.

AMERICAN SOCIETY OF CONCRETE CONTRACTORS Position statements available

The ASCC has published Position Statements 10, 11 and 12 in a series of 12, on key issues of interest to concrete contractors. They are as follows:

"Moisture-Sensitive Floor Coverings on Concrete Slabs" (#10); "Appearance Requirements for Concrete Slabs" (#11); and "Responsibility for Buying Concrete" (#12).

Copies may be ordered by calling (866) 788-2722 or e-mailing ascc@ascconline.org.







Dana Boyer ConcretiZen Apache Junction, Ariz.

by Christina Camara



efore Dana Boyer discovered concrete, paint was her artistic medium. Her parents painted for a living, and she followed, specializing in faux techniques, murals and custom airbrushing.

She was perfectly happy painting cars and Harley Davidsons, but a home improvement project changed everything.

Just after moving to Arizona, Boyer decided to replace the white carpet in her home with a concrete floor that would better handle the dirt and rocks tracked in by her motorcycle-racing husband and her dogs.

She wanted just a quick lesson so she could custom paint her floor, but it

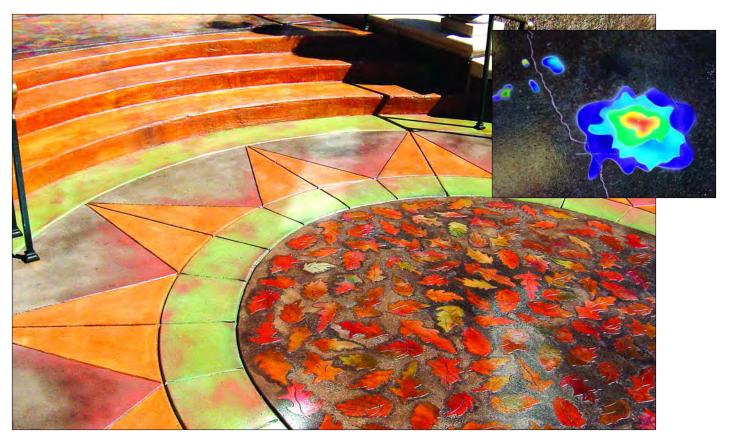
turned out to be an introduction to the diversity of concrete. Boyer was hooked. "It just took over my life. It totally swallowed up my life and consumed me. I just loved it."

Paint was out and concrete was in. Now, Boyer is the owner of ConcretiZen, based in Apache Junction, Ariz. She does it all — art pieces, driveways, pool decks, countertops, floors. She takes residential and commercial jobs, coloring, texturing, stamping, polishing, sandblasting or engraving concrete.

The wide variety of effects Boyer produces began with Mike Miller, the founding father of the Concretist

group. Miller, a leader in developing innovative staining techniques, asked Boyer to work with him. She started at the bottom, doing cleaning and scrubbing and other low-level jobs, but kept her eyes open and learned quickly. Miller, whom she describes variously as "an incredible mad genius guy," "a spinning vortex," "a real blessing," "a kick in the pants," and "the Tazmanian devil on quadruple espresso," taught her everything. "He doesn't take that kind of time with everyone," she says. "I was very fortunate."

Miller asked Boyer to join the Concretist group, a loose organization of artists and craftsmen who pool their ideas and talents to create amazing







www.ConcreteDecor.net • Apr/May 2004 • II



decorative concrete work. Each artisan also works separately, and each of them is always experimenting with techniques and products to produce new decorative effects. The Concretist group's motto is "Concrete & Architecture + Art = The Concretist."

Boyer considers concrete beautiful, and views it as a huge blank canvas. Over the years, she has learned to work with the dozens of factors that affect how a project comes out, and appreciates the unique, changeable properties of concrete.

She has worked with designers and architects all over the country on projects large and small. Whether it's a home patio or a mall, they're all fascinating to her because each one is an opportunity for innovation.



12 • www.ConcreteDecor.net • Apr/May 2004

"Everything that I do is custom," she says. "I just don't throw a color down and say that's it. If you're looking for that kind of contractor, that's not me. I don't have it in me."

She makes use of all types of coloring systems: integral colors, color hardeners, chemical stains and more. She creates her own palette and can produce dazzling effects — a floor in brilliant teal blue, or a natural-looking floor with subtle variations of color.

Boyer recently recreated Vincent van Gogh's famous painting, "The Starry Night," on the floor of a doctor's office in Phoenix. One of her concrete floors may look like a stone path, another may resemble an array of different colored blocks, a scattering of fall leaves or wooden planks. Images of fish, kelp and glass bubbles have made their way into Boyer's work. Textures may resemble marble, rawhide or elegant alabaster.

Boyer also designed a wild-looking conference table for The Stamp Store, an Oklahoma City business that provides decorative concrete training and materials. The table features green and blue acid stains with gold accents. Boyer herself still shakes her head in amazement. "I look at it and I'm like, 'My God, I did that?' I just can't get over how beautiful it is."

She says her toughest challenge is not the hands-on concrete work, but dealing with customers who aren't sure what they want. Customers should expect variability, not uniformity, since concrete is an unknown variable with a mind of its own. Boyer tries to educate each client at the outset, explaining that she can't possibly match a one-inch color chip across 10,000 square feet of flooring.

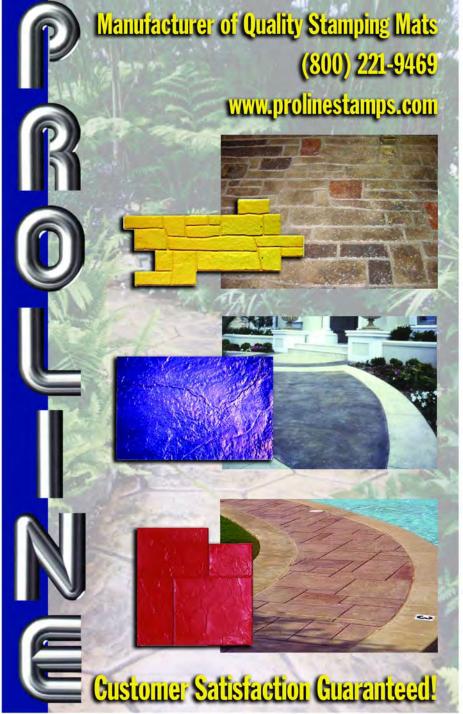
One challenge she has not had to worry about is working as a woman in a male-dominated field. "On the most part, the guys have really been good to me," she says, and she feels grateful for the encouragement and mentoring she has received from some of the top experts in the decorative concrete industry.

Boyer is eager to learn as much as she can about her favorite artistic medium,

and is a strong advocate for continuing education in the trade. Those who don't want to learn more are selling themselves short, she says. Boyer says she's like a 10-year-old kid, always learning, always trying new products and constantly asking why. "I want to know everything I can," she says, adding, "Nothing takes the place of good old trial and error."

She'd like to do more sculpture with concrete, and is always open to new ideas. The broad array of colors, textures and applications for concrete are just beginning to be recognized.

"People have yet to realize the full potential of concrete and concrete products," she says, "It's an untapped market."



CIRCLE #63 ON READER SERVICE CARD

Home Solid Home

Americans are warming up to the idea of concrete houses

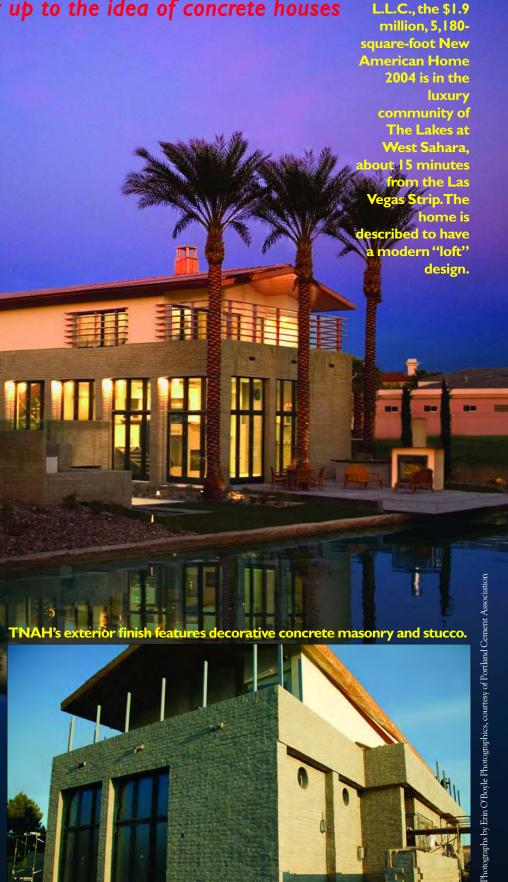
by Stacey Enesey Klemenc

he ancient Romans had the right idea. If you want a structure to last for centuries (think Coliseum, aqueducts), shelve the sticks. Build it out of concrete.

And although most Europeans grasped onto this concept eons ago their dwellings are built to be passed on from generation to generation it's taken the less frugal Americans awhile longer to literally bring the concept home.

But it's here and finally catching on. According to the National Association of Home Builders, the market share of concrete homes has steadily increased in recent years, from 3 percent in 1993 to more than 14 percent in 2002. In 2002 alone, more than 150,000 single-family homes were built with a variety of exterior abovegrade concrete wall systems, including masonry construction, which uses concrete blocks to form the basic structure of a home; cast-in-place forms, which are filled with concrete to create walls, then removed once the concrete is hardened; precast panels, which are cast in a factory and then assembled in large sections at the job site; and insulating concrete forms (ICFs), where concrete is pumped between two layers of foam insulation to form walls.

The No. 1 reason concrete homes are gaining in popularity depends on who you ask, and where. "There are five or six strong benefits associated with concrete," says Dave R. Pfanmiller, managing partner of the Security Building Group, L.L.C., who built the first cast-in-place concrete home in Raleigh, N.C., and is currently building concrete condominiums in North Topsail Beach. "Depending on your



Constructed by

Contracting,

Merlin

geographical location, the list is reprioritized.

"At the beach, strength and safety are a big issue. In the Milwaukee area, it's energy efficiency. In another part of the country, it's durability [resistance to insects, mold or fire]. You just reshuffle the deck and you come up with the same benefits, just in a different order."

But the list remains the same. Concrete walls make for a house that's comfortable, solid, durable, resistant to natural disasters, quiet and incredibly energy efficient.

According to Reid T. Pocock Jr., president of Dominion Building Group in Virginia Beach, Va., who's been building homes with PolySteel ICFs for more than 10 years and has twice won

THE NEW AMERICAN HOME: A modern concrete marvel

The upper level deck, with its

stained concrete flooring, is a

fine example of a very usable

utdoor room.The exterior

For the first time since 1994, concrete provided the vast majority of the structural elements for The New American Home (TNAH), the official show home of the National Association of Home Builders that debuted during the 2004 International Builders' Show in Las Vegas.

The 5,180-square-foot home brings the outside in and the inside out, with excellent use of natural light and dramatic use of building materials. Insulating concrete forms (ICFs) make up the high-performance envelope for the belowand above-grade walls.

Precast hollow-core concrete planks provide the flooring structure for the home's interior. Three different concrete flooring techniques, integrated with decorative finishing, appear on all three levels, as well as the exterior decks.

Concrete pavers line the pool deck, while an exposed aggregate finish covers the boat dock area at the rear of the home. All of the concrete flatwork areas make extensive use of pattern-stamped and stained decorative concrete, as well as white cement.

Decorative concrete masonry and/or stucco clad the exterior and landscaping elements. Several of the interior walls are coated with a portland cement-based

> textured limestone finish, while others feature exposed masonry. Concrete countertops grace two of the bathroom suites.

The home has been designed to reach a Home Energy Rating System score of 90 (well above the current Energy Star rating requirement of 86) thanks to the high number of highperformance technologies, including the ICFs. Homes built with ICF exterior walls offer greater energy efficiency, improved comfort through less air infiltration and reduced sound penetration, and greater strength and durability — without sacrificing beauty

hot water and lighting than a

and architectural flexibility. TNAH is designed to use nearly half the energy for space heating and cooling,

standard home.

wall is finished with stucco.



national awards for energy-efficient building, "My clients typically save between 50 percent and 70 percent of what it costs to heat and cool a stickbuilt house the same size." As a matter of fact, he adds, he's built a 2,200-square-foot house in neighboring Smithfield that has an average heating and cooling bill of \$18 a month. And it gets these results with an HVAC system that's half as powerful as the typical unit installed in a house that size. Other builders across the country report similar savings for their concrete homes.

