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#### Viewpoints

#### **Integrals: Faded or Not?**

oncrete Decor's Q&A in the Winter 2001 issue had included comments discouraging the use of integral coloring for concrete work in high altitude mountain environments. It was implied that integral coloring of concrete is UV unstable resulting in a color faded appearance over time. This is incorrect.

The use of integral colors, or "dust-on" colors for that matter, are very color stable when exposed to ultra-violet (UV) sunlight. According to ASTM C979, iron oxide pigments now used predominantly for integral and "dust-on" concrete coloring applications are not degraded by exposure to sunlight. What is often seen as a faded-look on these surfaces is mostly the result of dirt and diminished wear resistance due to improper maintenance. The fact that mountain environments produce excessive rain, snow, dry spells, wind, dust, and falling debris from trees and scrubs, add to the difficulty of maintaining these surfaces. Most concrete applications, colored or otherwise, are most often improperly maintained. Like any applied finish, getting the most enjoyment and longest life from these decorative surfaces requires regular cleaning and treatment. Without proper maintenance on colored concrete the familiar faded look or dirty appearance will become noticeable. However, when concrete is properly installed and maintained, it provides excellent wear resistance and color value.

While many opinions circle about the difficulty of repairing gouges or deep scratches in integral and/or dust-on colored concrete applications we must be the first to admit that most are the result of individual experiences or preference. With this in mind, we will continue to explore ways *Concrete Decor* can better meet or exceed the limits of our understanding for the

benefit of advancing the trade.

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ON THE COVER: The beautiful architectural designs and sandblasting stencil work of Prestige Concrete Co., Poway, California is a testament to the limitless ways concrete can be crafted for beauty in any environment. Location: St. Gregory's Church, San Diego, California.



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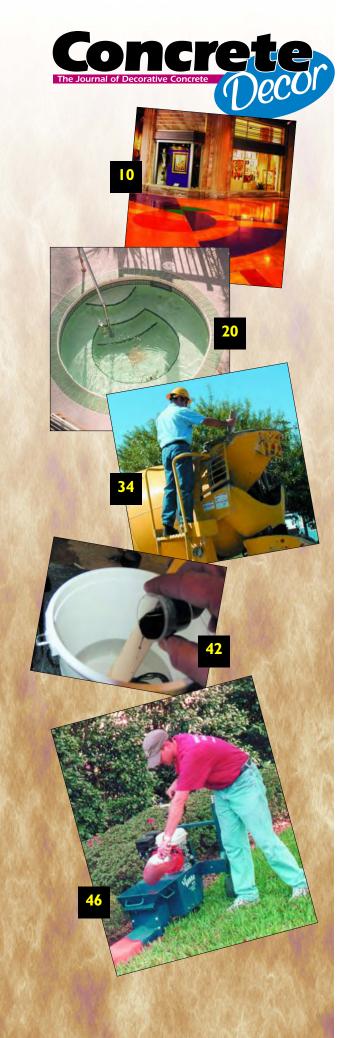
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#### Contents

#### **FEATURES**

- 10 In a Hurry? Preparation and Timing are Everything with Fast-Drying, Self-Leveling Toppings
  When time is of the essence, fast-drying, self-leveling toppings can be the ideal solution.

  by Susan Brimo-Cox
- 20 Giving Concrete a Facelift
  Similar to texturing walls and ceilings, texturing concrete adds
  color, texture and a lot of new business opportunity.
  by Ester Brody
- 34 Using Admixtures in Decor Work:
  How-to tips from the pros that save time and money
  Discover ways admixtures can improve concrete's ultimate
  durability and strength and make it easier to work with.
  by Cindy Grawl
- 42 Adding Color to Sealers:
  Creating Beautiful Effects Takes Knowledge and Practice
  A least expensive and practical way to create unique surface
  treatments for enhanced color finishes on concrete.
  by Craig Park
- 46 Decorative Curbs and Gutters
  A look at the possibilities for adding value to projects with decorative curbs, gutters and borders.
  by Gail Elber

#### **DEPARTMENTS**

- 16 Contractor Profile: Richard Smith Custom Concrete Rick Smith, owner and president of Richard Smith Custom Concrete of West Hills, CA, subscribes to an essential business maxim: Do more listening and less talking. by Bruce Hackett
- 26 Product Profile: Rafco Brickform Decorative Sandblast Stencils With little investment in equipment and training, sandblast stenciling will make an incredible profile in your concrete work. by Gail Elber
- 38 Manufacturer Profile: Increte Systems Inc.
  After 39 years in business it's still; quality products, quality education, quality support that equate to quality installations every time.
  - by Stacey Enesey Klemenc
- 52 Classified
- 51 Concrete Marketplace
- 4 Decorative Concrete Tips
- 6 Industry News
- 8 Industry Spotlight
- 54 Product News
- 32 Product Profiles
  - 7 Project in Focus
- 2 Viewpoints

## Decorative Concrete Tips

**Marbleizing Poured-in-Place Concrete Countertops** 

hen working with poured in place countertops, you can marbleize the surface using Color Hardeners. Pre-Colored countertop materials (SCP's Duratop System) are generally Polymer modified for added cohesive and tensile strength. This is a great system for countertops, but it also adds a finishing dilemma in the way that the Polymer makes the surface sticky to the trowel. The trick is to let the material set with an open (mag trowelled) surface for about one hour for a standard one and one half inch thick top (Temp. dependent), this allows the Polymer to tighten up and lose some of its stickiness. After the cure time has been allowed, then mist surface with water, and slick finish with steel trowel. At this point you have a multitude of finishing

options, you could stamp a texture into the surface, work in bits of another material, etc. A very nice technique is to sprinkle Color Hardener over the surface in an irregular pattern; I will usually use a small spoon to apply the sprinkle in what resembles marble veins. Then mist over the Color Hardener with water, completely wetting out material. Then, pass over the surface with a steel finishing trowel again, the trick is to pass

in one direction, and to not overwork as that will bleed the colors together more leaving less delineation of the veins. Then, after a ten day cure time, you can also Acid Stain the surface if desired, or use Stone Shades immediately.

— Marshall Hoskins Specialty Concrete Products, Inc 1-800-533-4702 Decorative Concrete Tips is a forum for readers to exchange information about methods, tools, and tricks they've devised. We'll pay for any we publish.

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# Industry News

#### New Southwest concrete homebuilder show

The first Southwest Regional Concrete Homebuilder Show is scheduled for September 5–6, 2002, in San Antonio, Texas.

Permanent Buildings & Foundations magazine (www.permanentbuildings.com), the business newsmagazine for the concrete builder and the Cement and Concrete Promotion Council of Texas have joined to launch the new show which will be held at the Henry B. Gonzalez Convention Center.

"This is the only show of its kind in the Southwest specifically targeted to the concrete home building professional," said Robert Lopez, executive director of the Cement and Concrete Promotion Council of Texas.

This annual event gives building professionals the opportunity to visit hands-on product exhibits from major manufacturers and expand their construction knowledge through a conference program that offers 24 seminars. Training focuses on regional problems and solutions and will include an "Ask the Expert" clinic. The exhibit hall will have two 1,600 sq. ft. staging areas offering live demonstrations, and a 3,200 sq. ft. special event area providing demonstrations for constructing lower level living spaces for the Southwest market.

Roger W. Nielsen, editor-in-chief of *Permanent*Building & Foundations magazine said, "We have seen a

dramatic increase over the past several years in residential concrete construction, and our hope is that this show will provide opportunities for both construction material and equipment manufacturers and builders."

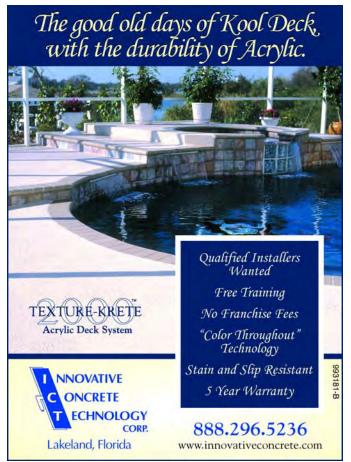
For more information, visit www.concretehome-buildershow.com

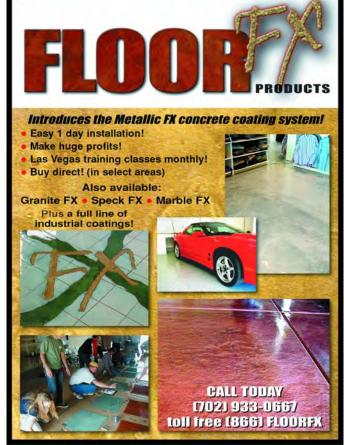
#### **2002 National Concrete Canoe** Competition.

The ASCE 150th Student Conference in Madison, Wisconsin will include a concrete canoe competition. Participating civil engineering students will design, build, and race canoes constructed of concrete. The event is scheduled for June 21–24, 2002.

Organized by ASCE and sponsored by Master Builders, this 15th annual test of academic and athletic ability will feature teams of student engineers from 26 colleges and universities across the United States, Canada, and Mexico. To qualify for the ASCE/MBT National Concrete Canoe Competition, teams must win one of 20 regional competitions held during the months of April and May, or qualify as an international competitor.

**Industry News** (Continued to page 51)





CIRCLE #37 ON READER SERVICE CARD

CIRCLE #29 ON READER SERVICE CARD

#### **Project in Focus**

## Decorative Resurfacing of Concrete Balconies Starts With a Repair System

More often than not, decorative resurfacing begins with some type of repair, whether it be patching of small holes before a chemical stain, thin repair of spalled concrete, crack repair, or a full depth structural repair. This article will discuss a project requiring both repair and prevention of recurring cracks on post-tensioned concrete decks.

esidential concrete balconies are typically enhanced with paint, carpet, pigmented sealers, ceramic tile, urethane coatings or decorative cements. Each of these options has its advantages and disadvantages. Paint and sealers are inexpensive but are not very durable, show cracks and offer a bland appearance. Carpets cover cracks and can move with decks but must be replaced quite often due to wear, moisture and bacteria growth. Urethane coatings also move with the decks and offer a waterproof barrier, even while bridging small cracks, but they cost more, provide limited decorative options, and sometimes don't cover imperfections in the substrate. Ceramic tile and stone offer tremendous decorative advantages but do not perform well over cracks, have difficulty with shear bond failure over post-tensioned concrete and usually have a higher installation cost.

Most industry experts agree that decorative cements — including spray textures, stamped overlays, broomed or smooth troweled overlays — offer the best solution for this application. The proper system must be implemented; otherwise, when cracks appear, delamination and moisture intrusion can become major problems. The design and colors are limitless and, if installed properly, will give excellent performance over concrete balcony decks.

#### **Project profile**

A condominium project located on the Gulf Coast of Alabama offers some real insight into this particular application of decorative cement toppings. It's a 15-story luxury condominium building constructed of cast-in-place post-tensioned concrete. Balconies surround the entire



building and are rectangular in shape with curved edges.