Building a home with concrete usually costs 3 percent to 5 percent more than the conventional stick-built method. "There is a learning curve," says Jim Niehoff, residential promotion manager for the Portland Cement Association, headquartered in Skokie, Ill. "That cost could be as high as 10 percent to 12 percent until the contractor gets the hang of it."

But, Pocock quickly points out, the slightly higher initial cost will quickly be recouped by the homeowner through the reduced cost of heating and cooling alone.

Energy efficiency aside, Pocock concedes that in his neck of the woods homeowners want a concrete home because it can stand tough in hurricaneforce winds (Isabel did visit the area last year), but he says you'll be surprised by the main reason why his customers who

outgrow their first concrete home choose to build another. "Although it seems like the most ambiguous of the reasons, most people build with concrete again because of how secure and comfortable they feel inside the house. They love the quiet."

Insulating Concrete Forms

Of the many ways to build a concrete home, "Concrete block is the most popular method," Niehoff says. "But ICFs are by far the fastest-growing segment."

The Insulating Concrete Form Association in Glenview, Ill., reports there are more than 70 brands of ICFs in North America, each with some variations in design and materials. Basically, though, they are hollow blocks or panels made out of rigid foam insulation and welded steel. Once they are stacked in place, workers pour reinforced concrete into the center of the forms to produce a home's walls. The forms are a permanent part of the wall assembly. The house can be built slab-on-grade or on a crawlspace.

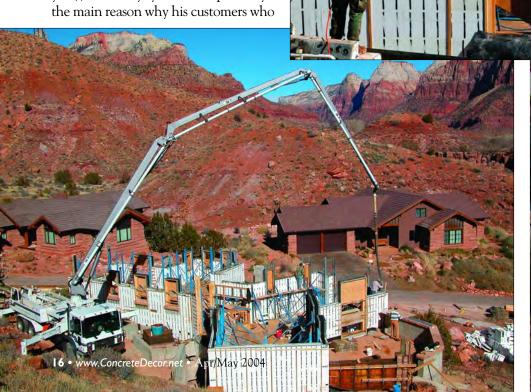
"Houses built with ICFs aesthetically look like any other house on the block," Niehoff says. They can be sided with most anything, including stucco, brick, fiber cement or vinyl.

And just like most other houses, the interior walls are covered with drywall. Pocock explains that the forms he uses have metal furring strips which are spaced about a foot apart and lie 3/8-inch below the foam. "You screw the wall board to that," he says.

Allan R. Staker, a retired petroleum geologist turned developer who is currently building homes near Zion National Park in Utah, says when he first started his current project in Springdale he was using conventional

2-by-6s to create custom homes that look like national park structures built 75 years ago. But he was sending about a third of the wood back each shipment because it was substandard.

"That's when we decided to make the switch to Arxx



ICFs," he says about the wall system that stacks up like LEGO building blocks. "We were skeptical at first. But we tried them and we liked them. They make an incredibly straight wall that is very sturdy. Everything we're building now and in the future will be out of ICFs."

Of all its fine qualities, Staker says, he likes concrete's permanence. "Once you build with concrete, it's there to stay. My homes will be around for 200 to 300 years." In comparison, most builders agree today's stick-built homes will last an average of 50 to 70 years without some kind of major renovation.

Cast-in-place has its place,

Although ICF use is certainly on the rise, the building method isn't for everybody. Pfanmiller says he saw ICFs nipping at the residential market, tried them and didn't like them. "They didn't fit our workforce," he explains. He found a system made by Wall-Ties & Forms Inc., which basically consists of removable aluminum forms designed for above-grade applications, to be more in line with what his workers were used to.

Concrete houses constructed with these forms are built "one lift," or a story, at a time on a slab-on-grade or an elevated slab. The forms are removed



Island creation

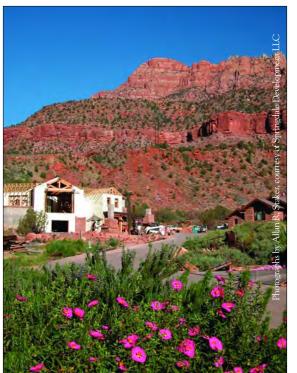
Fu-Tung Cheng designed this concrete home currently under construction on the island of Culebra off the coast of Puerto Rico, smack dab in an area known as Hurricane Alley.

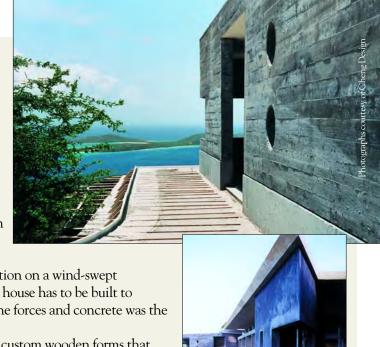
Because of its location on a wind-swept mountainside, the house has to be built to withstand hurricane forces and concrete was the logical choice.

Cheng built 20 custom wooden forms that were 8 feet long and 30 inches high and lined them with laminate to create the super-smooth, 160-foot-long curved exterior wall. The soaring roof and most of the house is cast-in-place concrete construction. The rest of the house was cast with more conventional forms, he says, and also contains concrete block.

and then used again for the second lift, with the ceiling of the first lift also serving as the floor for the second. The exteriors are typically covered with brick, stucco or stone, and the interior walls are left a smooth concrete or plastered over for a textured look.

The forms are a major investment, Pfanmiller admits, costing a couple hundred thousand for the lot, but if





you're in the forming business much of the equipment and tools you already have can be adapted to this method of concrete home building. "There's a difference between basement and housing forms," he says, "but it's the same technology." And, like basement forms, the housing forms are designed to be used for many years to come. "I'll wear out before the original set of forms wears out."

The one thing that concrete home builders have to stay on top of more so than traditional home builders is planning, Pfanmiller warns. "We ask the homeowner the same questions, we just ask them earlier in the construction process" in matters concerning heating, electrical and plumbing components.

"One of the principal differences in our forming system as compared to ICFs is it allows us to pour walls and floors at the same time. This monolithic pour creates a tremendously strong structure with no joints or seams," says Pfanmiller. "Its strength is second to none."

Which is the driving factor for the concrete home demand along much of the East Coast. Pfanmiller says the six 3,060-square-foot concrete duplexes he built in North Topsail Beach each weigh more than 1 million pounds. "Imagine what kind of wind it would take to upset that structure," he says. According to independent tests conducted by Texas Tech University, reinforced concrete homes can withstand 250 mph winds and projectiles traveling in excess of 100 mph. Thankfully, most hurricanes never reach that velocity.

Quality is the overriding factor

Jon S. Rufty of Rufty Homes Inc. in Cary, N.C., a builder who worked with Pfanmiller on his first concrete project



18 • www.ConcreteDecor.net • Apr/May 2004

three years ago, has since built a 10,000-square-foot cast-in-place beauty in Raleigh, among others. His reason for building concrete homes has little to do with the weather. "Storms are a minor reason," says Rufty, who builds homes in the \$1.5 to \$4 million-plus range in the Research Triangle Park of North Carolina. "Our clients are looking for better quality and concrete homes are superior in construction. Whether you're talking about energy efficiency, indoor air quality, safety or insurance rates, they're just superior."

David J. Davenport, AIA, of Davenport Architecture Design Inc. of Cary, who has worked with both Rufty and Pfanmiller on several occasions, agrees. "You cannot find a better, more durable material in the world than concrete," he says. "It's a wonderful liquid that can be made into any form



that you want. From an architect's perspective, I love concrete. It's beautiful as an entity and limitless in what you can do with it. You can make it look like anything you want."

Photographs courtesy of Tidewater PolySteel, Inc

From an environmental point of view, he says, "It's a more energy-efficient way to build. The thermal performance of concrete homes surpasses anything you can build out of wood."

As for its other attributes, Davenport says, "It's an environmentally friendly, incredibly green material." The elements made to create concrete are very plentiful and renewable. Concrete can be recycled. It contains no cellulose so it won't support the growth of mold. There's no off-gassing to affect indoor air quality and the product will practically last forever.

"That is a key element," sums up Rich Warren, executive director of the Southern Nevada Concrete and Aggregates Association in Las Vegas. "Concrete's sustainability. It not only lowers the life-cycle cost of the structure but it extends the life of a building, too. It's a great concept to pass on to the generations to come. Let's build better buildings."

And now's a good time to start.



Tried and True Recipes for Concrete Homes

Just like there's more than one way to make chocolate chip cookies, there are plenty of ways to build concrete homes with satisfying results. Here's a synopsis of the main ones:



Concrete masonry units

A concrete home building system that is familiar to most Americans is concrete masonry, also known as concrete block. Using this time-proven technique, masons lay a series of courses, or rows, using the block units. Each course is set on a layer of mortar to bind the blocks and to ensure proper spacing. The most common exterior finish is stucco, while on the inside surface the walls can be furred out to accommodate drywall.

There are a number of new types of concrete block systems on the market that make it easier than ever to achieve a wide variety of architectural looks and to incorporate rigid insulation for added energy efficiency.

Insulating Concrete Forms (ICFs)

One of the fastest growing methods of home construction in the United States involves the use of Insulating Concrete Forms. Two basic types of ICF systems are currently available. One uses hollow, polystyrene blocks that stack



and interlock almost like children's building blocks. The other uses panels or planks that are held a constant distance apart by a series of plastic or metal ties.

After using the forms to construct a hollow wall with vertical and horizontal steel reinforcement, contractors pump concrete into the cavity to create a solid structural wall with insulation on both sides. Unlike traditional concrete forms, the forms stay in place and the polystyrene insulation on either side of the concrete functions as the insulation for the home. Drywall is screwed into the

fastening surface on the interior side of the forms. The result is a highly energy-efficient, disaster-resistant home that fits into any neighborhood.

Removable forms (cast-in-place)

Traditional concrete forming, also known as cast-in-place, is typically associated with basement foundations and commercial construction. However, in recent years a number of form manufacturers have utilized their products for the above-ground walls and floors of single-family homes.

With conventional cast-inplace construction, a crew erects forms of plywood, steel or aluminum that make a mold in the shape of the desired walls. After placing steel bars to reinforce the wall, the crew pours concrete inside the cavity. Once the concrete hardens, the crew strips the



forms to leave the reinforced concrete walls. For above ground walls, a layer of rigid foam insulation is attached on both or either side of the concrete, or within the inner cavity, to provide additional energy efficiency.

Some cast-in-place systems make it possible to use form liners or apply architectural finishes to the exterior surface of the concrete. On the interior, a skimcoat layer of plaster is typically applied, with painting as the final step — it is not necessary to install drywall.

Panel systems and precast

With precast technology, large sections, or panels, of concrete walls are poured horizontally in a carefully controlled factory environment. Openings for walls, doors, electrical and plumbing lines are selected in advance of the

pour. The factory setting ensures a very high level of quality, which is unaffected by weather or unexpected jobsite conditions. Once completed and cured, the panels are delivered by truck to the job site, lifted into place with a crane, and fastened together. Precast panel systems often incorporate a layer of foam insulation to greatly enhance the energy efficiency of the completed wall.

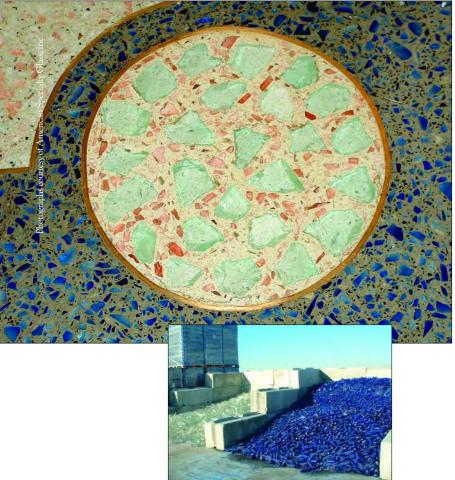
Photograph Courtewof Dukme Precess

A textured finish and coat of latex paint are all that is

needed to finish the interior panel. The combination of concrete and foam insulation delivers an aesthetically pleasing home with superior energy efficiency, durability and moisture resistance. A precast home can utilize virtually any blueprint design.

— Courtesy of the Portland Cement Association





he next time you're at an airport, hospital, convention center, school, large resort, government building or large office building, look down. More than likely what you'll see underfoot is terrazzo.

In indoor applications, terrazzo has a ground and polished surface that lends itself to creative design. The use of divider strips allows the material to be mixed in different colors and applied in a process similar to paint-by-number, so you can incorporate designs, logos, borders and just about anything.

Terrazzo is not used much in outdoor applications, but, when it is, unpolished "rustic" terrazzo is common.

"Traditional" cementitious terrazzo has been used for centuries because of its durability and easy maintenance, but installing it is a labor-intensive and time-consuming process. Generally, traditional terrazzo is only used in large-scale applications.

There are other limiting factors to using traditional terrazzo, as well. Its thickness — often as much as three inches — means other issues come into play. The substrate slab usually needs to be recessed. The thickness of the terrazzo increases the weight load. And it may be hard to find someone with the expertise to install traditional terrazzo properly.

Epoxy terrazzo

In the 1960s, thinset epoxy terrazzo products came on the market. Their use began to take off in the '70s as their many benefits became apparent.

"Epoxy terrazzo is excellent for multistory use, as it is relatively light and offers better flex strength than cement terrazzo," says George Hardy, executive director of The National Terrazzo & Mosaic Association Inc. in Purcellville, Va.

Robert Cain, president of Key Resin Co. in Batavia, Ohio, says these new products have many advantages over traditional terrazzo. "They are lighter weight, %-inch versus 2½ inches thick, high strength, high wear, ... faster to install [and] can accommodate a wider variety of aggregates."

Epoxy terrazzo definitely offers more versatility in color and design. Unlike traditional terrazzo, epoxy is available in unlimited colors. Instead of just marble or granite chips, epoxy terrazzo aggregate options include glass, mother of pearl and synthetic chips. And, while zinc and brass divider strips are commonly used with traditional terrazzo, you also can use aluminum and plastic strips with epoxy terrazzo. So, let your creativity hang out — the sky is the limit!

And there's more good news. As Ken Korizon, manager of architectural sales at Polymerica Inc. in Carrollton, Ga., points out, the thickness of epoxy terrazzo is only ¼- to ¾-inch, but "because of the epoxy, its compressive strength is over 10,000 psi, compared to around 5,000 for cement terrazzo."

The thinner installation also means the concrete slab does not need to be recessed, which makes it easier for the concrete people and lowers the cost of pouring the slab. It weighs only around three pounds per square foot installed.

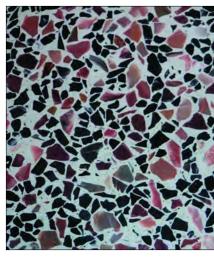
And don't worry about the fumes. Since the early days, epoxy technology has advanced so that "almost all epoxy terrazzo is installed with a 100 percent solid epoxy which has little or no odors or VOCs," reports Korizon.

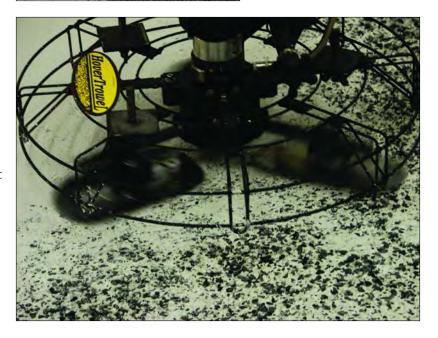
Terrazzo troubleshooter Fritz Iselin, director of Niagara Research Consulting in Jacksonville, Fla., observes that more than 50 percent of today's terrazzo market is epoxy terrazzo. "In the old days it was a matter of cost. Cement terrazzo used to be less expensive. Not so anymore."

Not only is the cost very comparable, you can install epoxy terrazzo in larger sections. With traditional terrazzo you need to limit your sections to no more than about five square feet because of shrinkage, Iselin says. But with epoxy terrazzo, "there is no real shrinkage, so you can go as large







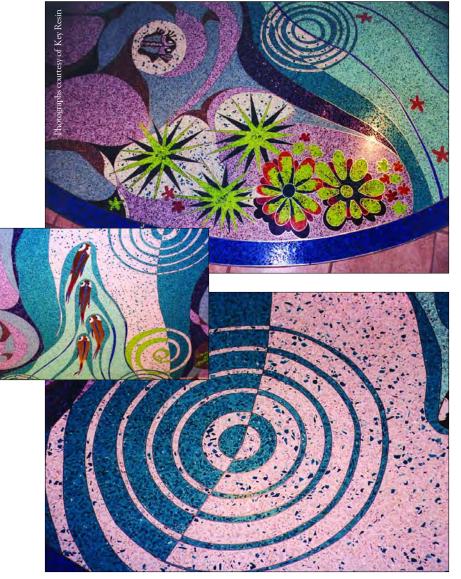


as 15 to 20 feet." You still need to honor control joints, however.

The installation process and tools required really aren't much different for epoxy terrazzo than for traditional terrazzo. Both require mechanical polishing, and though usually done in the presence of water, in some cases dry grinding is possible. There is significant timesaving with epoxy terrazzo, however, because the epoxy cures overnight, rather than the three to seven days needed for traditional terrazzo.

Another advantage to epoxy terrazzo is that it is stain resistant and non-breathable. "Because the epoxy resin is a non-breathable system, it does not sustain growth of mold or mildew, which makes it ideal for schools, hospitals and restaurants. Many pharmaceutical manufacturers use epoxy terrazzo in their labs and clean room environments," Korizon says.

But that characteristic is also epoxy terrazzo's Achilles heel. Cain explains, "Terrazzo overlays are



beneficial just about everywhere because their advantages make them superior. The only limitation is that epoxy systems are non-breathing and subject to problems associated with moisture transmission. . . . [though] there are now treatments and measures that can be used to allow their use in these situations."

Cementitious-based thinset terrazzos

If moisture is a problem but you need the advantages of a thinset terrazzo, you might consider polyacrylate terrazzo, which features a latex-fortified cement matrix veneer. This provides the strength for you to apply it %-inch thick, Hardy says, but like traditional terrazzo, the color selection is limited and it requires a longer cure time than the epoxy systems.

Gary Powell, construction renovation systems and terrazzo specialist with Mapei, in Deerfield Beach, Fla., describes a polymer and additive-enhanced cementitious-based terrazzo overlay product his company is introducing this summer as a hybrid material that falls between traditional and epoxy terrazzo. "It looks like traditional terrazzo, but has several of the benefits of epoxy — thin application, lighter weight and fast-curing ... [and it] is more practical and economical than traditional terrazzo."

The installation procedure differs a bit from traditional and epoxy terrazzo, too, Powell says. After the divider strips are laid, the binder is screed raked into place. Then the aggregate is hand (or machine) broadcast and rolled with special equipment to settle the aggregate into the binder. Powell reports that within two to three hours you can walk on the terrazzo. Dry grinding can begin in 24 hours.

Terrazzo is forever

For all intents and purposes, terrazzo is considered permanent. Higher up-front costs are offset through its long life. Terrazzo takes high traffic in stride. Maintenance is simple: daily sweeping and a neutral cleaner are usually sufficient.

The need to seal terrazzo depends on the binder matrix and the aggregate used. A terrazzo sealer might be needed in certain situations, such as a hospital, restaurant or clean room, if the terrazzo binder is cement-based and if the aggregate is porous (such as marble). How often you should strip and reseal depends on the traffic load. Use of other topical finishes depends on how much sheen you desire.

Remove Mastic for only \$0.08 per sq. ft.

Without the ODOR! Easy Water Rinse





BEAN • e • doo® Made with 100% Soybeans!

Mastic Remover

Easy to apply and even easier to remove and dispose of (land-fill friendly). 100% biodegradable, non-toxic and non-caustic - makes negative air, or other special equipment unnecessary. Very economical. Low evaporative rate allows it to continue to work for up to 24 hours - letting Bean-e-doo Mastic Remover do the work saves labor. LESS LABOR - MORE PROFIT! After extensive testing, a U.S. Postal Authority said, "Bean-e-doo does the trick, with money savings of almost 300%. Furthermore, it is unusual for only one product to meet all the criteria of the U.S. Postal Service."

Coverage:

- · Asbestos Mastic 250 sq. ft. per gallon
- Vinyl Mastic 200 sq. ft. per gallon
- Ceramic Mastic 150 sq. ft. per gallon

Available in:

- Gallon
- 5 Gallon
- 55 Gallon Drum



Terrazzo can be repaired, though matching may not be easy. It's best to replace a whole section between divider strips if a repair is required.

As demand grows, craftsmen are needed

The industry is seeing a growing awareness of the benefits of terrazzo, and contractors are scrambling to keep up with demand.

"The thing I hear from first-time installers is that it is not as easy as it looks or sounds," reports Hardy.

Iselin agrees. "Not many young men are coming into the business — it's hard work. What we're finding is that immigrants who have experience with the crafts in Europe and other places are coming here and taking up the trade."

Workmanship is a real big issue, he says.
"[Terrazzo] is a piece of art — it is working art."

You need a certain skill level to achieve it.

Terrazzos — traditional, thinset and otherwise — are special types of installations. Cain cautions individuals interested in learning the skills needed that "the learning curve for most new contractors has tended to be very steep. It is highly recommended to get thoroughly trained or hire experienced people to get started."

Terrazzo finds a new use in kitchens

On the heels of the concrete countertop trend, terrazzo is making its way into the kitchen. Steve Jarred, a field representative for Mason Supply Co. in Eugene, Ore., says one of the most popular applications for terrazzo in the Pacific Northwest right now is for countertops.

When precasting, the vibrator shakes the aggregate to the bottom of the mold, which is the top of the surface. This is ideal for grinding and polishing for a terrazzo surface, whether the application is a wall, column or countertop. You also can hand-seed pretty aggregate to grind and polish on a new slab poured in place, he says.

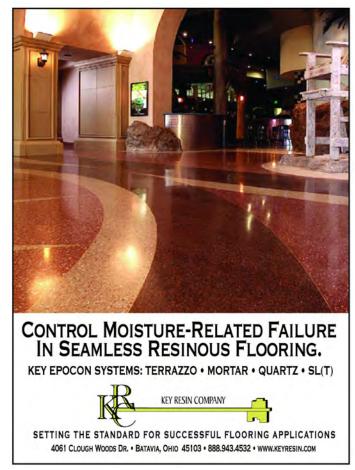
With consumer interest in terrazzo countertops growing, Jarred laments, "I wish more people did terrazzo."

And don't forget you need the right tools. Korizon points out, "An investment in the right machinery is necessary. This includes grinders for the floor, both heavy ones and flexible-shaft ones, and different types of mixers."

While learning the craftsmanship of terrazzo installation, it's good to visit projects where terrazzo is being installed, learn from a professional terrazzo mechanic, listen to your material manufacturers and suppliers, and then start small. As your talents and projects grow, so will your art.

For more information about terrazzo, visit The National Terrazzo & Mosaic Association's Web site at www.ntma.com.







CIRCLE #49 ON READER SERVICE CARD

CIRCLE #23 ON READER SERVICE CARD



For concrete repair on building façades, balconies and parking structures,

you should know more about Sto.

Sto Corp. manufactures quality-engineered waterproofing, repair and aesthetic concrete treatments that set industry standards of excellence. Improve the life and the look of your concrete repair. Sto pros are ready to help you diagnose problems, formulate repair strategies, and select appropriate repair materials to ensure the success of your project.

Call us toll-free at 1-800-542-3057 or visit **www.stocorp.com** for more details.

The more you know about Sto, the less you think of our competition.



Education and Training Bring Many Rewards

by Bruce Hackett

s most concrete contractors are aware, the market for decorative concrete has grown exponentially over the past 25 years, and especially during the past 8-10 years. What was once a highly specialized application limited to theme parks, resorts and casinos has become an established niche market with thousands of installations in a broad range of commercial, residential, corporate and hospitality environments.

Not surprisingly, the money-making opportunities inherent in decorative concrete installation have not gone unnoticed. Experienced concrete contractors are taking advantage of this "sexy" niche in order to improve their bottom line. In addition, artistically inclined newcomers with limited background in concrete are also trying their hand at designing and installing decorative concrete.

Therein lies a big problem, both real and potential, according to knowledgeable industry insiders. While there are without question some very highly skilled practitioners out there doing outstanding work with decorative concrete, there are, regrettably, too many people with little or no training or education in proper installation techniques. Their efforts are often unsuccessful or inferior, resulting in unhappy customers and a black eye on the industry's overall public image.

"One bad job by an inexperienced contractor can poison the well for the people who do a good job," asserts Ward

Malisch, senior managing director of the American Concrete Institute (ACI). "There are people who say, 'Wow, this is great, it's a booming market, I want to jump right in and get some of that business.' But it's more difficult than it looks. Concrete is a unique material with many variables involved, and you have to know how to deal with them. Proper training from someone with significant field experience is crucial."

Bev Garnett of the American Society of Concrete Construction (ASCC) agrees. "Our mission is to promote quality installation, whether it's basic gray concrete driveways or fancy decorative work. You absolutely have to know the basics of working with concrete before you can do decorative concrete. If all you do is attend a one-day seminar and watch someone stamp and stain a 3' x 3' concrete sample, and then think you can do it yourself, you're in for some trouble."