A polymer-modified base coat and spray texture topping had been installed on approximately 20,000 square feet of decking. Almost 90% of these coated decks

were exhibiting cracking in the concrete. Not only were these cracks unsightly, but more important, they caused delamination of the polymer cement and allowed water to penetrate the substrate. In many cases, the cracks were full depth and could be seen on the ceiling of the floor below. An elastomeric "popcorn" type finish had been applied to the balcony ceilings and was also delaminating near the cracks. The cracks extended from the outside edge of the balcony past the window walls and inside the unit, affecting dry wall and carpet. These cracks, and their constant movement, had caused the bond loss on ceramic tiles inside the units as well.

**Project in Focus** (Continued to page 56)



CIRCLE #09 ON READER SERVICE CARD

#### **Industry Spotlight**

The British Are Coming!

By Jim Peterson, President, Concrete Network. Com

he Decorative Concrete Industry is also drawing in the French, Italians, and Canadians, along with Painters, Interior Designers, Architects, Ceramist, Structural Engineers, and Chemists.

Cross-pollination is one of my favorite concepts to think about. (Isn't it odd that one could have so much time on their hands!) It's when an idea or a product from one industry is taken and used in an entirely new way by a person from outside that industry. The person from outside the industry sees the idea or product from a totally different perspective — and also has his or her own set of unique talents to add to the process. This is why I believe we are just in the first inning of the decorative concrete explosion we are witnessing.

#### Why is cross-pollination happening?

I believe cross pollination is happening because the concrete industry is currently unleashing an amazing slew of new product innovations such as texturing tools, micro-toppings, concrete profiling chemicals, polishing equipment, molten metals for concrete, acid stains, water based stains, polymers, dyes and other colorants, stamps, sandblast stencils, form liners, special saws and decorative concrete cutting apparatus. This gives others from outside the concrete industry the tools, ideas, and the inspiration to get involved in the industry. While concrete experience definitely speeds the learning curve- many of the above applications require you work on the concrete, not in the concrete. Thus those outside the industry are seeing a major opportunity.

I recently observed Bob Harris of L.M. Scofield and Tom Ralston of Tom Ralston Concrete create a gorgeous design on slab at the Spring 2002 Decorative Concrete Council



event in Oklahoma City, Oklahoma. They did a lot of amazing things with stains, an angle grinder, eye droppers, tape, and Miracle Grow (yes, Miracle Grow), but they didn't pour any concrete (of course they did have input on

which admixtures should be in the mix and which should not be, and how the slab to be treated should be finished).

#### So who are these people?

Jean-Pierre Berthy is a popular designer and painter of murals and faux-marble concrete finishes in San Francisco. In the '60s, Berthy studied at an art school in France. The school's curriculum centered on learning from some of history's most highly regarded painters. "In France, you learn how to copy artwork from the big painters like Cézanne and Monet," said Berthy in a recent *PaintPRO* article. "We would take our canvas to the art museum and copy the masters. We learned the technique, and I was very good at copying. This helped lead to painting murals."



When acclaimed Italian artist Marco Lucioni came to the United States 14 years ago, he didn't want to start from scratch to rebuild his reputation as a painter and sculptor.



Instead, he incorporated his artistry into decorative concrete — a move that has thrilled homeowners throughout the Seattle area. Lucioni, who lived in Italy for 45 years, in Greece for 10 years, and in France for a couple of years,

displayed his work in about 50 shows throughout Europe. When his first wife became homesick, he came to the United States with her.

He started doing decorative work for Italian restaurants, making a lot of faux columns reminiscent of the old country, which ultimately inspired him to give the real stuff a whirl.

"I knew the medium already," Lucioni said. "I taught myself how to use concrete; I read books, I asked around. I like to use my Italian artistic background and culture and combine it with the technology to make everything."

DEX Studios owner Craig Smith does product fabrication while Interior Designer and wife Lauriel designs products for clients. Their Atlanta operation offers a line of furniture that includes benches and assorted sizes of round and rectangular

tabletops (designed for mounting on wrought-iron bases). The benches make a bold design statement in any foyer or entrance. They feature an integrated planter that can be filled with accents such as wheat grass, floating flower petals, or river pebbles.



Customers can choose the planter size, shape, and position desired.

Originally a potter, Buddy Rhodes was immediately drawn to concrete because it offered more variety and the work wasn't as monotonous as toiling over clay.

He now has 25 employees scurrying about his San Francisco studio and has to take it in slowly. "Sometimes I



still can't believe it," Rhodes said when asked if he had ever imagined the degree of success he has experienced over the past two decades. His work has evolved into the quintessential model for many in the industry and has been showcased in the nation's

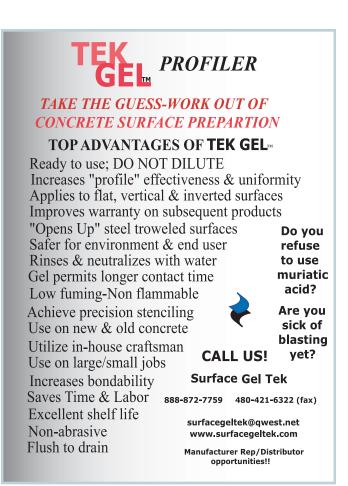
top home and design publications, including Architectural Digest, Home, Metropolitan Home, Kitchen and Bath, Sunset, Fine Homebuilding, Luxury Kitchens and Baths, Beautiful Baths, and Home Remodeling, among others.

Kelley Firmin, a former chemist and owner of Minds in Motion Contractors, has

taken everything he learned about acid and is applying it — literally — to concrete as his young company makes a great first impression on the Houston market.

During his years as a degreed chemist, Firmin always filled his free time with unrelated work on the side. He's the first to admit that he gets bored easily, which is one of the reasons concrete fascinated him so much when he was introduced to acid staining less than three years ago. "I love concrete because it's so diverse," Firmin said.

The above are just a few of the examples of people from different places with different skills and experiences entering the decorative concrete market. I think we can expect and look forward to a lot more of this in the future. Like this great country itself, the concrete industry has its very own "melting pot."





## In a Hurry?

## Preparation and Timing are Everything with Fast-Drying, Self-Leveling Toppings

hen time is of the essence, fast-drying, self-leveling toppings can be the ideal solution, but don't be lured into thinking that time-saving equates with easy-to-use. In truth, the stakes are raised when these products are employed.

Fast-drying, self-leveling products are often the product of choice when leveling and topping new construction concrete floors — or resurfacing old concrete floors — in a fast-track environment, such as malls, retail spaces, restaurants, hotels, casinos, museums, showrooms and warehouses. But these products have advantages and disadvantages.

"These products are wonderful — excellent for quick turnaround jobs," exclaims Mark Donaldson, owner of Skookum Floors USA Ltd. in Seattle, Washington. "They allow you to turn over jobs a lot quicker; allow you to get in and out within three days." But they are not for the novice. "We definitely recommend manufacturer training," he says. Technique and properly trained manpower is essential.

Fast-drying, self-leveling toppings need a solid, rigid substrate. Concrete substrates are recommended. "A self-leveling topping is only as good as the substrate it's put on," cautions Matthew Casto, vice president of technical services at Bomanite Corp. in Madera, California. "It is not advisable to put [these toppings] over any material that has flex, though some do."



When cured, these toppings will easily handle compression loads of 6,000 pounds per square inch or more. Will there be heavy foot traffic and moderate forklift traffic? No problem. Small hard loads are another issue; use another product or stick to rubber wheels.

Fast-drying, self-leveling toppings are designed for interior use. Constant exposure to moisture, such as rain and ground sources, can be problematic, so, for exterior applications other products are recommended. Even in interior applications, moisture is an important consideration. Always perform a moisture test first. These products are not going to be a solution to moisture problems; you'll have to solve those first, though waterproofing membranes can be used.

#### The technology is relatively new

ARDEX is credited with introducing the first fast-drying, self-leveling topping seven years ago (not to be confused with the self-leveling underlayment the firm introduced in 1978 when it began doing business in the United States). The self-drying technology of the fast-drying, selfleveling topping "means that virtually 100 percent of the water mix is cured internally within the cement matrix," explains Dave Fabyonic, national accounts manager for ARDEX Engineered Cements in Aliquippa, Pennsylvania. "The benefit that it provides is time saving on the job site — you can apply water-based sealer in as little as 2 to 3 hours following application of the topping."

For topical color, you can apply stains after 24 hours; though, as a general rule, the longer you can wait before applying the stain the more true a color you'll get, advises Fabyonic.

Fast-drying, self-leveling products also are available from other manufacturers, such as MAPEI, which introduced its self-curing product six years ago. Products from different manufacturers are not identical, so be sure to read and follow the



manufacturer's directions. Mixing ratios and application recommendations vary. It is also advantageous to use the topping manufacturer's primer.

#### Prep that substrate!

As with other concrete projects, preparation is the key when using fast-drying, self-leveling toppings. Even if you don't see a lot of problems with the substrate, don't skimp!

"Prep is 90 percent of the job [and] you're only as good as your prep," says Richard Smith, president of Richard Smith Custom Concrete in West Hills, California.

Shot blasting is the No. 1 method recommended by fast-drying, self-leveling product manufacturers and contractors alike. Use grinders for the hard to reach edges. But when you're done, be sure to get up all the particles and dust.

"From prep to sealing — no dust!" cautions Peter Golter, product manager for MAPEI in Deerfield, Florida. "You don't want primer sticking to concrete dust or drywall dust instead of having direct contact with the substrate. Same for the sealer; if there's dust on the topping, it'll be a rough topping and the sealer may delaminate."

After shot blasting, Smith patches and repairs the substrate where needed then applies the primer, which he typically lets cure a little longer than what's required.

"What troubleshoots cracks and failures," he says, "is the preparation."

The substrate preparation and primer give you the benefit of two bonds for the topping, observes Fabyonic. "Shot blasting profiles the substrate for a physical (mechanical) bond. You achieve a chemical bond through the use of primer."

Follow the manufacturer's directions for the primer. The mix ratio, recommended number of coats and dry times differ among products. Applying the primer with a broom ensures the primer is worked into all the nooks and crannies of the substrate. And be sure to completely cover the surface. Not only won't you get the desired chemical bonding on those unprimed spots, they also will allow air to come up from the substrate and create pinholes in the topping, which can become an aesthetic problem.

#### Perfecting the perfect pour

This part of the job needs to be planned out perfectly.

"Have your mixing area ready, bags ready and have one guy mixing while the other installs," recommends Ron Garamendi of Recreation Development Co. in North Las Vegas, Nevada. In addition, "you have to be careful you don't work an area too big."

What's the big deal? The "fast-drying" properties of the products mean you have mere minutes of working time. At

70 degrees Fahrenheit and 50 percent relative humidity, you have about 10 minutes before the topping begins to gel. The hotter the temperature; the less working time you have. The minimum recommended temperature of the substrate for application is 50 degrees.

Don't neglect considering the temperature of the topping materials, either. Preconditioned material is important. In the wintertime, make sure you're using products at room temperature.

When pouring fast-drying, self-leveling toppings, one-quarter-inch is the minimum thickness recommended and 2 inches is the maximum. A thicker pour does not increase performance. Also, if a thicker application is required these toppings may not be the most cost-effective products to use.