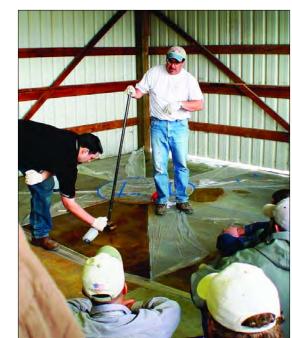
There are many professional opportunities for the concrete contractor who wants to further his or her education and training in installing decorative concrete. Both ACI and ASCC periodically offer various seminars and courses in different regional locations across the country. A number of manufacturers also offer instructional sessions that explain how and where their products are best used in decorative concrete applications.

Everyone in the industry seems to agree that training is a wise





Decorative Concrete System's annual training event in March drew contractors from all over the Northwest.







investment. "It's probably the best investment a contractor can make," says Bob Harris, president of the Decorative Concrete Institute in Atlanta and a recognized leader in training and education in the industry. "Not only will students learn the necessary skills and techniques needed to install a particular manufacturer's product, they can interface with other contractor students and learn from each other during the classes."

As with any situation where one is faced with numerous choices of varying quality, it's vital that the contractor do his homework. He needs to decide what he wants to learn, and he needs to investigate the various offerings and find out about the teacher's background and how the course is structured.

The first step is to determine goals, says Steve Jarred, a field representative with Mason's Supply in Eugene, Ore. "They need to start by asking themselves what they're looking to do. Are they interested in learning about all kinds of decorative concrete? Maybe they want to focus on just one part of the market, like stamping. They need to get more involved and in touch with what's happening. They need to ask questions, read the trade magazines, come to the supply houses, and visit jobsites to see what the various applications look like and how to install them."

Once the contractor has determined his areas of interest, he needs to ask pointed questions about the seminars The Decorative Institute, near Atlanta, offers training for everyone from beginners to advanced installers.

he is considering. ""Probably the most important thing is to find out about the teacher," states Wes Vollmer, a San Antonio-based contractor and independent consultant who has helped teach seminars. "The teacher should be much more than just a salesman or distributor. The teacher should be someone who has a lot of experience actually installing decorative concrete. If the teacher hasn't 'been there, done that,' then they're just showing you pictures of how the product looks, and you're not learning much in the way of technique. The seminar should give plenty of time for each person to get some hands-on experience working with the products and trying the techniques."

Harris concurs. "There are plenty of good schools out there, but unfortunately, there are bad ones as well. For instance, be wary of one-day classes that try to cover too many topics. If

your desire is to learn staining techniques, choose a course with the emphasis on staining. Some schools give just enough information for newcomers to end up doing harm, which does nothing but hurt the industry overall."

Word of mouth is an effective way to learn of a specific program's worth, notes Malisch. "Talk to people who have attended the course. Did they teach useful skills or were they just trying to sell product? If you visit websites like www.decorativeconcrete.net, you can get feedback from others who have posted their thoughts and comments. At major events like World of Concrete, there are many opportunities to compare notes with others in the industry."

Training seminars should include a mix of classroom instruction and hands-on demonstration, believes Clark Branum of Rafco Products.



CIRCLE #41 ON READER SERVICE CARD



"Both offer distinct advantages and the best programs combine the two. Both are necessary for a successful education. Also, contractors should ensure that the program can offer technical support after the class is completed."

There has been some talk about establishing certification programs for those who have successfully completed training seminars, but there are difficulties in doing so. Says Branum, "A certification's value depends on the value or expertise of the organization that issues it. Certificates show only that you attended the class. They don't confirm if you're competent."

If structured properly, a certification program can be a good idea, says Harris, "but in order to certify, prefer, or approve a potential installer to use a certain product requires extensive training that cannot be taught in one day or on an 8' x 8' panel."

Relatively speaking, the decorative concrete industry is in its infancy. "If a guy with insufficient knowledge lands a job, then finds he's unable to do it and walks away, that hurts the industry overall," says Vollmer. "At ASCC, we've organized the Decorative Concrete Council, and we're always looking for ways to better the whole industry. We need to help these guys be better businessmen and be more successful. Proper training plays a large part in that."

Branum says, "Contractor training increases the overall level of expertise in the field, and improves the presence of quality work over poorly done projects. Happy customers mean happy contractors, and happy contractors mean happy distributors and manufacturers."

Concrete Decor offers a comprehensive listing of learning opportunities on our website, www.concretedecor.net. Our training directory and calendar of seminars and events provides the latest on dates, locations and subject matter with links to providers for more information.

See how H&C® Infusion™ transforms concrete.



Introducing H&C® Infusion™ Reactive Stain System.

The H&C® Infusion™ Reactive Stain System is the newest way to give concrete surfaces a whole new look. Available in many ready-to-use colors, this acid stain solution is easy-to-use and delivers excellent results, which helps your bottom line.

- Eight ready-to-use colors
- Mix and match colors to create a unique look
- · Commercial, industrial and residential use
- Resists oil, gasoline, water and UV rays
- Available as a concrete stain, solventbased sealer, water-based sealer and industrial floor finish

Call 1-800-867-8246, or visit your local Sherwin-Williams store.

www.hc-concrete.com



Acid Staining

This coloring technique — in high demand — gives floors a one-of-a-kind look.

by John Strieder

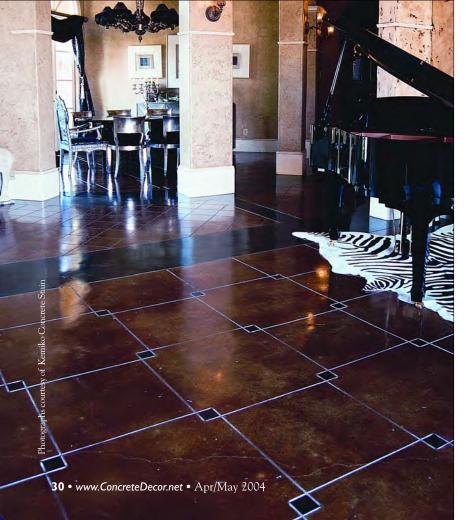


ntegral color and color hardener are still the most common ways to tint concrete. But these days, the buzz is all about acid stain.

"It's one of the most popular things that's going, period," says Sherry White, director of corporate communications for L.M. Scofield Co. "As far as people calling us with inquiries, it's the hottest thing we have going."

Barbara Sargent, owner of Kemiko Concrete Products Inc., agrees. Acid stain gives even the blandest concrete slab a blast of unique character, she says. "Every floor comes up different. I'm not slamming integral color, but that's more monochromatic and uniform than acid stain."

Stain bonds chemically with concrete, creating crystal formations that lend color to the slab. Because the stain is the result of many individual chemical reactions, the tint is uneven — gloriously so. It can contain marbling, mottling and all kinds of variations in the base hue. It can be





manipulated to duplicate the shadings of natural stone or the effects of age. What's more, it's translucent, allowing variations in the substrate to show through. Each stained floor has a look that can't be duplicated, even with another batch of the same stain.

Sargent stained the floors in her home with her company's tan stain, and she sees all kinds of delicious shades in the result: caramel, creamed coffee, buckskin suede. Her company's most popular color, cola, turns out a floor that looks like old distressed leather, she says.

"Landscape architects love staining concrete because concrete is boring and bland to them," she says. "Concrete is plain by nature. If an owner has gone to all the trouble to landscape it, it just finishes off the home."

A homeowner who stains a kitchen floor doesn't have to buy tile or carpet. Stained floors are easy to clean, making them ideal for pet owners and working parents. Acid stain resists snow, mud and sand, and doesn't attract allergens. And it wears only as the concrete wears.

Acid stains can color interior and exterior surfaces, from garden statuary and urns to settees and fireplace mantles to countertops and sinks. Stained driveways are increasingly popular, Sargent says.

Age is not a factor. Decades-old concrete will stain as easily as fresh. Concrete that is tinted with integral color or dry-shake hardener will take stain just fine.

How it works

These are the basics about acid stain: The acid, often a mild hydrochloric acid, is mixed with metal oxides or trace minerals, the particles small enough to penetrate the capillaries of concrete.

"Acid stains aren't as acidic as most people think they are," says Lee Tizard, vice president of Floric Polytech Inc. "The solution of acid isn't that high. It's not profiling the surface."

The concrete must be properly hydrated for the process to work. It must be properly cured, at least a couple of weeks old. And it must contain lime.

When the solution is applied, the topical colorants react with the lime to create insoluble crystalline compounds. In general, the higher the cement content, the more intense the color, because there is more available free alkali in the concrete.

The crystalline forms penetrate usually between one-sixteenth and one-eighth of an inch. The deeper the stain, the longer it will stand up to wear.

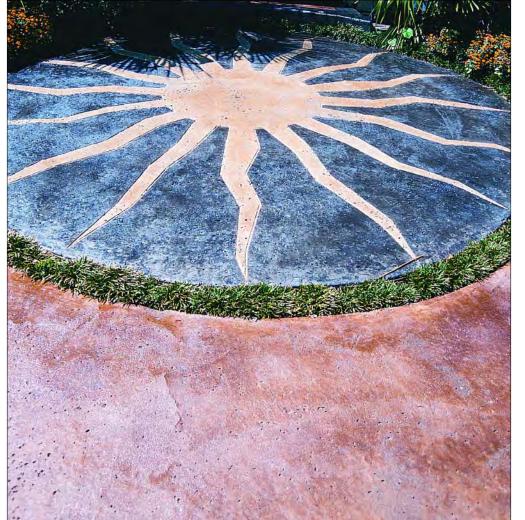
Acid stains come in blacks, bluegreens, and earth tones ranging from reds to tans. But the same color of stain will oxidize differently when subjected to the smallest variation — when puddled, for example, green stain may turn the concrete brown instead.

"Acid staining is an unpredictable animal," says Tizard. "The oxidization of the crystallization as it's forming gives different intensities of color and stain."

What's more, lime varies from quarry to quarry, which also affects color. A tan stain that looks the color of buckskin in Texas, for example, may turn out more russet in Colorado, Sargent says.

All stains are not the same, says Shellie Rigsby, a Dallas, Texas, contractor who specializes in acid stains. Some products marketed as "concrete stains" are, in fact, paint or pigmented sealer, she says. Paint starts out the same color it dries into, but acid stain doesn't. "Black stain usually starts out bright yellow," she says. "Red stain usually starts out a green."

Green and blue acid stains are risky outdoors, because when they are exposed to water, they may change into black or brown, she says. On the other hand, paints tend to be sensitive to ultraviolet rays, while acid stain is not.



Also, each manufacturer has a different recipe for acid stain, she says. Some come ready to use, while others are concentrated, less expensive but with more potential for contractor error. They also vary in terms of strength of acid and particle size. "Acid stain in some ways is like a bottle of wine," she says. "A merlot is a merlot, but they're all a little bit different."

Prep work

By far the best way to ensure the results you want is to obtain a sample of the acid from the manufacturer and test it on one or two square feet of concrete. "I don't think you can say, on an individual basis, what will or won't work," says Tizard. "That's why you do mockups."

It's also important to evaluate the manufacturer, Rigsby says. "If a company has good customer service, that is a good indicator of a good product."

L.M. Scofield's Web site (at www.scofield.com), which describes prep work and spray techniques, stresses that different substrates require different types of preparation. "If the surface is too porous, too dense, or covered with any contaminants, the stain may not penetrate the surface."

If the floor is coated with paint, sealer or any other topping that is not cementitious, it needs to be stripped before acid stain is applied. Even a streak of clear sealer, invisible before the stain, will show up vividly on a slab after a stain.

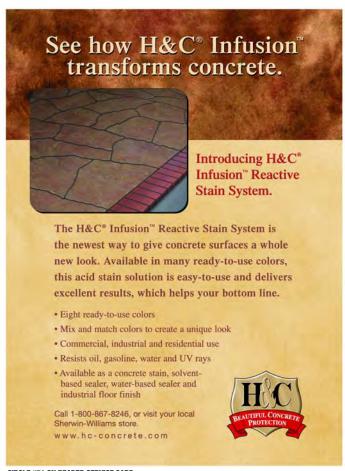
A floor that is tightly troweled will accept stain differently than a floor that was broom-finished. "The tighter the concrete, the less porous it is, and the less penetration you get," Rigsby says. "The depth of penetration has a lot to do with the life of a decorative floor."

Shot-blasting, sanding, and brush or pad work are all acceptable choices for prepping a floor. Do not, however, use acid wash. It will neutralize the lime in the concrete, and the acid stain won't take.