At the time of application, "turn off the air conditioning, heat and avoid direct sunlight where you pour," advises Golter. "Airflow will cause ripples, which can crack and it'll look like a dried mud bed."



Another cardinal rule: Honor expansion joints throughout the process. "For saw-cut control joints, you can self-level over them, but map them in and make saw cuts in the topping to mirror them," says Fabyonic.

#### Go ahead and decorate!

There is virtually nothing you can't do decoratively with fast-drying, self-leveling toppings. "It's the artisan's dream come true — the perfect canvas," Golter says.

For coloring, the options mirror those for traditional concrete: integral colors, acid stains and color dyes. Be sure to consider UV resistance if the topping will be exposed to sunlight. While not widely recommended, acrylic stains can be used when the surface is properly profiled. "New technologies in micro emulsions allow better adhesion and penetration of the topping," reports Golter.

Use custom inlays of aggregate, crushed glass, metal, even wood. Use leaves and other objects to create relief impressions.





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Create a stencil and sandblast a logo or design into the topping's surface. Incorporate saw cuts into the finished design. Consider using grout in saw cuts for distinct lines. Be creative!

#### Sealing and finishing your work

Use a sealer appropriate for the environment. For example: sealers approved for retail applications may not be approved for restaurant use. If slip coefficiency is a concern, adding floatable aggregates or fine sand to the sealer might be considered at this stage. Some sealers already contain micro-aggregates. Consult the manufacturer of the topping product for recommendations. And, again, read and follow the directions for the sealing product you use.

Ongoing maintenance protocols will vary from facility to facility and are affected by the traffic load. Use a sacrificial wax on the sealed surface to take the brunt of the abuse and extend the time period between resealing. "They may be less maintenance, but these floors are not maintenance-free by any means," reports Fabyonic.

Smith says he monitors a job for six months to a year to determine proper maintenance intervals.

The folks at Skookum recommend recoating floor finish products at a rate of: every four to five weeks in high traffic

#### Tips and pitfalls of fast-drying, selfleveling toppings

• Participate in the topping manufacturer's training program.

Read and follow all directions exactly.

Use the proper tools and equipment.

- Don't skimp on substrate preparation. It is critical for a good physical (mechanical) bond.
- Eliminate as much dust as possible.
- Complete primer application is critical for a good chemical bond.

• Don't misuse or abuse the product.

 Don't over-water the mix. To extend working time in hot weather, add ice to the water barrel and use that chilled water in the mix.

 Don't apply the product when the temperature is below 50 degrees or above 95 degrees. At temperatures above 85 degrees, chill the water used for the mix and consider pouring at nighttime.

 Don't let the material get away from you or pour too large an area at one time.

• Eliminate airflow to prevent ripples in the surface.

 After the decorative effects are completed, apply a sealer and a finishing product, such as a sacrificial wax.

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CIRCLE #03 ON READER SERVICE CARD

areas, every three to four months for moderate traffic, and every six months for low traffic areas.

#### Navigating the critical path

Golter suggests, "When contractors are putting together the critical path for the project, the contractors have to mark in that no other trades are there" during the prep, application and finishing of the fast-drying, self-leveling topping.

"A lot of the time you have to make the general contractor, or whomever is in charge, aware how temperamental the product is and what's needed prepwise," explains Garamendi.

"Sometimes I set it up so we do the job in the evening. Sometimes we've worked around the clock, with two shifts, to get the job done."

Smith says, "Instead of planning, we orchestrate." We pre-lay the groundwork for subs before us and behind us."

One other important aspect of the job is doing an on-site mock-up. "Use the exact technique, coloration, sealer — even timeframe — and get that approved before you begin the job," advises Donaldson. For commercial projects, create a 10-foot by 10-foot sample. Include it as part of the floor, or in a closet or smaller room. For residential projects, an 18-inch-square sample should suffice.

For radiant floor applications, check with the topping manufacturer first. There may be concerns if the underlayment is gypsum-based instead of Portland cement-based.

Fast-drying, self-leveling toppings are not for the faint of heart, Fabyonic points out. "You've got one shot to do it right."

Smith agrees. He says very rarely does something go wrong, but if something does goes wrong you can't fix it until everything is said and done, and then you probably have to fix the whole floor. "Concrete is an unstable material anyway. This stuff is like working with dynamite. It either goes off well from the beginning or it doesn't."



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## Richard Smith Custom Concrete



ick Smith, owner and president of Richard Smith Custom Concrete of West Hills, California, subscribes to a business maxim that he believes is crucial to the success of any contractor business, or, in fact, any business: Do more listening and less talking.

"It all boils down to honest and open communication," he says. "If people would just try to keep their mouths closed

and their ears and eyes open more often, there's virtually nothing that can't be done. We all need to do a better job of listening to our clients." (That advice would probably save many marriages as well!)

Not that you should stop talking entirely, however. The ability to clearly communicate your ideas, your strengths as well as your weaknesses, and your concerns about a given project are also very important, Smith adds.

"Anything can be achieved as long as everybody's honest at the table — honest about what they want, what they know, what they don't understand. Instead of the proverbial poker game that takes place at the beginning of too many projects, wouldn't it be more beneficial to all parties involved if the 'game' were to be played 'openhanded'? Lay your cards on the table and dispense with the posturing."

In his 20 years in the concrete installation business, Smith has been involved in more than his share of successful projects, from 20-square-foot residential patios to 200,000-square-foot malls. He's also seen a few projects that were less than successful, and in nearly every case, he believes this was due to communications failure. "There are many ways for communications to break down," he points out. "The client may be unclear in conveying what he wants. The designer and architect may not fully appreciate each other's area of concern. The contractor may fail to admit his lack of experience with the type of application

the project requires. The budget, and its flexibility, may not have been discussed sufficiently. Any of these will decrease the likelihood of having a satisfied customer at project's end."

Nurturing the relationships between the key players on any concrete job — the owner, the architect, the designer and the contractor — is crucial to achieving successful results, says Smith. "Every project has its key players, and those players, as controlling as they might be, are constrained by the progress of the project itself. Each has his or her own agenda and level of understanding within their area of expertise. For example, many clients are very precise about what they envision the project should look like upon its completion, but too many are rather vague about what they want. In those cases, it's up to the contractor to probe for more information, or show samples of products and applications, that might help the client identify and communicate their wishes."

client's dream, and to feel confident

that the other key players have the

knowledge to achieve that dream."

The concrete application specialist's responsibility is to assess the variables, learn the client's desired concept, and communicate them to the architect and designer, Smith says. "It takes a lot of patience and a lot of time to really listen to people and try to understand exactly the language they're speaking. The successful contractor is, in effect, a translator who is fluent in the multiple languages spoken by the project's key players. One of the certainties I've discovered about concrete is this: Everything you construct takes a significant amount of orchestrating and networking, with the involvement of talented people, in order to get great results. No way is this a one-man job. Those who say they're in business by themselves are immediately labeling themselves as not as good as they claim to be."



#### A Balance Between Structure and Aesthetics

Meanwhile, the architect, who has a tremendous liability on a given project, is keenly interested in the nuts and bolts: load-bearing values, thickness, weights, UV exposure concerns and ADA issues. The designer, on the other hand, is interested in creating atmosphere through design elements such as color, texture, size and placement. "All projects need the architect as well as the designer," notes Smith. "It's our duty, when working with a designer, to compassionately convey the structural requirements during the design process, while at the same time taking intro consideration the design aspects when speaking to the architect. After all, the architect and designer share the common goal of creating a finished product based on the client's vision. It takes a tremendous amount of courage and patience — and communication — to design toward the

#### **Preparation is Critical**

Another rule of a successful business, Smith maintains, is the same as the Boy Scouts' motto: Be prepared. "Concrete is one of a very few things on this planet that is unstable and has a life of its own. Concrete is a volatile material. It tells us what it's going to do; we do not dictate what we want it to do. We can add all the chemicals, reinforcing agents, retardants and accelerants, but sooner or later, it's going to blow up on you. It's going to fail. So you have to be prepared, not only with what you're specifically trying to do, but for any eventuality, because concrete has so many variables. Do you have enough iced water on hand? Do you have extra manpower? Are all the necessary tools on site? What if the weather changes for the worse? Preparation is the key."

Smith, whose father was in construction, started working in concrete after high school, but he found it to be very difficult work and instead





He decided to get back into concrete, but adopted a new attitude. "I decided I wanted to do it better and be more inspiring and more passionate, than anyone else out there. One way to do that was to not lock myself in a bubble. I didn't do just stamped concrete. We would try new applications, experiment with them in research and development, and broaden our palette. We started doing small patios, and then got into foundations, then walls and hardscapes, and eventually the decorative, artistic side of the business, including concrete sculptures and countertops. Our way is to try to take it to the next level, to see if we can improve on it."

Smith employs 18 people and, he says, "We've never been without work. We've never really had a recession because we're so diversified. There seems to always be concrete work

around, and the recent popularity of the decorative stuff is great. I think it's because the new-age designers coming out of school now have opened their eyes to applications that old-school thinking wouldn't permit. For interior projects, for instance, instead of always using hardwood or carpet or tiles, they have seen how concrete can have a really warm element, and a sense of elegance as well as a sense of old-world renaissance."

#### Be Passionate About Your Work

One more key characteristic is required of a successful concrete contractor, Smith believes: passion. "We try to turn up the enthusiasm, especially when a project appears simple or mundane. We do our best work when the client is passionate about the project, and we share or mirror that passion. Whether it's a government library building or a homeowner's back pool deck, we live

Quality workmanship is important. Customer relations is critical to a successful project.

for the passion. If it's a residential customer, chances are it was a flip of the coin as to whether they were going to do this extensive project or go to Jamaica for a vacation. We won out, so we strive to make their choice equally enjoyable."

Smith thinks the future looks bright for his company as well as his industry. "If the industry holds integrity and people do high-quality work, there's no end in sight. As for our business, we intend to maintain the nice conservative growth that we've been experiencing instead of that explosive growth others shoot for. We want small growth so communication and passion can be maintained. When a prospect or client calls, answer the phone. Return the message. Listen. Be enthusiastic. Treat everyone equally no matter the size of the project. Those are the kinds of things I want to maintain."

He concludes, "You have to like what you do. I think have the greatest job in the world. Basically, we take unskilled labor, a material that can blow off on us at any time, and clients that really don't know what they want, and we're invited to achieve a dream. It's a wonderful challenge, and it inspires hope to be given the chance to reach out and do something right."



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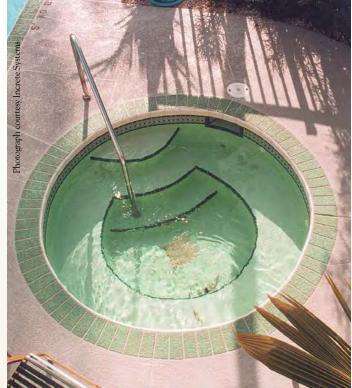
TIME TRACKING TOOLS FOR THE CONSTRUCTION TRADE

utting a new face on old concrete is nothing new. In fact, some of the better-known theme parks, hotels, airports and malls have walkways that have been resurfaced using several popular methods. Many of those pedestriantraveled venues that look like cobblestone, slate, brick and marble are in fact, cement surfaces fashioned to look like more expensive materials at a fraction of the cost.