The stain can be applied with an inexpensive garden sprayer, but use one that is plastic; acid will ruin metal. In smaller areas, use a sponge brush.

Perhaps the most critical part of the job comes after the stain has dried: cleaning residue off the surface of the slab. Scofield's Web site explains: "When Chemstain is applied to concrete it reacts with the calcium hydroxide. Once that reaction is complete, there's a residue on the surface that must be removed before sealing. (Mopping the surface is not an effective way to remove the residue because you spread contaminated water each time you return the mop to the surface.)" Instead, the site advised, buff the dry residue using a white pad, then sweep up or vacuum.

The surface should be neutralized with a cleaner such as baking soda or ammonia. "I'm a stickler for ammonia,"







Tizard says. It's caustic, strongly alkaline, and doesn't leave residue like powders, he says.

The crystallizing color can take a while to form. Sargent says her company's black stain will show results within the hour, but their tan will not impress until the following day. "I've seen them take a couple of days to generate color, although not ours," Tizard says. "Everybody is going to have different variables with acid stain."

Because acid stain is translucent, it will not mask any spots or marks. But Sargent offers a solution that will work on, say, an oil-stained garage floor. Lay down two coats of her company's "cola," then follow with a light, random scattering of black stain. The eye will have a hard time finding the stain spots, she says.

Finish the job with a sealer. If it's an interior job, there are also waxes designed for the occasion.



Special effects

Because wet acid stain responds so dramatically to disturbances, contractors like to get creative with their floor patterns.

Ragging, splattering and sponging are common. An air compressor can be used to smear secondary stain colors to simulate marble. Sealer sponged onto an area will resist acid stain applied afterward.

Contractors are known to throw everything short of the family cat onto a floor of wet stain, anticipating the wrinkles and distortions that result from the variations in oxidation. Possibilities include rock salt, fronds, leaves, sand, straw, sawdust, Visqueen membrane, fertilizer, crumpled newspaper, cereal and spaghetti noodles. "The only problem with these techniques is that they are generally a little bit messy," Tizard says. "They are hard to clean up."

Tizard's company also makes a thickening powder that turns acid stain

A pictorial guide to acid staining

If you want an all-encompassing guide to staining concrete floors, check out "Bob Harris' Guide to Stained Concrete Interior Floors," written by Bob Harris, founder and president of the Decorative Concrete Institute in Temple, Georgia.

The book is the first in a planned series of Harris works on decorative concrete. The 100-page guide sells for \$35 and was released this year. It's packed with detailed information and practical tips, as well as vivid full-color photos.

"Bob Harris' Guide" has already picked up a few raves, included at www.bobharrisguides.com. Says Rocky R. Geans of L.L. Geans Construction Co. in Mishawaka, Ind., "This is the alpha and omega of stained concrete instruction ... If I tried to list everything that Bob has included, I would have to write a book on the book."

Harris is a seasoned construction professional, product trainer, and researcher. The Decorative Concrete Institute, which he founded, offers training and workshops in decorative products and techniques.

into "profiling jelly." Jellied stain will cling to walls without dripping and help create formations with crisp, bleed-free edges.

"There are really no rules in acid staining," Tizard says. "Acid staining is a

technology, not necessarily a product. Whether you dilute it, whether you apply by brush or not — these all are different aspects of technique."



PEGGRATIVE GONGREEF, YOUR ONE STOP SHOP! TOOLS • CHEMICALS • TRAINING

Full service manufacturer offering "ONE-STOP SHOPPING" for all your decorative concrete needs...

Deal Directly With The Manufacturer

Offering a complete line of decorative concrete systems:

- Stamping Tools and Chemistry
- Architectural Wall Formliners
- Integral Colors
- Chemical Stains
- Stamped Overlay System
- Textured Overlay System
- Self Leveling System

Factory Training & Technical Support

Seeking Contractors & Distributors Worldwide

- Hands-On Training Seminars
- Technical Support
- Marketing Support-Lead Programs
- Complete Turn-Key Systems
- Worldwide Distribution

Let us show you how to... Pour half the concrete & DOUBLE YOUR PROFITS!!!

Deal Direct and Get More Out Of Your Concrete.

INCRETE. SYSTEMS

The Future of Concrete

www.increte.com (813) 886-8811 *Call Today!* **1-800-752-4626**

CIRCLE #43 ON READER SERVICE CARD

PRODUCT PROFILES



Quick-Imprint Liners

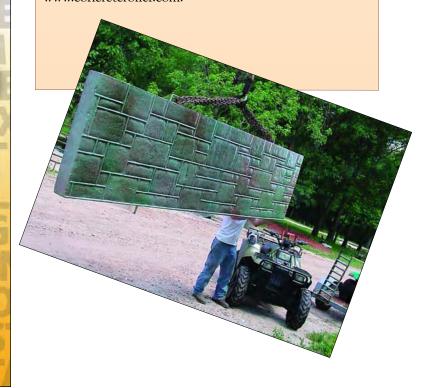
uick Imprint Systems is well known for its Roller System, which utilizes a roller to imprint large areas without showing any stop-start marks while allowing for continuous pouring. The system has been used to imprint millions of square feet for everything from sound barrier walls to medians, patios, pool decks and driveways.

Now the company has come up with reusable form liners — for tilt-up, downcast, and vertical precast pours — enabling an imprint finish on both sides of the walls. The liners are made of a polyethylene co-polymer material that is high density but lightweight. They are very quick to install and can be stripped down without release agents, although a release agent is recommended for longer life.

Designed with perfect matching bed joints and head joints for easy installation, the liners can used to create walls or be fitted to any type of column or Sonatube application. The liners are

also appropriate for historical preservation projects, because they can be used on the reverse side to create a raised bead (see photo below).

"Because of their fast and lightweight installation, the liners are dramatically cheaper and more worker-friendly to use than what's been done in the past," says Brad Jordan, owner of Quick Imprint Systems Inc. For more information, call (800) 746-8820 or visit www.concreteroller.com.



Unlock the potential



A nonprofit organization

Classes Start Today!
Stay current by subscribing to our free e-mail newsletter.

Upcoming Events:

June: Surface Gel Tek - Flattooing® July: Concrafter - Stamping Tools August: Colormaker Floors - Troweled Toppings Buddy Rhodes - Countertops Call toll free **877-935-8906**

see calendar online www.tradeskills.org

Institute for American Craftsmanship

CIRCLE #45 ON READER SERVICE CARD

A-H Stained Glass Floor System

The A-H Stained Glass Floor System, from Anti-Hydro International, is a solvent-based system that creates a vibrant-colored, transparent, high-gloss film for concrete and masonry floors.

The coating, which goes on in four layers, contains no pigments and creates beautiful colors by changing the refractive index of light, like a precious stone.

"We envision the product as jewelry for a room," says Bruce Kreielsheimer, director of operations for Anti-Hydro, which has 100 years of experience as an industrial flooring and waterproofing company. "It's so original we have a patent pending."

The product, designed for high-end residential and commercial use, comes in 15 colors: emerald, tourmaline, jade, amber, citrine, sapphire, aquamarine, moonstone, rose quartz, garnet, ruby, onyx, spinel, topaz, and peridot.

Originally designed to be competitive with acid stains, the coloring system is actually very different because it shows the floor underneath and combines with the underlayment color to create unique hues. "Half the look is our product and half is what you're putting it over," Kreielsheimer says. "It makes it more marbleized."

The product can go over a floor that has been ground to expose the aggregate, creating interesting patterns of color and texture. If you catch an edge and create a groove while grinding, product is thicker in those spots, creating a pattern of dark and light. Some contractors are putting metal flake in the product or even embedding fiber optics.

The Stained Glass Flooring System is appropriate for high-end residences, shopping malls, restaurants, nightclubs, showrooms, hotels, etc. It is not recommended for areas with excessive abrasion, exterior applications, or areas that require slip resistance when wet. For more information, call (800) 777-1773 or visit www.anti-hydro.com





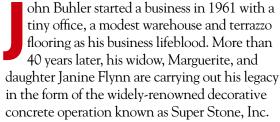
CIRCLE #73 ON READER SERVICE CARD

CIRCLE #67 ON READER SERVICE CARD

Manufacturer Profile: Super Stone Inc.

Opa-locka, Fla.

Florida Manufacturer sees a Super Future by Jeff Woodard



"My father was a pioneer in the industry," says Flynn, Super Stone's chief executive officer. "He was well respected by everybody and helped a lot of manufacturing companies get started. He was a brilliant man."

Flynn initially worked for her father in Super Stone's Ft. Lauderdale, Fla., plant, developing color hardeners and release powders. In 1993, she stepped out of the loop to concentrate on raising her children. But in 2001, she heard her calling. "My dad was diagnosed with cancer, but we thought he was in remission," she recalls. "X-rays first showed five tumors, but then a month later, he had three. He was never in any pain."

After his diagnosis — and with his mind focused on the future of Super Stone — Buhler told Flynn that he wanted her to take over operations in Opa-locka. "What you're going to be doing is solving problems," Flynn says she was told. "I'll teach you. I want you to start on Monday, March 12 (2001)." On March 1, Buhler called Flynn from The World of Concrete convention in Las Vegas. "He was having dinner, and he said, 'Janine, I want you to start this Monday, March 5.' I said, 'Okay.' He died the next day. He was in his glory that night in Vegas." A new chapter in the Super Stone legacy had begun.

A long history of decorative work

Expanding his business from terrazzo flooring, Buhler had begun to produce Epoxy Chattahoochee in the early 1970s and branched out into decorative concrete in the early '80s. "He saw the change coming," says Flynn. The Opa-







locka location, now located in a 60,000-squarefoot manufacturing warehouse, has steadily grown and flourished. In addition, distribution centers in Miami, West Palm Beach, and Las Vegas are thriving, and the company is about to open a fifth store in just a few months, Flynn says.

Super Stone strives to "have it all" for its loyal customers. "We have everything you need for stamped concrete, and then the sealers and the Liquid Bubblegum Release," says Flynn, proudly adding that her father selected the bubblegum scent used for the product, which is designed to release stamps and mats from concrete. Super Stone also produces clear and pigmented lowgloss sealers, table-top epoxies, and "any supplies and forms you might need for decorative concrete," says Flynn.

Four products carrying registered trademarks form the cornerstone of Super Stone's everincreasing line of offerings. Liquid Bubblegum Release was patented by Buhler in the early '90s. Super Stone also manufactures Super-Tex, a finishing system providing excellent durability, custom color-matching and limitless textures and patterns; Super Surface overlayment, a highly cost- and labor-efficient concrete polymer designed to give any existing concrete surface the look of marble, tile, stone or brick; and ChlorStain, a coating available in 10 colors whose formula reacts chemically to become part of the concrete, giving it a weathered look.

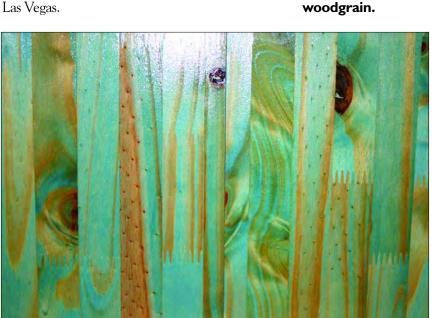
Also prominent within the Super Stone line is Strip It Off, a biodegradable stripper with a light citrus scent. "It removes epoxies, polyurethanes and acrylics, and the fumes won't kill you," says Flynn. "I'm selling that by the drum; people are just loving it." The Super Cleaner Degreaser — which cleans, degreases, etches and is a bond enhancer — is another top seller, and Super Stone's Color Hardener chart will soon be expanding. "We're adding seven new colors to our chart," says Flynn. "In all, we'll have 35 now."

Flynn notes that Epoxy
Chattahoochee, popular in the 1970s, is
making a comeback. "Some people
thought Epoxy Chattahoochee wasn't
good enough, but they weren't
maintaining it properly, so it would
break down and come loose," says Flynn,
adding that a quality polyurethane sealer
is critical to the epoxy's effectiveness. "I
was in California last September, and
they are building new homes with Epoxy
Chattahoochee driveways. We have
about five different colors."

Loyalty among employees and customers alike

Super Stone works with distributors but is not in the installation business. "We don't like to compete with our own customers," says Flynn. "It wouldn't be fair. We could outbid them on every job, and we don't like that." Flynn says Super Stone conducts two-day training seminars monthly in Opa-locka and every three months in Las Vegas.

Super Stone's Super Hydro-Tone shows off woodgrain.







A consistent history of excellent customer service has established a solid foundation for Super Stone's success, Flynn says. "Our customers stay with us for a long time. There are a lot of other companies that are popping up, but our customers are with us for years because of our customer service. Our customer service representatives are even asked for by name."