Experienced contractors have been applying these textured finishes for years, adding to their profitability and reputations. If you haven't ventured into this part of the business, it's never too late to add another practical and colorful technique to your repertoire.

When dealing with existing concrete there are many options available that can enhance the surface appearance including texturing, scoring, stamping and staining. Determining which option is the best will depend on the condition of the concrete and the final desired appearance. When original concrete is in good condition, customers can consider any of these methods. Another option is sandblasting a design into the surface using stencils or templates. Various patterns and designs can also be achieved by scoring the surface.

In addition to providing a whole new look to existing concrete, resurfacing is



also extremely economical. Resurfacing offers other benefits such as added safety and durability. "Unlike plain concrete or tile, decorative systems can be applied in a slip resistant finish," says Rick Cox of Spray-Crete Industries. "This feature of resurfacing is crucial in pool areas, and other areas like wheelchair access ramps, building entrances, and stairways." Resurfacing products also provide extremely high compressive strength, UV resistance and resistance to stains, mildew, oil, and most solvents. Product composition is what gives these resurfacing materials such resilience. For example, Spray-Crete Industries uses high quality Portland cement combined with an exclusive liquid bonding additive for their Spray-Crete Base and Texture

Coat. The water composition of most resurfacing products also makes them environmentally friendly to use, and easy to clean up when the job is done.

Other substrates like brick, block, tile, exposed aggregate and even wood decking are also ideal for resurfacing applications because of its durability and bonding strength. There are also many interior and exterior application possibilities such as pool decks, driveways, entryways, sidewalks, kitchens, baths and steps. Virtually any surface that is appropriate for walking or driving can be resurfaced.

Perhaps the only time resurfacing is not recommended is when the concrete is so badly damaged, it needs to be removed. In these cases, old concrete is replaced with new. If a decorative finish is desired, the contractor can work with the customer to determine the best finish for the job. Stamping, stenciling, and coloring freshly placed concrete become the sensible alternative. This option produces beautiful, realistic looking brick, paver or stone-like finishes. However, the process is more costly than resurfacing since the job involves creating a new "foundation."

#### **Getting Started**

As with any new material or product, consulting the manufacturer on application techniques and tips is the

## Resurfacing Brings a New Dimension to Concrete

Old surfaces get a whole new look with resurfacing systems that level; add dimension, color and durability.

by Ester Brody

best way to ensure success. Many manufacturers offer hands-on training in the field or organized classes for a more in-depth coverage of product uses, capabilities and trouble shooting. In addition, most resurfacing products are "systems," that involve several components that should be used together.

Preparing for the base coat is the next step. Most products come packaged in 50 lb. bags, which are mixed with a bonding agent. Typically, the resurfacing material is used as both a base coat and texture coat. Mixing is best performed with a 450 to 600-rpm drill and mixing paddle. The ratio of dry product to bonding additive will depend on the type of texture you're trying to achieve. Again, the manufacturer can supply the correct "recipe" for each application. Once you have the desired consistency, the product can be applied with a hopper gun, towel or squeegee, or a combination of methods. The thickness of the application can also vary from feather-edge to an eighth of an inch in depth. Some products can even be applied up to two inches thick.

Other tools and materials needed depend on the finish type.

Manufacturers can supply a list of tools needed (stencils, trowels, spray equipment, etc.) along with information on the necessary safety equipment. For example, manufacturers recommend wearing safety goggles and protective gloves during all stages of application including pressure washing. Respirators must also be worn when applying solvent-based concrete sealers due to fumes. If acid etching will be part of the job, check with the manufacturer for additional safety guidelines.

#### Taking the Right Steps for a Successful Job

Proper surface preparation is critical to the success of the job. The best product in the world won't stick if you don't properly prepare the surface. No matter how sound the concrete surface appears, review three principles before you begin.

1. Clean — The host surface must be free of dust, dirt, oil, grease, paint, and



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#### **Some Common Questions about Resurfacing**

How long will the resurfacing last?
A Resurfacing jobs can last indefinitely if properly applied and maintained. According to most manufacturers, annual cleaning and resealing is recommended to keep the surface in good condition. Ask manufacturers for details on the correct cleaning agents to use.

How can I create the designs?
Designs are based on the stencils or templates used. However, taping out patterns with grout tape can create beautiful custom designs.

Can designs and colors be changed?
Yes. Colors and designs can be re-shot as often as you'd like. Just remember that the surface needs to be properly prepared before you start. Pigmented sealers can also change colors effectively.

What if my stencil buckles, and won't roll

A If the stencil won't flatten out, cut the stencil in two at the buckle and press the loose ends down. If this doesn't work, cut out a small section and replace it with grout tape.

How do I estimate how much product I'll need for the job?

Coverage depends on several factors including the texture and contour of the surface, and how porous it is. As a rule of thumb, very smooth surfaces will get 100-135 sq. ft. per 50 lb. bag. Some manufacturers offer simple computer diskettes that can tabulate the complete resurfacing system product requirements based on the square footage entered.

Is there a minimum temperature for application?

Yes. The air and host surface temperatures must be at least 40 degrees Fahrenheit and rising to do the work.

Whom can I contact for more information or classes?

A To find out more about products or classes near you, many of the advertisers in this issue of Concrete Decor provide hands-on training. You can also visit Concrete Decor's website at www.concretedecor.net to view the calendar of upcoming training opportunities found throughout the country.





curing components. Customarily, the surface should be washed with an industrial degreaser. All loose, delaminating, flaking, or spalling concrete should be mechanically removed by pressure washer, abrasive systems, scarifier, etc.

- 2. Cured New concrete should be fully hydrated. Cure times can vary widely depending upon climate. Cooler climates make take up to 28 days, while hot climates may sufficiently cure in as little as 4 days.
- 3. Profiled The host surface should be acid-etched or shot-blasted to open the "pores" of the concrete. This allows the fine sand and latex modifier to flow into the pores and marry as one unit with the concrete. Stress cracks and pitting should be filled with an appropriate quality concrete patching compound. In addition to checking with your resurfacing product manufacturers, detailed surface preparation guidelines specifically designed for



concrete are also available from the International Concrete Repair Institute.

"Important to keep in mind with any and all crack repairs is the fact that over time, cracks will return. Cracks can best be hidden if they can become a part of your decorative work (e.g. grout lines, color transitions, or fancy ivy or grape vines) on the concrete surface," says Mike Lowe, Jr. of Increte Systems, Inc.

Once all surface preparation is completed, the actual resurfacing can start. Base coats are applied for two reasons: to level the surface, and to establish a base or grout color in a typical two-color application. The consistency of the base coat will depend on job requirements. For example, a



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thin liquid coat will fill small imperfections or pock marks. This thin coat is not meant to provide 100 percent coverage. However, a thicker base coat will help level the surface and offer total coverage. Either of these applications can be done with a squeegee, gage rake or trowel. Before the next step, surfaces should be allowed to dry at least two hours.

Stencil installation is next. There are many designs to choose from: some stencils are easier to work with than others. In any case, stencils are measured, cut to fit and held in place with putty. Once the stencil is secure, a color coat can be sprayed on with a hopper gun. Usually the color coat is the same product (with color added) as the base coat. A wide range of textures can be achieved depending on the pressure and type of spray nozzle used, and whether the top coat is troweled. After drying, two to three hours, remove the stencils and sweep away any loose putty and texturing debris.



(A leaf blower is ideal for removing any remaining texturing debris.) The surface is now ready for sealer application. Check manufacturer's directions on how many coats of sealer to use: directions for interior and exterior work may vary. In general, the surface will be ready to walk on in about 24 hours. Surfaces exposed to vehicle traffic should dry for four full

days before they are used. According to industry standards, the surface will not be completely cured for about 28 days.

#### **New Niche in the Business**

While decorative resurfacing is not a new technique, demand for these applications is growing. "Polymer modified cements have been in use for decades, but it's only been in the last five years or so that architects, builders and homeowners have really gotten turned on to this aspect of decorative concrete," says Rick Cox. Because of their water-based formulations, resurfacing materials are easy to work with. They are also versatile and offer relatively fast completion times. The many advantages provided by resurfacing along with renewed interest from customers makes this application a solid addition to the services you offer to customers.



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## Rafco Brickform Decorative Sandblast Stencils





There is virtually no limitation to the size or complexity of a design with sandblast stencils.

equiring little investment in equipment and training compared with other decorative techniques, adding sandblast stenciling to your repertoire lets you move up into high-profile commercial and residential projects. Rafco has introduced Brickform sandblast stencils to make this technique more accessible to contractors.

#### The growth of stenciling

Robert Freis, the president and owner of Rafco Products Brickform, realized the need for precut sandblast stencils several years ago after seeing the elaborate stenciled concrete work in some Las Vegas casinos. Back then, stencil material was laid out and tediously cut by hand. Freis realized that with the aid of design software and computer-controlled machinery, stencils could be made in a fraction of the time. Freis brought in Glen Roman to develop the company's stenciling department and help customers design and use the stencils. Rafco unveiled Brickform Decorative Sandblast Stenciling at World of Concrete '98, and the decorative concrete industry received the product eagerly.

"Stenciling has become very popular with both landscape architects and decorative concrete contractors," Roman says. "Architects see the design potential right away. They can create artistic concepts and incorporate them using regular concrete as their canvas. Stenciling can create decorative borders, logos, custom designs, or theme artwork-whatever they can dream up! Lately we've seen a dramatic increase of sandblast stenciling being



specified on major commercial hardscape projects."

"And," Roman adds, "decorative concrete contractors can see that by adding stenciling to their existing services, they can bid on specialty or high-profile projects that they would have passed up before."

#### What you'll need

Getting into sandblast stenciling requires a sandblaster, of course. Small sandblasters that run off bottle-type compressors don't have the capacity for large stenciling jobs. Most contractors rent a 185-cfm compressor and a 100-200-lb kettle sandblaster or shot blaster the day of the application.

Most commercial stencil projects are done in the construction phase of the project, and in deference to other operations going on around you, you may need to use a Blast-Track machine



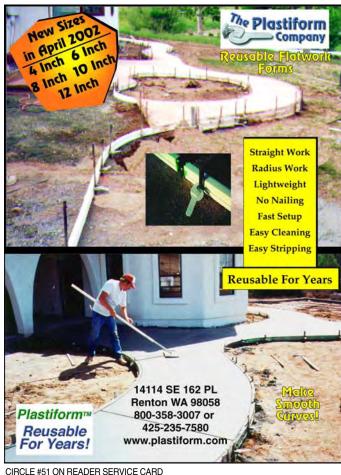


or water-vapor sandblaster to control dust emissions.

As for the stencils themselves, you may be able to find the right one in Rafco's selection of stock borders or medallions. If not, you can fax or mail the company an 8½" x 11" black-andwhite copy of your artwork, along with a rough drawing of the layout and dimensions of the project. The company will give you technical assistance if you need it. Rafco then sends you a proof of your stencil along with detailed dimensions of the design and layout. Once you approve the proof, Rafco calculates the price, cuts the stencil, and ships it out within a couple of days.

Stencils can be made as large or as small as you need. The panels are 26 inches wide and four or five feet long, and a larger medallion or design can be made by joining multiple panels like puzzle pieces.









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#### **Design ideas**

A good source for stencil designs for borders or medallions is your local bookstore or library. Look in the art section for clip-art books from Dover Publishing. In these books are thousands of copyright-free black-and-white designs that Rafco can enlarge to the size you need. In addition to all kinds of contemporary and vintage theme art, the books contain designs from many cultures, such as Celtic, Arabic, and Japanese art. Photocopy the best black-and-white image you can, the bigger the better, and avoid shaded designs.

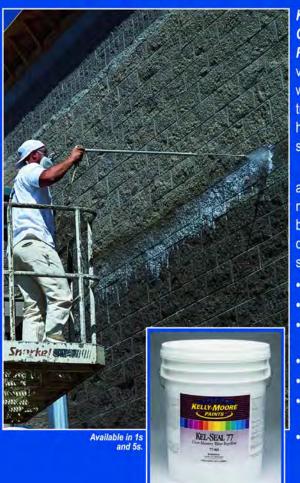
#### Applying the stencil

Most stenciling is done after the concrete is cured for 28 days. Overlays don't require curing. The concrete may be integrally colored, stained, or colored with color hardener depending on the look desired for the overall design.

The first step, which is very important, is to apply a light coat of high-quality solvent-based wet-look sealer and let it dry thoroughly. The

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sealer gives the stencil adhesive a "skin" to stick to instead of porous concrete. Don't use water-based sealer, as it may blister when you peel up the stencil.

Next, vacuum or blow off any dust or debris, then wipe the immediate area with isopropyl alcohol and allow it to dry. Allow ½ gallon of alcohol per 150 square feet of working area.

The stencil is supplied between two Mylar sheets. The design is cut into the stencil, but the excess hasn't been removed; it just looks like a continuous sheet. Without peeling off any backing sheets, lay the stencil down on the concrete in the exact position required, using chalk lines as guides. Using chalk or a grease pencil, make registration marks from the stencil to the floor, so you will be able to lay it down in exactly the same place.

Now you'll need a helper. Turn the stencil over and remove the clear film that covers the adhesive. Pull it back.





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not straight up. Carefully turn the stencil over again, keeping it suspended in the air. Lower one end to the concrete and adjust the stencil to match up with the registration marks. Then lay down the rest of the stencil, from one end to the other, aligning as you go. Get it right the first time, as pulling it up to realign it will weaken the adhesive.

Once the material has been applied, make sure you have proper adhesion to the surface. Then remove the clear plastic that protects the top of the stencil, pulling it straight back as before. If the stencil wants to lift at the edges, which is normal, stop and press it back down while peeling back the Mylar.

When the protective sheet is removed, use dental pick tools or razor knives to peel away the stencil material from the areas that should be open. Once the stencil design is revealed, it's always a good idea to apply light to moderate heat to the surface using a propane torch. Assure adhesion as you warm the stencil by softly stepping on the material.

Once your stencil is applied, mask off the surrounding area, and you're ready to sandblast. Keep the nozzle about 12-18 inches from the surface, and keep it perpendicular to the surface, as blasting at an angle may peel up the stencil. Practice will establish the pressure and distance needed to create the desired effect.

After sandblasting, peel up the stencil. The material won't leave any glue on the surface, so no cleanup is required. You can stain the etched areas if you want to; the sealer on the unetched areas acts as a barrier to the second color application. Then seal the surface.

#### Don't rush

Allow plenty of time to prepare the surface and apply the stencil. "Most application problems stem from dirty job site conditions," says Glen Roman. "The stenciling area should be

absolutely clean! Any type of drywall or concrete dust on the application area will render the stencil unusable. Wiping down the surface with isopropyl alcohol will give you a nice dry tacky surface to apply your stencil to without affecting your sealer."

As you can see from this brief description, sandblast stenciling requires patience and attention to detail, but careful work will reward you with a nice-looking portfolio that will open the doors to the growing market for this kind of work. To help you get started, Rafco offers "deminars" through its distributors, who can also send someone to train your crew on-site at a job. For more information please call Rafco Brickform Products (800) 483-9628.



#### **Product Profiles**

#### **Brilliant New Color from QC Construction Products**

ere's a design truth retailers understand: before customers make the decision to purchase, they make the decision to enter the store. This showroom floor has proven irresistible to shoppers, with show-stopping color from QC Construction Products.

New QC CemTint colors are penetrating water-based tinting compounds designed to provide lush, translucent marbled hues on gray and colored substrates. Similar in appearance to chemically stained concrete, QC Cemtint can be used on concrete, brick, plaster, porous limestone, Mexican tile and gypsum products. A hydrolyzed, lithium quartz compound, QC Cemtint works by penetrating and reacting with mineral compounds and/ or siliceous materials in the substrate so the vibrant QC colors cannot be easily worn off like other film-forming water-based coloring products.

QC Cemtint colors are easily applied in light uniform coats with airless or pump-up sprayer systems. Applying the right sealer over top of QC Cemtint stains brings the colors to life for stunning variegated effects.

#### ZipWall's® Pioneering "Dust Wall" System Isolates Work Areas

t doesn't matter how good your dust recovery system may be, but when it comes to working indoors a dust control barrier system is imperative to maintaining clean and happy customers. ZipWall is the award-winning product that offers an effective method to isolating the dust and debris that's associated with concrete cutting, profiling, or other applications. The ZipWall system is available in both 12 foot and 20 foot pole lengths.

The ZipWall system is flexible enough to accommodate variously sized

spaces; lightweight and portable; easy-to-assemble and virtually airtight. The ZipWall system consists of two telescoping, twist-lock ZipWall poles topped with the patented ZipWall jack. The ZipWall jack locks the screening material firmly against the ceiling with a special slip-resistant lock plate, mounted on a ball-joint assembly. The foot of the pole keeps it snug along the floor. The work area may be screened off with inexpensive plastic sheeting, light canvas tarp or drop cloth. Stretch the screening material tightly from one pole to the next to create a smooth neat-looking wall. One person can construct a 12 foot — or — 20 foot long ZipWall dust barrier in less than a minute.

ZipWall is available from a growing list of selected distributors, listed on the web site at www.zipwall.com. For further information, contact the manufacturer at 1-800-718-2255 or visit ZipWall's web site.

When you want to convert retail foot traffic

into buying customers for your client, lay down a floor with colors by QC Construction Products. For more information call 1-800-453-8213 or to find a distributor near you log onto www.qcconprod.com.

#### The New Finishers Edge

The Finishers Edge is a new "straight-edge" cutting system designed to provide fast, affordable and a highly simplified means for cutting straight lines in concrete. Enclosed in a durable carrying case, the Finishers Edge comes with five stainless steel tracks; a 2', 3', 5', and (2) x 10' pieces. Included is a nylon puck specifically designed to attach to your existing skill saw. The puck, once attached to the saw, slips into the steel track to provide smooth and effortless operation. The design of the track prevents the saw from pitching on uneven surfaces and keeps the saw perpendicular to the concrete at all times. The track also keeps the saw off the concrete surface, avoiding any surface abrasions to the concrete. The Finishers Edge, designed by a professional concrete worker and used in the field for more than five years, is a testament to its usefulness and ability to cut up to 1,000 feet of concrete per day.

With no moving parts, you simply snap a line, set the track and cut. After use, the tools can be cleaned up in a matter of seconds.

The Finishers Edge company is currently working on a new easy-curve cut system to be released later in the Fall. For more information call Brain Honcoop at 360-738-8549 or visit their web site at www.finishersedge.com. See ad on page 30.



#### Aluminum Stamps from Lasting Impressions In Concrete

asting Impressions In Concrete, makers of traditional aluminum stamping tools in Sun Valley, California is one of the few foundries still casting specialty designed aluminum (A356 T-6) concrete stamping tools. Also known as "Cookie Cutters," these stamps offer unique characteristics and advantages not found among other stamping systems. In talking to various contractors who use aluminum stamps regularly, Concrete Decor found several valid reasons today's concrete contractors should consider the aluminum stamps as a valuable tool for decorative concrete applications.

#### Aluminum stamps offer these benefits:

- They eliminate the use of a release agent in stamping applications.
- They allow for a patterned imprint without leaving a texture on the concrete. This benefit allows for a smooth stone or tile appearance or other custom texturing applications, if desired.
- They are easier to press into the concrete and maintain precise joint lines across the slab. Producing a ½" to ¾" jointing imprint, aluminum stamps eliminate the "oozing" of concrete between stamps, characteristic in other stamping methods. With a deeper impression they also provide for enhanced grouting applications.

Designed with a tapered edge, the aluminum stamps provide a clean and very authentic tile or random stone pattern with each application.

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For more information on your specific application needs please call Lasting Impressions In Concrete at 800-655-7565. See ad on page 56.





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dmixtures are an important part of concrete mix design. They are those materials other than cement, water, and aggregate, and they are put into the mix just before or during the mixture to help it meet the design and finish needs of the installation. Says Gabriel Ojeda, president of Fritz-Pak, Dallas, admixtures can be used in two ways: to improve concrete's ultimate durability and strength and to modify its behavior to make it easier to work with.

They can reduce the cost of concrete work, modify the qualities of the hardened concrete, and assure the quality of the concrete during the mix, transport, pour and set, while they help to modify setting times in response to weather or workability needs and make the concrete stronger and more durable.

According to the Portland Cement Association, Skokie, Illinois, the effectiveness of an admixture depends on the type and amount of cement used, water content, mixing time, slump, and the temperatures of concrete and air: Admixtures include the following broad categories:

- air entrainment chemicals that trap air in the mix, allowing it to withstand freeze-thaw cycles by giving water a place to go;
- water reducers to increase the slump and enhance the concrete's placeability without adding water and thus reducing the strength and permeability of the concrete; and
- accelerators and reducers to help modify set times and thus allow more time to do design work or keep the job on track with time constraints.
- 4. other admixtures, says the PCA, can be used to color the concrete, inhibit corrosion, reduce shrinkage, enhance workability, damp proof and bond the concrete.

#### Air entrainment admixtures

According to Master Builders, a manufacturer of admixtures based in Cleveland, Ohio, concrete containing these admixtures, meant to safeguard concrete in exterior installations from the rigors of Northern climates, is more workable. However, adding too much air entrainment can reduce the compressive strength of the concrete. The bubbles in airentrained concrete, says Ojeda, make it stronger and easier to trowel, as well as reducing bleed to produce a better finish.

Bob Harris of L.M. Scofield, Los Angeles, agrees. "You can't do the finish work in excessive bell water, so air entrainment lets you get to it sooner and assures better quality," he says.

However, according to Kevin Copeland, manager of technical services for the Southwest Region at Boral Material Technologies, San Antonio, Texas because air entrainment slows the rate of bleeding, it can cause delamination if the surface seals before the bleed out, so beware.