Flynn said employees of some companies often leave after the passing of their organization's leader. Not so in the case of Super Stone. "That didn't happen when Dad died," she says. "One employee has been here 22 years; another one has been with us for 17, and

a third one for 15. That says a lot about a company right there. You take care of your people."

Flynn is also taking care of the South Miami market. "Since I've been on board, we've opened up a location in South Miami, and it's rockin' and rollin' down there. I was afraid at first; it was the first time I'd done anything like that. But we're so busy down there, it's unbelievable." In addition, the ISO 9001:2000 certification bestowed upon Super Stone in August 2003 is a great source of satisfaction for Flynn. "It took us two years to achieve that goal."

Tickled pink with success

Also of particular personal pride for Flynn is a product she developed, a water-based, translucent pre-coloring system called Super Hydro-Tone. "It's great on open concrete, and also on wood because you can see the grains through it," she says. "It's a beautiful thing, and it comes in 30 colors." One of those colors is a shade of pink, her mother's favorite color. The name of the color? Marguerite. "She loves it," says Flynn with a laugh.

Super Stone remains dedicated to innovation. "We're continually working on new things, but I'd rather not say what," she says. "I don't want to give the competition a heads-up!"



GRIND & SHINE

REFURBISH & POLISH AREAS UP 2,000 SQ. Ft.

Increases Concrete's Surface Strength Significantly **Protects Against Industrial Traffic and Tire Marks Eliminates Dusting and Constant Maintenance** Resists Chemicals, Stains, Oil, Water, Etc. **Economical Polishing System**







A Hardened, Polished, **Protected Surface!**



IDEAL FOR:

Concrete & Masonry Surfaces Interior & Exterior Areas **Garage Floors Basement Floors Patio Surfaces** Warehouse Floors Retail Spaces **Food Processing Facilities**

When EDCO Shield is applied as directed, it becomes an integral part of the surface - sealing and hardening with long lasting results. EDCO Shield changes the wear surface making it denser and harder. Existing (old) slabs must be cleaned and restored to a smooth level surface by grinding with diamond discs. Using coarse grit discs to eliminate the rough, irregular imperfections, high joints, curling, poor finishing techniques and progress through a series of finer grit diamond discs until the surface is left with a clean, smooth finish.

Newly poured slabs should have a hard troweled finish and should age for a minimum of 10 days before the surface is conditioned. Once EDCO Shield is applied - further grinding with a succession of fine grit abrasives will produce a highy polished surface. It's important to note that the condition of the surface (color, texture or appearance) cannot be changed by using EDCO Shield - Only the hardness and density is changed!

Visit us online edcoinc.com

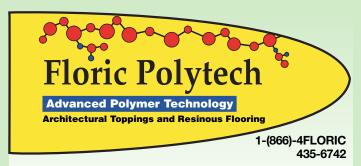
Equipment Development Company, Inc. 100 Thomas Johnson Drive • Frederick, MD 21702 Phone: 1-800-638-3326 • Fax: 1-800-447-3326 E-mail: sales@edcoinc.com

Concrete **Marketplace**

is a paid listing of quality-related products. If you would like more information about any of these products, circle the appropriate number on the reader service card found between pages 52 and 53 of this issue.



CIRCLE #89 ON READER SERVICE CARD



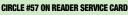
Polymer Modified Cementitious Coatings Stains **Resinous Flooring Waterproofing Membranes**

CIRCLE #33 ON READER SERVICE CARD



CIRCLE #31 ON READER SERVICE CARD







CIRCLE #21 ON READER SERVICE CARD







CIRCLE #59 ON READER SERVICE CARD



CIRCLE #07 ON READER SERVICE CARD



CIRCLE #03 ON READER SERVICE CARD



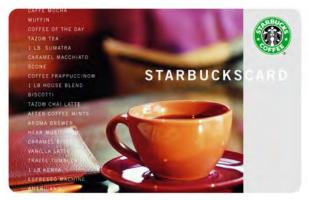
CIRCLE #87 ON READER SERVICE CARD

Want to know more about decorative finishes? **Subscribe to** the best coatings journal in the industry! **Every issue gives you:** New Product Information Powerful Selling Ideas Designer Insights Technical Expertise Great Tips **Call today:** 1-877-935-8906 or subscribe on-line at www.paintpro.net

Earn a Starbucks Card loaded with \$3.

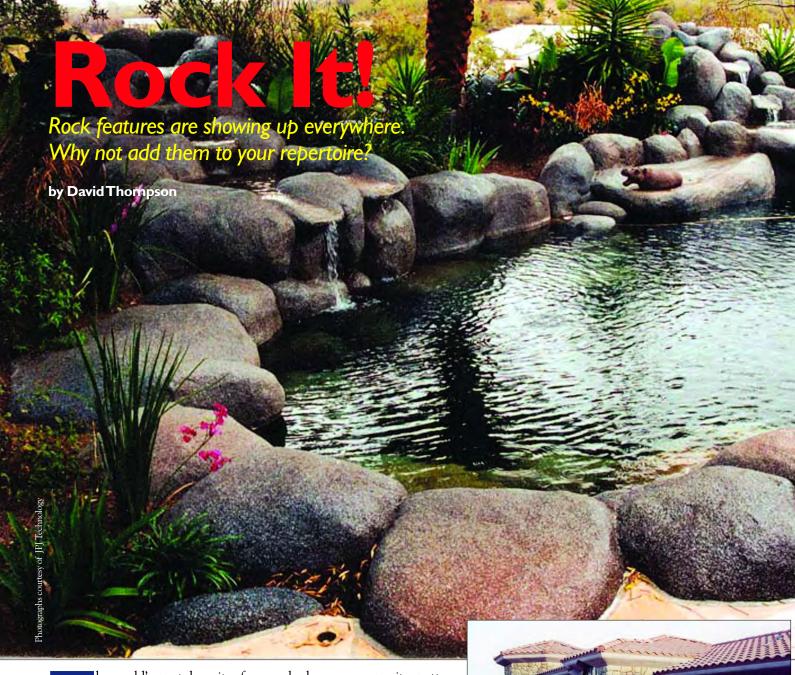
Simply complete Concrete Decor's 5 minute Reader Survey online at **www.concretedecor.net.** Just click on Reader Survey and answer each question. Then sit back and enjoy a cup of "Joe" on us.

It takes 5 minutes.



We appreciate your support.

 $Starbucks, the Starbucks \ logo \ and \ the \ Starbucks \ Card \ design \ are \ trademarks \ or \ registered \ trademarks \ of \ Starbucks \ U.S. \ Brands, LLC.$



he world's great deposits of synthetic rock were once concentrated in zoos, theme parks and the occasional museum exhibit. But times have changed, and these days, faux rock is cropping up all over, from backyard pools and spas to shopping-mall waterfalls.

"The demand for artificial rock is booming just about everywhere," says Bruce Riley, managing director of RicoRock LLC, which uses fiberreinforced concrete to manufacture modular rock waterfall kits. "Only in parts of Southern California has it peaked in popularity."

But if someone wants to put in a sandstone waterfall, a lava-rock

barbeque, or a granite grotto, why not use real rock? There are a number of reasons why faux is so popular.

- Cost is one big factor. For the same money your customer might spend on a modest real-rock feature, they could have a mini Grand Canyon made with synthetic rock.
- Weight is another consideration.
 Pool decks or other structures that
 would fail beneath the crushing
 weight of rock generally easily
 support faux.
- When it comes to water features, which go hand in hand with

rockwork, faux rock has no mortared joints to leak and seep like real rock features do.

- Environmentally, faux eliminates the need to tear up to the earth to mine real rock.
- It also offers versatility and ease of use that real rock can't touch. You

don't need to bore holes through solid rock to hide the plumbing and electrical guts of a waterfall or hire a crane to hoist boulders into place.

While faux stone is fabricated from a variety of materials, including plastic, fiberglass and urethane, concrete is widely regarded as the most durable and least costly way to go — and many say the most realistic.

Polymer-modified concrete or glassfiber-reinforced concrete are generally used for synthesizing rock. Some contractors prefer to create their own cementitious mixes, while others opt for commercial faux rock systems, which might include a filler mix, a top coat, a texture coat, colorants and sealers.

Faux rock formations can either be sculpted and textured by hand or cast offsite using molds taken from real rock.

Building a framework

Hand sculpting offers the greatest opportunity for creativity and usually costs less than casting. If done poorly, though, it's the method most likely to result in fake-looking rock.

The decreasing demand for faux rock in Southern California, according to Riley, is due to the plethora of fakelooking rock there. "There's way too much poor-quality, rounded, mushy rock shapes out here," says Riley. "Homeowners call it 'dinosaur dung."

Al Shultz, co-owner of Boulder Crete Inc. in Maple Ridge, British Columbia, avoids phony faux syndrome on his rockwork jobs by employing an actual artist to do all the sculpting and coloring. "He pretty much came right out of sculpting school," says Schultz. "We keep him busy."

The underlying framework upon which sculpted rock is built can be made in a variety of ways. Rebar and metal lath are commonly used, and some contractors insist on them for all formations taller than four feet. But in some situations, rock made from polymer-modified or glass-fiber-reinforced concrete can stand on its own perfectly well.





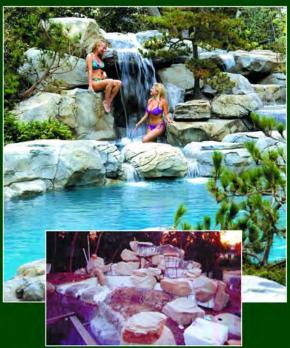
Tim Phelps, owner of Phoenix-based Boulder Image, which manufactures a lightweight faux rock product called Techstone Systems, has a customer who specializes in building faux-stone doghouses made entirely of concrete. "He takes an inflatable bladder, pumps it up, pours our concrete filler mix on it, puts our lightweight finish over that, lets it dry, deflates the bladder and yanks it out," say Phelps. "Structurally, all that's there holding it up is the filler mix, but it's concrete and it's very strong and durable."

JPJ Technologies has faux rock training centers in Oregon and Tennessee. Among the techniques the company teaches for making temporary forms for synthetic rock is the use of recycled materials, including stacks of rubble, chunks of Styrofoam, bags filled with cans or bottles, and cardboard appliance boxes cut, taped and glued into shape. "We once did a 175-foot granite wall using used tires stacked seven feet high, draped with expanded metal lath, then shot with gunite," says Jim Jenkins, JPJ's president.

When the basic form is in place, multiple layers of coating are applied to build the rock.

A rule of thumb says that the closer people will get to the rock, the more realistic it needs to appear. Shotcrete alone might be the only coating needed to create a rocky landscape in a gorilla

Are these boulders real? No. They're better.





Modular waterfalls with basic masonry skills.

Build quality waterfalls with our patent pending technology.



888-717-3100 • ricorock.com

Developed by Rock Formations Inc., Orange CA Pioneer Builder of Rock Pools since 1979.

Distributors needed in many areas.

CIRCLE #65 ON READER SERVICE CARD

cage if only the gorillas will see it up close. But if human primates will be crawling on it, a finish coat would be warranted.

Rock textures can be achieved with stamps or rubber skins molded from real rock and hit with a release agent before use to ensure a clean parting of ways between concrete and imprinting tool. Improvised texturing tools such as tin foil, brushes or sponges also work. In western Canada, where granite is much in demand, the faux rock artist employed by Schultz has found that sea sponges can produce a nice granite-like texture.

Spaces between rocks, fissures, strata lines and other recesses can be carved using trowels, screwdrivers or other common tools. Careful attention to the nooks and crannies can enhance the appeal of faux rock tremendously, but that's a point that gets overlooked all too often, says Rick Smith, of Richard Smith Custom Concrete in Los Angeles.

"Nobody puts deep enough cracks or straddle lines or rock separations," he says. "They just put scratches, and there's no interest there. The artisans I learned from taught me to build to the shadows. No one really cares about the face value of the rock, but everybody's really interested in what's in the cracks and crevices, or what's around the corner. That's what made Disneyland so famous. You walk around one rock and all of a sudden you're in a whole new world — there's Frontierland!"



Concrete Texturing Tool and Supply

Owner: Bart Sacco

Good People • Fair Prices • Excellent Service

For all your concrete needs please visit us at

www.concrete-texturing.com

PHONE: 1-888-824-2383

FAX: 1-888-824-2353
WE SHIP ANYWHERE!

CIRCLE #19 ON READER SERVICE CARD



Casting from the real thing

CIRCLE #69 ON READER SERVICE CARD

Molds made from real rock can capture every detail of the original — even the lichen — and castings made from these molds offer the most authentic rock simulations you can get. The molds, or skins, are made by coating a rock with silicone or rubber, which is peeled away after it dries.