Air-entrainment additives can be used to save contractors money if they have a load that will be used for both interior and exterior installation. They can do the interior pour first and then add the air entrainment chemicals that will help the concrete stand up to weather for the exterior pour.

#### Water-reducers

These admixtures come in three strengths — normal range, mid range and high range, also known as superplasticizers — that improve workability and decrease the need for water in the mix by varying amounts, allowing for a stronger concrete without increasing the amount of cement, helping to save on costs. Adding water reducers, says Rick Seymour, technical services manager at Lafarge, Denver, Colorado, can help contractors get better detailing — he's seen the engraving on

a coin reproduced — and also save labor costs, as a four-man crew can do the work of six.

Lee Levig, of Levig Concrete is San Francisco, agrees that mid-range water reducers can give more "life" to the concrete — more detail time — while making concrete easier and less labor-intensive to place. They also make surfaces wetter, he says, so color hardeners can have a better effect.

The high-range water reducers, or superplasticizers, can produce highly flowable concrete while maintaining a specified water to concrete ratio, according to Master Builders, but their effect only lasts a short time. Fritz-Paks' Ojeda adds that they do give the concrete more strength, by reducing the water to cement ratio, but that as it becomes denser, it may become harder to add color hardeners, as they need to absorb the water that just isn't there. Another drawback, says Levig, is that too much of a plastic effect can result in shrinkage.

According to Boral's Copeland, superplasticizers can be used to create self-compacting concrete, but that can cause aggregate to sink down and segregate out. To overcome this, he recommends use of viscosity modifying admixtures that will keep aggregates suspended throughout a mixture.

Superplasticizers can also lead to shrinkage if overused, and many contractors use fibers to assure that the concrete will stay put. However, warns Harris, polypropylene fibers are to be used only to overcome surface cracking; they will not give the bearing strength of rebar.

#### **Accelerators**

These admixtures make the concrete set faster and are often used during cold weather to overcome the slowdown in the hydration of the concrete that occurs when temperatures fall. They assure that concrete reaches its full strength before it is subjected to freezing. If fly ash or slag is used in the mix, an accelerator can help regulate the set of the concrete. Using accelerators can also help finish work begin earlier and keep an installation on schedule — and on budget, says Master Builders.

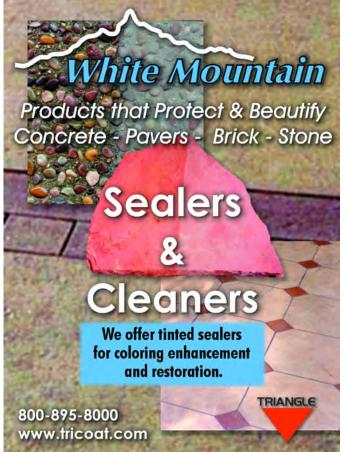
Tom Ralston, president of Ralston Concrete, Santa Cruz, California, agrees. "Use an accelerator to reduce wait time. If your crew is standing around waiting for a slab to go off on a cold day," he says, "it costs a lot of money. Weigh that against the cost of using an accelerator."

Ojeda adds that in addition to saving labor costs, accelerators are great to reduce cure times, so concrete can cure before a freeze is due. He also notes that they achieve faster strength, so driveways and runways are available for use by customers sooner.

One word of warning: Accelerators can contain calcium chloride, but Fritz-Pak's Ojeda warns decor contractors to stay away from the calcium chloride ones. They can cause corrosion problems if exposed to water, react negatively with integral colors, and promote efflorescence, a drawback to aesthetics, he says.



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#### **Retarders**

Retarders, as the name would imply, act just the opposite from accelerators. They slow down the set to allow for proper placement or to overcome the faster hydration that would be expected in warm weather, helping to assure quality. The PCA notes that the many problems contractors face in the field — trucks held up by traffic, onsite delays and equipment malfunctions — are other reasons to consider the use of retarders.

Retarders are used by decor contractors to give them more time to do stamping and finish work. Ralston says that his company is realizing the advantages of step retardation, using the prepackaged admixture on site when second loads come in. "The guys are like ants on a Sugar Daddy waiting around to do the work," he says. "And you can use admixtures to get better control of local weather conditions — if your concrete is coming from 50 miles away, they may not know your local situation and you'll have to adjust for it on site."

Scofield's Harris, who has worked on installations with Ralston, explains it this way: A third of the concrete can be poured, then a retardant added to the rest. After a second third is poured, more retardant is added to the remained. This allows time to do finish and detail work.



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#### Costs

Ojeda adds that use of step retardants can also help contractors avoid short load charges. Indeed, the costs of admixtures must be considered when planning a project. When it comes to costing out a project, says Ojeda, the cost of the concrete represents 10%-20%, and the cost of the admixture is about 5%-10%% of that, so the total cost of admixtures represents only a small portion of the project. However, he says, this small investment can modify the concrete to meet the total needs of the project, saving time and labor and helping eliminate expensive callbacks and repair work. "So don't cut corners," Ojeda says. "If it will help, use an admixture."

Admixtures vary widely in cost, adds Seymour, but ultimately, the cost is immaterial, as the specifications of the job are paramount. When it comes to concrete, he says, "performance is key."

Levig would agree. "When I use an admixture," he says, "I do not think of how to cut costs but rather how to get a higher quality concrete."

#### **Getting the right product**

"There is something we call putting the concrete to sleep, and admixtures can give you flexibility of set time so you can dictate what you need to do," says Harris.

When it comes to knowing what to use and how to use it, suppliers are key. Lafarge's Seymour notes that decor contractor should work with suppliers to get the right mix design for the job.

Most ready mix suppliers, Levig says, will have the right mix design for a particular job if the contractor gives them site — and temperature-specific information. On large jobs, suppliers will work on site with you, he says, but any contractor has to be ready to adjust for the local ambient temperature and other conditions. Levig advises contractors that "you must keep control of what you have. Each manufacturer will try to sell what he knows, and each one's products reacts a little differently, so try out each one and learn by experience."

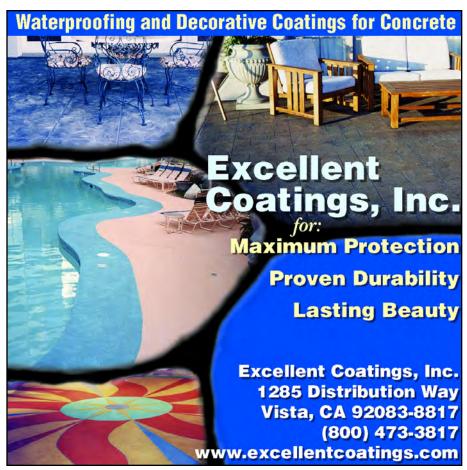
Ojeda says that while ready mix suppliers determine what the contractor gets, each contractor should demand what he needs, so the more they learn about admixtures, and the more they know what to demand of their suppliers, the better they will do.

This is especially good advice considering that admixtures can also be added by contractors on site to meet specific needs of a pour. To this end, admixtures are packaged in preweighed portions that can be placed into the mix in the field, allowing for precise modification of the mix to meet site conditions without spillage.

Contractors would do well to keep a selection of these admixtures on hand to deal with on-site problems, making sure to conduct a field test before the pour to make sure the fix is on target and that the admixture does not change any aesthetic priorities.

Admixtures can come in combinations, says Harris, which gives more than one capability in one product. Further, admixtures can be used in combination, says Ojeda, but contractors should be wary about combining them. He warns that they are used in such concentration that each must be thoroughly dispersed before the next one is added to avoid problems.

Admixtures, if used right, can be the decor contractor's best friend, allowing him to build in quality and strength while using his labor and time to the best advantage.



CIRCLE #25 ON READER SERVICE CARD



CIRCLE #43 ON READER SERVICE CARD

# Profile: Increte Systems Inc.

f you ask Increte Systems Inc.'s marketing director, Mike Lowe Jr., what makes his company head and shoulders above the rest, he'll tell you the answer to that question is easy. "We really are the only company that manufactures every component of all of our systems," from the ad mixtures, coloring agents and sealers to the stamping tools and form liners.

"We're a one-stop shop," he adds with confidence when describing the 39-year-old Florida-based company founded by his father and company president, Mike Lowe Sr. If something goes awry with a job, "You can just pick up the phone, call our free tech support line and one of our representatives will walk you through the situation," unlike the runaround you may experience if you're using several companies' products and each claims the issue is someone else's fault.

#### Education, education

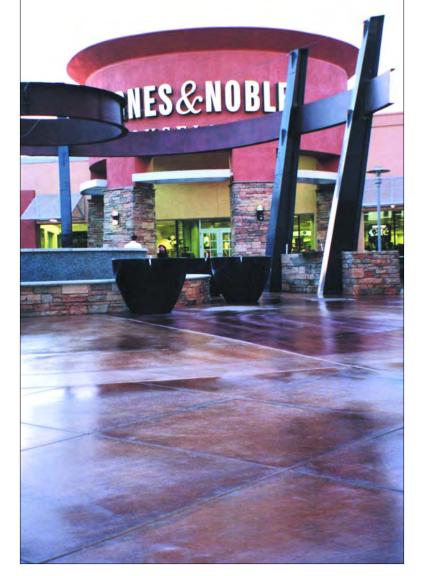
Beyond offering a complete package deal, there's one other thing that makes Increte Systems stand out. "We were the first company to institute a training program," Lowe says, noting its first seminar was held in 1988. "We won't sell our products to contractors who haven't taken one of our training seminars," he says with obvious pride. "No other company that I know of has that requirement in place." To date, Increte has trained more than 7,500 contractors.

"We feel when a decorative concrete job fails, it's typically because of poor training or lack of training. There are lots of shortcuts and misinformation out there and we want to make sure our contractors are trained properly how to use our products," Lowe says. Because when a product fails to do what it's designed to do, it's not just bad for Increte's business, it's bad for the decorative concrete industry as a whole.

Increte Systems, which is headquartered just outside of Tampa, has dedicated 40,000 square feet for training purposes. Lowe explains his company holds its two-day, hands-on seminars,









Due in part to the many product offerings from Increte, concrete can take on more shapes, textures and colors than any other building material today.

which includes classroom instruction, on site about 10 times a year. By the year's end, it will have conducted 130 seminars.

#### A solid line up

To date, Increte markets eight different systems:

- Increte The company's most popular product, Increte is a stamped concrete system "Second Only to Nature." The realistic systemwhose molds are pulled off the real thing-is available in a wide array of patterns duplicating granite, slate, stone and brick in a wide assortment of colors.
- Stone-Crete A cast-in-place architectural wall system that duplicates the look of handlaid stone.
- Color-Crete An integral coloring system for concrete available in 30 standard colors.
- Stain-Crete A penetrating stain system designed to created mottled color tones on both new and existing concrete.
- Texture-Crete and Spray-Deck Decorative overlay systems designed to transform ordinary or unsightly concrete into bold and textured surfaces. Touted as the "ultimate cover-up," the products create a surface that is both slipresistant and cool to the touch with a strength twice that of regular concrete.
- Thin-Crete A stamped overlay system designed as a cover-up for existing concrete surfaces, eliminating the expense of concrete replacement.
- New-Crete The newest addition to Increte's offerings, New-Crete is a self-leveling, fast-set floor topping that can be applied to existing surfaces and walked on in three to fours hours.

"What's so exciting about this product are businesses, such as restaurants or those in a shopping center, will no longer have to shut down so contractors can tear up and replace old, wornout concrete. Floors can be functional in as little as four hours," Lowe says about the polymer



The stream effect design by the architect was achieved by using the Increte stamped concrete Large Random Flagstone pattern with custom colors.

cementitious overlay system that's compatible with Increte's stain system. Also, he adds, its 6,000 psi makes for a durable surface, almost double the strength of regular concrete.

#### Stamped concrete: A solid alternative

A subsidiary of Inco Chemical — a company that's manufactured sealers, stains and epoxies since 1963 — Increte Systems entered the decorative concrete market as a natural progression, adding stamped concrete and overlay systems to its coatings and colorings offerings. Today, Increte is used in 70 countries throughout the world, including all 50 U.S. states.

"We've been overseas for 11 years now," Lowe says. And aside from a few formula adjustments they've made to allow

Increte's products to work properly in different climates, it's pretty much business as usual.

Stateside, "Interlocking pavers are our largest competition," Lowe laments, while abroad people lean toward natural materials over stamped concrete. "In Europe, people tend to want the real thing and it's an uphill battle against real cobblestone and slate. Our products have to be as realistic as possible and we sell on their functionality."

It's Lowe's job to get consumers to access the total life cost of a project and realize that stamped concrete is more cost effective and doesn't have the inherent maintenance issues associated with the real thing. As for pavers, an old technology that has been in use for hundreds of years, "It's nowhere near as good a system as stamped concrete," he says.

For pavers to work best, they need to be installed over a slab of concrete, Lowe points out. If they're installed over hard-packed sand or dirt fill, there will be settling, shifting and washouts. "So if you're going to pour concrete," Lowe rationalizes, "you may as well stamp it to achieve the look you want."

#### Solid footings in the future

Through training, tech and marketing support and its involvement in more than 15 tradeshows a year, Increte Systems hopes to educate both consumers and contractors about the benefits of decorative concrete. "I think it's in its infancy right now," Lowe says. And in the near future, "People will expect a decorative finish to be standard rather than an upgrade. I don't necessarily mean stamped concrete but maybe colored concrete or a textured border. As soon as more people realize that we can do most anything with concrete, they won't go back to plain old, gray concrete if they've got a choice."

Lowe points out there is a healthy balance between new construction and decorative remodeling that he sees continuing in the next 10 to 20 years. "We're going to see the decorative market share grow, with no end in sight," he predicts, noting that he thinks renovation products will be especially huge, as more consumers want to decorate those plain slabs with everything from stains and overlays to textures and spray-on colors.

He also notes that integrally colored concrete, which has been big for years in the southwest, is starting to spread across the country. But, he's quick to add, color hardeners are still the way to go with stamped concrete for a realistic, durable finish.

His advice to contractors who want to help themselves to a large slice of the decorative concrete pie in the years to come: "Offer a wide range of options to your customers in a wide range of prices. You need to know how to deliver everything from cast in place to overlays if you want to be out in front of the industry."

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By Craig Park

# Adding Color to Sealers

#### Creating Beautiful Effects Takes Knowledge and Practice



In general, there are three ways to think about adding color to a concrete installation. The first, as noted above, is to add a color pigment to the original mix. This can be very effective, but finish and color consistency can vary. The second is a *stain* that uses a chemical reaction, and the resulting color is what remains. A protective sealer finishes the project. The third approach is to use a sealer that has *tint* color in it. It is dispersed, translucent to opaque, and goes down very thin. A tinted sealer is not penetrative, it is topical.

Colored sealers or stains are available, premixed with a specific coloration. This is fine for applying an exact color to a small or large area, but is more difficult if you are trying to match an existing condition. Many contractors prefer this approach because a color or acid stain has a more penetrative quality. Overall, stains tend to be about 50% more expensive than tinted sealers for the same coverage application.

Adding a tint color to the finish sealer provides more flexibility in creating the desired effect. It is also a good way to match or enhance an existing colored surface. However, depending on the use the tinted area will experience, a topical

application like a tinted sealer can be prone to more wear if not properly maintained. On the positive side, the application can be completed in about half the time of a stained finish.

#### **Getting it Right**

Before attempting the application of a tinted sealer, you need a very basic knowledge of color theory and the chemical properties of the sealers you will be using. The experts agree that one of the biggest problems in our industry is there is a very serious lack of knowledge, both from the manufacturers, the supply houses and the contractors themselves. Taking time to do the research will result in a better installation, and a happier customer.

Having a working knowledge of color theory can give you an advantage over a competitor. If the color or finish is not already specified, understanding the color wheel, and the use of contrasting and complementary colors, can be an important differentiator to the customer. As in most creative efforts, try to keep it simple. A few choices, carefully selected to work with the color schemes already present in the project, gives real value.

It is very critical that you use pigments that are compatible with the sealer you are using. There are several choices ranging from translucent acrylic pigments, solvent-based pigments and specially formulated pigments for use with solvenated and water-based epoxies, and those developed for urethane applications.

Anytime you start tinting clear sealers to do topical color, you need to use a compatible pigment. When using solvent-based epoxies, you need to be using either epoxy dispersions, or







solvent-based surfactant dispersions. Liquid pigments do not work in 100% urethane formulations. It is very critical that you use compatible pigment solutions with the appropriate sealer.

As with any additive, you have to worry about harming the integrity of the sealer. For example, if you take a universal color, and try to stick it into a solvenated acrylic, it will not mix. It is like oil and water. This is where a little homework will help a lot. Make sure you have selected a pigment that works with the sealer you are using.

Go to the manufacturer of the sealer and ask them to recommend a pigment, or buy it through that manufacturer, you should not have a problem. Recommended formulations are designed to be compatible. Therefore, be sure that what you are buying is appropriate for that application, both from its chemical formulation, and for its intended use.

#### **Application Techniques**

Application technique is crucial to a successful project. The final finish will be very dependent on when you apply a tinted sealer, how you apply it, its thickness, and other characteristics. It takes a somewhat artistic touch, and some real practice, in order to get the final finish to meet the desired aesthetic. Depending on the method used, finishes can range from marbleized like an acid stain, to colorful blends like terra cotta. Think "faux" finish.

For the fewest problems, the easiest tint-able product is a solvent-based acrylic. It does the best job of dispersing the color as well. Next, would be a water-based acrylic, and most of the

manufacturers of stains right now are water-based acrylics, or hybrids with urethane or epoxy. Typically, these are a single chemical component.

Solvent-based sealers generally give a better consistency than water-based sealers. It gives more depth, and much better durability. However, if you add too much color, it can start to break down the sealer and make it weaker. The molecular structure gets changed. Similarly, if the pigment is not compatible with the sealer it can settle in the lower areas of the pour, causing a undesirable mottled finish.

Using a colored sealer is an excellent choice to help touch up areas. Where acid staining can be temperamental, and can react differently with different mixes of concrete, sealers generally make the final project look newer and cleaner.

#### In or Out

Colored sealers can be used interior or exterior. The application method is different, depending on the look you

want to achieve. Interior applications require an acrylic hardener over the top, or a floor polish. For exterior applications, to protect a stain, or pigmented sealer, you put a clear sealer over top as your protective film.

Exterior projects are not often maintained as well, and the finish is subject to UV-degradation, pollutants and other environmental factors. This is why epoxies are not used for exterior projects. If you are using a tinted sealer for an exterior application, organic oxide pigments will be more UV-stable than non-oxide based pigments. Typically, exterior application are renovations or repairs. You can use pigmented solvenated acrylics to retrofit a stained job that is worn out. For a successful exterior application, you have to maintain the topcoat of protective sealers in order to maintain the integrity of the color.

For interior projects, it is critical that when you select a sealer, you take moisture vapor emissions into consideration. Traffic levels are also a consid-



eration. Water-based acrylic sealers have the least amount of abrasion resistance, adding to maintenance costs. When the surface to be treated is going to have heavy pedestrian traffic, a colored sealer is probably not a good idea. Lots of foot traffic will wear it down quickly if a good maintenance program is not in place.

Moisture in the concrete substrate can be a problem in a colored sealing application. Running the calcium chloride test is important and inexpensive insurance. As with any concrete application, the simple, common-sense approach is usually best.

#### When Not to Tint

The biggest caveat colored sealers is their tendency to be film-forming. Because they sit on the surface, they do not penetrate like an acid stain. Most applications are surface film-forming acrylics in water-based form, and do not penetrate deeply.

If the project calls for a very hard smooth-trowel finish, getting the tinted sealer to bond can be difficult. In certain situations, they tend to peel or not bond adequately. If the preparation includes proper profiling of the surface, this should not be an issue. However, if it is not a good substrate, (e.g., one that is old, degraded or damaged) the sealer is simply going to peel taking the coloring along with it. If the preparation is right, and the test sample has been done, you will get good adherence and no problems.

If you know that the project is going to have poor maintenance, topical anything is not a good idea. Any form of topical treatments will wear through. For high traffic, low maintenance applications, sticking with an integral coloring would be best.

If the project calls for a more solid, opaque look, with less mottling and less accent coloring, a colored sealer does not make a lot of sense. Colored sealers add variety and more color density variation to a surface. If you do not want any accent colors, then you should not use colored sealer because even when it is the same color, it would give it density variation that is not natural.

#### Think Faux

The options for colored sealers are many. The variety of cost-effective and aesthetic opportunities can provide a real value add to many projects.

Make sure you have selected a tinting agent that is compatible with the sealer being used. Practice the application to ensure the finishing technique to give the desired results. Inform the customer on the maintenance needed to ensure the finish lasts. Avoid situations like high-traffic, low-maintenance situations where stains or integral finishes would be a better choice.

While integral pigments give a concrete mix a solid color, and acid staining creates a finish by its reaction to the concrete, using topical tinted sealer techniques can expand the horizons of finishes for architectural flooring, allowing a wide variety of looks to meet almost any desired finish. From translucent and brighteners, variegated colors to solids of white to black, tinted sealers can add beauty to almost any architectural concrete project.



**Craig Park** is a free-lance writer based in San Francisco. He is an architect by training, and serves as a managing principal for a national engineering consulting practice.



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CIRCLE #95 ON READER SERVICE CARD

# Decorative Curbs and Gutters

by Gail Elber

n your work, you may have encountered curbs and gutters on several scales — a border around a flowerbed, curbs and stops in a parking lot, sidewalks in a new subdivision, or a full-on highway project. Here's a look at some of the possibilities for adding value to these projects with decorative techniques.

#### Curbs in new places

Curbs are familiar sights by the street or in a parking lot, but landscape curbs are growing in popularity around North America. Concrete curbs around garden beds serve several functions. They retain water in the bed. They prevent mulch and stone from escaping onto the lawn or sidewalk. They keep weeds from invading the bed from the lawn. And with an L-shaped curb profile facing the lawn, you can mow right up to the edge. It's no wonder that these curbs exert a powerful effect on neighbors, who begin calling to get estimates of their own once the first house has been done in a neighborhood.