Panels or stand-alone boulders can be cast from the molds, typically using fiber reinforced concrete for its strength, lightness and flexibility. After the panels are anchored to a framework, joints are mudded and the whole thing colored.

Panels may vary in size from about 2×3 feet up to 7×7 feet, and weigh anywhere from 80 to 600 pounds. They can be sliced and diced for variation. "You can cut them up and just basically manipulate them like a puzzle so you're not seeing the same repetitive pattern," says Mike Norton, manager of the custom rock division of Colorado Hardscapes.

Boulder castings usually range in size from 12 inches long to 8 feet long. They can be backfilled with concrete or plastered on the inside to beef them up.

Since nothing ruins the illusion of solid rock quite like a hollow knock, contractors often backfill cavities with concrete. "When we're doing exhibit work for aquariums, zoos or anyplace where the rock comes in contact with the user, they like to have it solid-filled so it has a dense sound to the knock," says Bob Wallace, director of sales for St. Paul, Minn.-based Custom Rock, which manufactures and installs panels and boulder castings.

Creating effects with color

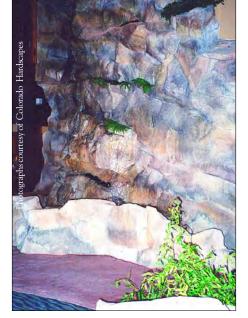
Integral colors are sometimes used in faux stone, but contractors more often use acid stains or acrylic paints. Air sprayers, brushes and sponges can be used to apply the color. The spray-on-sponge-off technique is popular. Layering of colors is the norm, since any real rock will have multiple colors or shades going on. Some artistically-





CIRCLE #55 ON READER SERVICE CARD





inclined contractors say the most realistic effect comes from putting the darkest shades in the depressions and lightest shades on the high points. Some contractors like to add a final antique coat.

One of the more unorthodox coloring techniques employed by David Long, president of Lakeland Co.



Inc. of Coeur D'Alene, Idaho, involves following freshly applied acid stain with an open flame. "You hit it with a weed-burning torch and — boom — it sets up and stops running," says Long. It also creates an interesting heatbaked effect, he says.

Waterproofing, sealing and maintenance

Some contractors seal their faux rock and recommend resealing it every few years, but the practice varies from contractor to contractor. There's no argument about the need to waterproof water features, though. Plastic liners

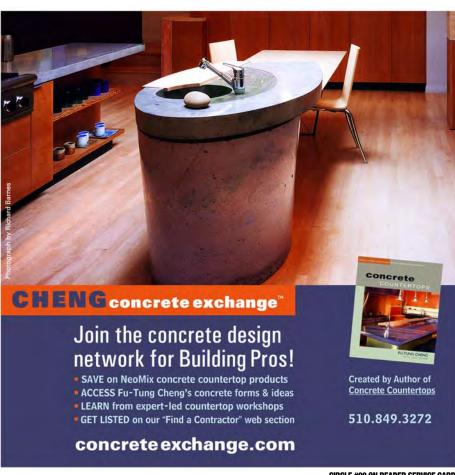


Pour-N-Restore is citrus-based, biodegradable, phosphate-free, and smells like fresh oranges. To top it all off, Pour-N-Restore is now available in this convenient squeeze bottle.

For more information, call toll-free 1.800.508.7939 or visit our website www.pour-n-restore.com/decor.



pour-n-restore.com/decor



CIRCLE #29 ON READER SERVICE CARD

CIRCLE #09 ON READER SERVICE CARD





are generally set beneath the cementitious surface, and waterproof coatings are used too. Waterproof coatings can be especially handy in serpentine channels, tiny fountains or other tightly-squeezed spaces where it would be difficult to lay a liner.

After completing a faux-rock job, a lot of contractors spend a little extra time with their customers discussing maintenance. When Colorado Hardscapes finishes a project, the company presents the customer with a job-specific maintenance and operation manual covering everything from plumbing to resealing.

With strong interest in synthetic rock among both commercial and residential customers, plenty of opportunity exists these days for rock builders who go with faux.

"You need a waterfall like you need a hole in your head, but more of them are being installed then ever before," says Jenkins. "The demand for synthetic decorative rock and decorative concrete is so high it's not being met with enough installation. So this is a really great time be a contractor."







Decorative Concrete Consulting and Training

mix it pour it grind it profit from it

Next Cheng Concrete
Countertop Hands-on Workshops:
June & July 2004

concrete exchange.com 510 849.3272 x 217



2 DAY FLOOR COATING SCHOOL

Learn how to install:

1/4" Stamped Concrete, Knockdown Coatings, Micro-Toppings, Stenciled Coatings, Acid Stains, Solvent Stains, Waterborne Stains, Epoxy Flooring, Granite Finishes, Color Quartz Finishes and Waterproof Walking Deck Coatings in the Los Angeles area.



www.garagecoatings.com 1-800-535-3325 www.deckcoatings.com

AlternativeFINISHES

- · Staining concrete since 1993
- · References available
- · Acid stain floors, walls, counter tops, etc.
- · Decorative scoring (sawcuts)
- Custom colors, color grouting
- · Clear coat sealers
- · Waxing, highspeed buffing

On the job training at your site

Wes Vollmer (210) 655-5940 Concrete Design Specialist

www.alternativefinishes.com



CONCRETE
COUNTERTOP
INSTITUTE
CONFIDENCE THROUGH KNOWLEDGE

The most comprehensive, in depth training and technical support for concrete countertops

4-day Academy held monthly.

ConcreteCountertopInstitute.com 888-386-7711

Products for Coating Concrete



Training available in:

- Art Deco
- Interior overlays and ¼" stamp overlays
 Knock-down finishes
 - Kilock-down linishes

Call 800-995-1716

or visit us online at www.super-krete.com

Trade Secrets Exposed

Beginners to experienced overlay installers can now be given the knowledge, insight and personal trade secrets of Richard DiGiacomo, acclaimed as one of the nation's most skilled overlay texture and color artisans. His ability to fuse creativity and inspiration guides students into an element of color and vision that elevates their abilities to a cutting edge.

Beginners to Advanced Coloring Techniques Increase Profits 35-40% Dealerships Available

www.europaartisansacademy.com

Toll free: 1-866-838-4370 Scottsdale, Arizona

Business Opportunities

Changing the Rules Isn't Cheating™

When material costs have you by the throat...

When your competition thinks dropping the price is the only way to get a job...

When the weather controls your life...

When rain washes your profits down the gutter...

Change the Rules in Your Favor

Seriously Profitable Innovative Concrete Engraving Systems Discovery and Training Seminars Monthly

> Catalog 1-888-884-2114 www.Engrave-A-Crete.com

Decorative Concrete Supplies

The Decorative Concrete Store

Coloring Agents
Stains & Sealers
Concrete Hardener & Densifier

Repair and Overlay Materials Finishing Tools and Hardware On-Site Training and Consultation Concrete Countertops

Eco-Block Insulated Concrete Forms

Two Locations to Serve You: 880 Pleasant Valley Dr., Springboro, Ohio 45066 3546 Eastern Avenue, Cincinnati, Ohio 45226 Phone: (513) 533-9200 • Fax: (513) 533-3078

Toll Free: (866) 483-3330 www.DecorativeConcreteStore.com

Engrave-A-Crete, Inc.

Our Seminar Attendees Say:

"The 2 day session was the most information packed seminar I have attended in 20 years" — Jerome, FL

"Engrave-A-Crete has surely raised the bar of the industries standards." — Christopher, MS

"Information was clear, concise, very friendly, and knowledgeable." — Dan, CA

Discovery and Training Seminars

Easy as 1... 2... 3... for beginners and experts. Advanced hands-on decorative concrete engraving, scoring, cutting, and staining techniques with exceptional equipment. Learn how to make fast, high quality, great paying installs plus how to market and sell your services. Discover new advanced tools and increase your skills. Free information packet.

"You inspired me. I can see a future in this business." — Raeben, CO

1-800-884-2114 1-941-744-2400

www.engrave-a-crete.com

Training Materials



Giving away Profit!

What's NEW with

- · Imprinted Concrete
- Concrete Stains
- Self Leveling Overlayments
- Texturetop™
- Concrete Sealers
- · Specialty Tools Equipment
- Application and Product Training

For more information call



1-800-938-4148 1-541-938-4005 (fax) www.dcsystemssupport.com

Advertisers Index

Free Product Information

Please circle the number(s) on the attached reply card and mail today.

Advertiser	. Page #	. Reader Service #
Alternative Finishes	. Classified	
Arcus Stone		
Armcon Molds		
Buddy Rhodes Concrete Mix		
Butterfield Color		
Cheng Concrete Exchange		
Concrafter		
Concrete Countertop Institute		
ConcreteIron.com		
Concrete Science International		
Concrete Science International		
Concrete Texturing Tool and Supply		
Concrete Texturing Tool and Supply	· 1 0 · · · · · · · · · · · · · · · · · · ·	19
Coyote Cleaning Systems	. CM	21
Custom Concrete Creations	. 24	
Dayton Superior	.5	25
Decorative Concrete Store		
Decorative Concrete Systems		
EDCO		
Edgewater Industries	. 48	29
Elite Crete Systems Inc.	.CM	31
Engrave-A-Crete	. Classified	
Europa Artisan Academy		
Exaktime		
Excellent Coatings		
Floric Polytech		
Franmar Chemical	. 23	39
HoverTrowel		
Increte Systems	. 35	43
Institute for American Craftsmanship	.36	45
Kemiko Concrete Stain	.CM	47
Key Resin	. 24	49
Life Deck Specialty Coatings	. 4	51
L.M. Scofield Company	. Back Cover	53
Love-Less Ash	. 47	55
Metal Forms		
Miracote		
Polytek		
Proline Stamps		
Rico Rock		
Rudd Company		
Shave Away Europe	47	69
Sherwin-Williams/ H&C Stains		
Slip Industries		
Southern Color Company		
Specialty Concrete Products, Inc.	. 10	77
Stegmeier Corp		
Sto Corp		
Super-Krete International		
Super Stone		
Tom Ralston Concrete		
Tygar Manufacturing		
Versatile Building Products		
VIC International	· 1 7 · · · · · · · · · · · · · · · · · · ·	95

CM: Concrete Marketplace is on pages 42-43. Classified ads are on pages 50-51.

When contacting an advertiser, please mention Concrete Decor.

Product News

New underlayment offers strength, bonding

A new self-leveling portland cement-based underlayment that offers high compressive strengths and superior bonding characteristics is now available from Hacker Industries.

Ideal for all types of commercial and multi-family projects, True Screed is engineered to transform cracked, uneven concrete floors into a smooth, strong surface for finished floor coverings. The self-leveling aspects of True Screed are perfect for use in new construction and renovation projects. It also offers exceptional surface hardness and quick drying time, keeping construction projects on schedule.

Installed only by certified, licensed applicators, True Screed is an optimal solution to achieve a lightweight, durable floor with minimal labor and installation time. True Screed does not require troweling and meets STM F710, Preparing Concrete to Receive Resilient Flooring.

For more information, please call (800) 642-3455, visit www.HackerIndustries.com or e-mail info@HackerIndustries.com.

Penetrating stain beautifies vertical surfaces

Sherwin-Williams Vertical Concrete Stain is a costeffective way to add distinctive color and improved appearance to large concrete structures such as parking garages, stadium supports and tilt-up, block and stucco walls, to name a few. The coating is formulated to penetrate the surface, adding extra protection from water and weather damage.

Vertical Concrete Stain can be applied to new or aged concrete. The stain, which acts as a water repellent, offers excellent adhesion and resists color fading, blistering and efflorescence. It dries quickly and is ready for a second coat in as little as 15 minutes. It goes on easily with conventional spray equipment and offers superior sag resistance and less overspray than similar products. With its penetrating formula, Vertical Concrete Stain offers better weather protection than conventional acrylic coatings without adding excessive costs to the project. For more information, visit www.sherwin-williams.com.

Catalog showcases Kraft Tool

Kraft Tool has released its 2004 catalog, which features approximately 3,000 hand tools for the trowel trades. The company manufactures construction hand tools and accessories specifically for the



concrete, masonry, drywall and plaster tradesman. To find out more, please visit www.krafttool.com or call (913) 422-4848.

Put a top on it!

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, visit (800) 533-4702.

Stain remover cleans up concrete

Pour-N-Restore concrete and masonry stain remover features unique Micro-Extraction Technology. Pour-N-Restore removes stains from motor oil, grease, hydraulic fluid, transmission fluid, brake fluid, anti-freeze, tar, wax, vegetable oil, citronella oil and food grease. It is ideal for use on driveways, garage floors, walkways, patios, factory floors, parking facilities, and similar surfaces. It both dissolves and captures stains, resulting in total extraction and complete clean up.

Pour-N-Restore penetrates deep into concrete and masonry, where its Micro-Extraction Technology locks onto stains at a molecular level. As it dries, stains are extracted and filtered by the absorbent on the surface. After Pour-N-Restore has completely transformed



from liquid to powder, it is simply swept up and the stain permanently removed.

Developed and manufactured by Edgewater Industries, Pour-N-Restore is biodegradable and phosphate-free. In independent testing, Pour-N-Restore received the highest ratings in all product effectiveness categories. Unlike conventional degreasers, which often get flushed down the sewer after use, Pour-N-Restore is swept up for proper disposal. For more information about Edgewater Industries or Pour-N-Restore, please call (616) 846-7939 or visit www.Pour-N-Restore.com.

Keep it on the level

DeWalt has introduced a new family of manual and self-leveling contractor-grade optical instruments for



checking measurements over distances up to several hundred feet. The instruments are designed for applications such as checking concrete forms, site layout, new deck and building additions, road construction, sewer and drain work, elevation control, landscaping, ground leveling, environmental and agricultural work.

The DW090PK level kit and DW092 transit level kit both feature 20x magnification and have protected lenses and protected vials. They are accurate to ± ¼ inch per 100 feet. They feature a 5 arc second vernier scale on the horizontal circle, and an endless tangent drive, features typically found only on auto levels and surveying instruments. Other features include a 1:100 stadia for distance estimation, three-knob leveling systems and built-in leveling bases for fast and easy leveling.

The DW096 auto level features 26x magnification and is auto-leveling for extreme accuracy over long distances. It is accurate to ± ½ inch per 100 feet. It features a durable wire-hung magnetically dampened compensator with an automatic locking system. For more information, visit www.dewalt.com or call (800) 4-DEWALT.

Polish your expertise with help from VIC

The Surface Prep Team at VIC International Corporation has revamped the brochures for VIC's Wet Concrete Polishing System and Concrete Polishing System. These brochures contain updated information on the products needed to polish concrete both wet and dry. They also include information on how to best polish your edges to match your floor.

VIC's Surface Prep Team also offers a hands-on, one-day seminar where customers can learn to polish concrete using the methods and procedures developed at VIC. To receive the brochures or find out more about the seminar, call (800) 423-1634.

System creates stonetextured finishes

The Arch-Crete textured forming system is a lightweight integrated form



and liner system that creates wall surfaces with stone textures including Boulder Stone, Castle Cut Stone, Cobble Stone, Ledge Stone, River Rock

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

Cast on site

Flexible

Versital

Economical

Easy to install



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.

STEGMEIER PO CORPORATION Circle no. 148

1111 W. Harris Rd., Arlington, TX 76001 800-382-5430 • (FAX) 800-356-3602 www.stegmeier.com and Flat Panels. The system is constructed of a high-impact and wear-resistant composite material. A standard 3' by 6' panel weighs about 57 pounds. Independent testing has rated the panel face at in excess of 1,500 pours. The structure consists of a reinforcement grid matrix that provides maximum panel strength during pours, thus limiting deflections and providing uniform and consistent concrete finishes. Cleanup is easy because concrete adheres minimally to these forms. For more information, visit www.arch-crete.com or call (877) 753-6767.



Mixers from Stow offer new features

From Stow, three new concrete mixers feature significant upgrades over earlier models, giving contractors a simple,

cost-effective solution to their construction challenges.

The mixers showcase a tough tubular steel frame that gives operators improved wheelbarrow clearance on the job. In addition, they feature new forklift pockets improving stability when a mixer is picked up and transported to and from the job site.

They are available in 4-, 6- and 9-cubic-foot capacities. Single-phase electric motor options to 1.5 horsepower and Honda gasoline engines from 4 to 8 horsepower are offered, as is a 3-horsepower Briggs & Stratton gasoline power source on the 4-cubic-foot model CMS44.

These V-belt driven concrete mixers have an impressive 23-inch dump height and drum openings up to 21 inches (53 cm.) for easy discharge of material. For more information, call (877) 289-7869or visit www.stowmfg.com.

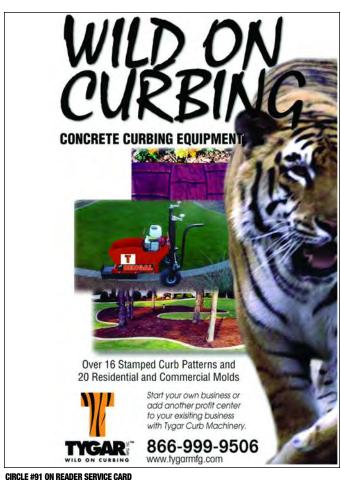


These stamps have got your number

Columbia Marking Tools has developed a complete new line of durable concrete hand stamp characters for marking wet concrete. A standard

character set includes the numerals 0 through 8 (6 is also used as 9) and a + sign. The character stamps are first machined from solid brass billets on precision CNC machine tools. Additional precision handwork is performed to create the necessary sharp corners that are required for the production of clear impressions. The characters are designed with beveled angles to enhance the release of the stamp from the impressed concrete.

Concrafter Designs give multiple





Standard stamps have 3-inch characters that are %-inches deep with a Gothic character font. Each stamp is designed with a rubber-coated metal handle. Special designs in any type of character size and font are available. Typically, users submit their rough stamp ideas and Columbia creates an engineering drawing of the stamp for approval prior to manufacture. For more information, call (800) 469-MARK or email sales@columbiamt.com.

No more burnish marks

Previously, finishing light colored concrete, light reflective concrete and epoxy with a power trowel has proven difficult

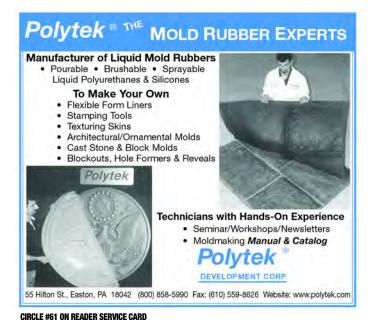


without the risk of leaving burnish marks from steel trowel blades.

To solve this problem, Wagman has introduced a new Poly Pro steel reinforced plastic power trowel blade. The Poly Pro is designed to give a hard finish without

leaving burnish marks, yet it remains stiff enough to use on ride-on power trowels, as well as walk-behinds. A steel backing adds rigidity to the plastic, providing a stiffer blade than previous plastic blades.

Wagman Metal Products has been a leader in production of quality power trowel blades since 1963. For more information, call 717-854-2120 or visit www.wagmanmetal.com.



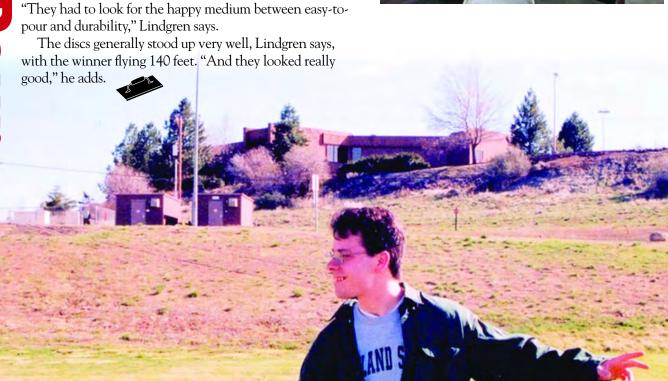


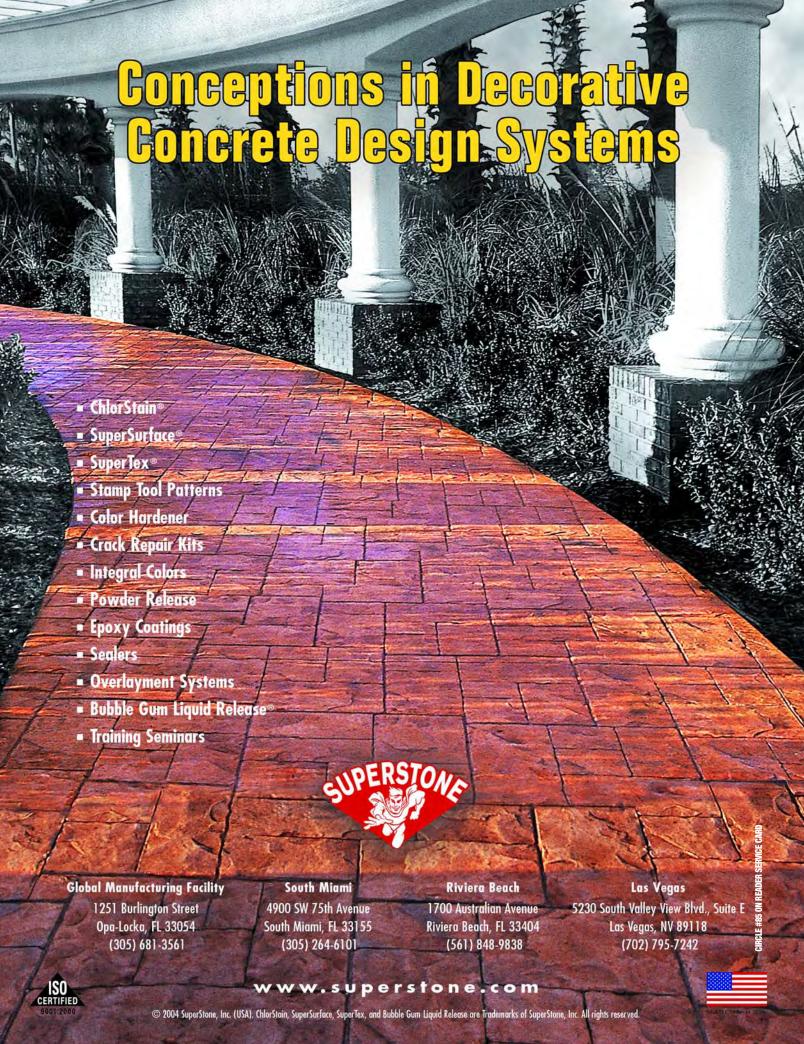
CIRCLE #77 ON READER SERVICE CARD

Society of Civil Engineers, students from 17 universities took part in a contest to see which team could come up with the best flying disc — made of concrete.

"People think of concrete as hard and heavy," says Roger Lindgren, assistant professor of civil engineering at Oregon Institute of Technology, where the symposium took place. "We wanted to challenge students to create a mix that would be light enough to fly and durable enough to hit the ground without breaking apart into dust."

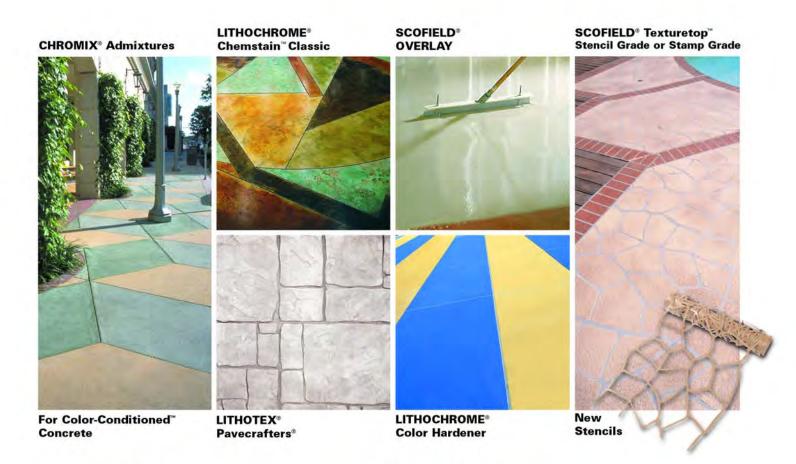
Students refined their designs for months before the competition, varying the mix design — sand, portland cement and water — to create the perfect flier. Some used Frisbees for molds, others used pie plates or built their own. Many used color as well, from dry shake to integral to stains. They learned that adding a lot of water made the mix easier to work with but created concrete that was not very strong. "They had to look for the happy medium between easy-to-pour and durability." Lindgren says.





click NOW www.scofield.com

SHOWCASE . SYSTEMS . TECH-DATA . TRAINING . TOOLKIT . HOME



engineered systems for coloring, texturing and improving performance in architectural concrete since 1915

showcase Project examples with information on products and techniques.

systems Product descriptions, selection criteria, and compatible components.

tech-data Technical bulletins and specifications.

training Step-by-step guides for installation & "Do's and Don'ts".

New technology New techniques