If landscape curbs are popular in your town, or you'd like to make them so, check out small slipforming machines, which are much easier to use than wooden forms or even reusable flexible forms. The Kwik Kerb machine, from Edgemaster, and the Lil' Bubba, from The Concrete Edge Company, lend themselves not only to residential work around curved garden beds and walkways but also to commercial parking lots.

The small machines can extrude curbs on a

paved surface or on compact soil. On a paved surface, the curb can be extruded over rebar spikes, lengthwise rebar, or epoxy adhesive.

If the site is grassy, the sod must be removed, and the best method for that depends on the type of grass characteristic of your area. You can use a sod cutter to scalp off the sod, which you then roll up for disposal. You can also use a bed edger, which grinds up the sod and deposits it on the bed side of the curb.

Once the surface is ready, you affix the desired mold to the machine, dump in concrete from a mixer, and start extruding away. An auger or plunger forces the zero-



slump mix through the mold. Where the curb begins and ends, it must be troweled by hand. Cut a control joint by hand every three or four feet, depending on how cold it gets in your area.

#### **Decorative effects**

Like control joints and ends, decorative patterns or textures must be created by hand. Both Edgemaster (Kwik Kerb) and The Concrete Edge (Lil' Bubba) supply equipment for this. The Concrete Edge offers tools and materials for troweling overlays on their curbs and then stamping them, or stamping the concrete itself, whereas Edgemaster offers only tools for stamping the curbs themselves.

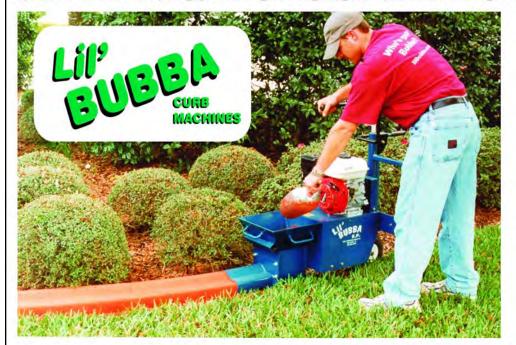
Exposed aggregate effects are possible. The Lil' Bubba normally uses a mix that contains glass fiber instead of stone, but it can accommodate gravel up to ¾", as can the Kwik Kerb. The surface is troweled to bring up the cement, then sprayed with retardant. When the uncured surface cement is washed away, the aggregate is exposed.

The Lil' Bubba can extrude a walkway as wide as 24". And suppose that walkway needs to be lighted? Both Kwik Kerb and Lil' Bubba machines can extrude a curb with a groove in which you



can install a strip of low-voltage lamps. An alternative to electric lights is Allumagel, a glow-in-the-dark coating, similar to a fiberglass gel coat. Applied to curbs, it will glow for twelve hours after sundown. Edgemaster plans to start distributing this coating later this year.

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#### Help for small contractors

Some contractors find it profitable to specialize in landscape curbs and parking lot jobs, and wish to market themselves in that niche. To contractors who buy a whole package of equipment and training, Edgemaster offers the option of branding themselves with the Kwik Kerb name. There are no licensing fees.

Benefits include roll-out advertising in your

area and Kwik Kerb's continuous advertising in consumer publications. It is also possible to buy an Edgemaster machine without the branding program. Likewise, the Concrete Edge offers single Lil' Bubba machines or turnkey packages with training and supportive advertising materials, without the branding aspect.

#### Decorative work on a bigger scale

Bigger projects are handled by bigger slipformers. Messinger Incorporated, MBW, and Power Curbers Inc. are just some of the companies that make machines that can do anything from a parking lot to a highway and can also spew out full-width sidewalks.

With bigger projects come different decorative demands. In 2000, A-Tech Concrete of Edison, New Jersey, won a

contract for a curb along a 68-mile rehab project on the Palisades Parkway, the biggest curb job in state history. The specs called for a grout cap, white for visibility, poured on a gray curb, which would be buried under asphalt. The white cap had to be imprinted with a faceted pattern to slow down rainwater.

A-Tech wanted to do the whole job in a single pass. Power Curbers Inc. modified one of its 5700-B slipformers to do it. A second hopper was added to extrude the white grout cap over the base curb. An imprinted wheel made the facets on the cap as it was extruded. A misting attachment sprays the imprinting wheel with release agent so it doesn't stick to the concrete. Mobile





mixers followed the machine to dump concrete into the hoppers. The crew could pour 2,000 feet a day.

Exposed aggregate is a less complicated decorative technique that lends itself to big jobs. For example, in the area surrounding the restored 18th-century village of Williamsburg, Virginia, builders of subdivisions often specify exposed aggregate curbs and gutters with a particular kind of brown stone from the nearby James River. The material harmonizes with the cobblestone pavements characteristic of restored Williamsburg, which is a major tourist attraction. Axel Nixon of Axel Nixon Inc. forms the curbs and gutters in one pass with a Power Curber machine, then sprays the concrete with Top Surface Control Set retardant, covers it with paper for several hours, then washes off the outer ½ inch of cement with a pressure washer, exposing the brown aggregate.

#### From homes to highways

As this brief overview suggests, curb and gutter work is available to contractors great and small. Let the accompanying photos give you decorative ideas that you can suggest to customers to add value to these projects.





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# It's Time to CARE About Sales Silence By Ken Lundin

hhhh... Close your eyes and don't make a sound. The sound of silence is the sound of sales increasing substantially for you and your company. The sound of silence represents the ability to truly hear what prospects are saying, before worrying about your next statement. It also represents the lack of time salespeople spend honing their sales skills.

In the era of modern communications, it's become easier and easier to lose track of the most effective sales tools. Too often, the sales process has become one of faceless and nameless entities submitting bids via telephone, e-mail or fax. Or the process has been diluted so significantly that only one sales call is made, although statistics show that more than 75 percent of all sales are made after the fifth call. Is it any wonder that Pareto's Principle states 80 percent of all sales are made by 20 percent of all salespeople? This doesn't mean that the top 20 percent are incredibly different, they just tend to do the little things better and win the close ones.

In today's competitive market it's more important than ever before to understand the sales process. I have been told that prospects only want to know: What is the price? How long is the warranty? How long have you been in business?

Under these conditions, it's even more important to understand the process. Have you ever lost a contract to a competitor who is higher in price? Have you ever purchased an item that was not the lowest priced? Why did you make the decision? Did you feel that the salesperson understood you? Did you gain a higher level of confidence in the company you chose over the company you did not? There it is — the sales process at work.

So how can you improve your sales effectiveness? \_Listen.\_ Next time you have a conversation, pay attention. Do you finish their sentence in your head or out loud? Do you have a response before they are done speaking? I know it sounds obvious, but if you've ever been told you could sell ice to Eskimos, you need to be a better listener.

As easy as it seems, listening is a difficult task to master. However, it's a very effective sales weapon. Silence makes people uncomfortable and someone is going to fill the void. The professional should know better and resist the urge to chase a question with an easier question. For example: "Mr. Prospect, how much have you put aside for this project?" Silence. "Mr. Prospect, if you're not sure, how about a ballpark figure?" Each time you feel uneasy about the silence, take a deep breath and slowly count to five. You'll be surprised by what you learn.

In short, you need to C.A.R.E. — Communicate, Articulate, Respect and Excite.

ommunicate with them and try to understand what makes them tick. Are they new and feel overwhelmed with responsibility? What is the history of the decision-making process? Who are you competing with and how was that decision reached? Every sales opportunity is an opportunity to make a friend and learn about your competitors' firsthand.

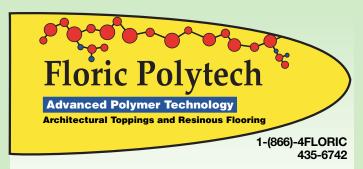
rticulate the most important benefits your prospects will gain by doing business with you. You should have a list of the 10 key benefits customers receive when purchasing your product or service. After communicating with your prospects, you should be in a position to articulate how your benefits will suit their needs.

Respect their time, and make them respect your time. Determine the ground rules. At the appropriate time, ask your prospects how long they have set aside for this meeting. Then stay within that time frame and end the meeting on schedule. This dependability will help you set future appointments. Schedule the follow-up appointment before leaving.

xcite them. If you don't believe your product or service is the absolute best choice, why should they believe it. You need to excite your prospects about your solution to their problem. Excite them about the product's or service's benefits, the ways it will make their life easier and how it will create more time for them.

### 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.



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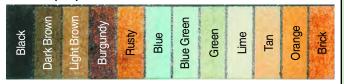
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In this new era of technology, it's more important than ever to personalize the sales process. Differentiate yourself and your company. You'll increase your sales through stepping around the impersonal methods of communication that are all too prevalent in today's business world. Listen and CARE about your client.

Ken Lundin is the national sales manager of Veron Coating Systems, a company that manufactures specialty coatings and construction products for floors that is headquartered in Phoenix, Arizona.

#### **Industry News** (Continued from page 6)

Five industry professionals have already been selected to judge this year's competition. Mike Shydlowski, president and CEO of Master Builders said, "Judging the National Concrete Canoe Competition can be extremely rewarding, but it requires a significant commitment of time and energy. We invite people in the industry who can bring knowledge of advanced engineering and design principles, as well as material knowledge."

For more information about the concrete canoe competition, visit the Master Builders' Web site, www.masterbuilders.com. For details about the ASCE 150th Student Conference, visit www.cae.wisc.edu~asce150.



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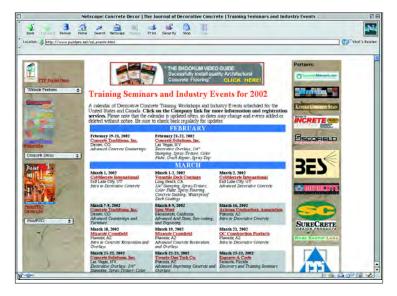
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# Product News

#### **Sto Texture Coat**

Sto Corp offers a reformulation of Sto Texture Coat, a two-component, polymer-modified cementitious decorative coating.

The coating is used to protect and finish horizontal concrete surfaces exposed to pedestrian and light pneumatic wheel traffic. It is formulated for skid and stain resistance when used in combination with Sto Clear Coat Sealer or Sto Decorative Top Coat.

It is designed for balconies, driveways, decks and walkways. Sto Texture Coat can also be applied over Sto Watertight Coat to achieve a highly durable, aesthetically pleasing waterproof deck finish system for concrete and masonry substrates. It has a wide variety of custom colors.

Sto Texture Coat has excellent adhesion and is factory blended to eliminate mixing errors in the field. It incorporates a non-vapor barrier that allows the substrate to breathe.

Sto Corp is a world leader and producer of a broad range of versatile cladding and coating systems for building construction, maintenance, and restoration. For more information visit the company's Web site at www.stocorp.com.

#### Integration services through alliance

On Center Software and nSpin offer a technology designed to enhance construction industry software using integration components that link industry-leading take-off, estimating, and accounting products.

The companies' venture, CIS (Custom Integration Services) focuses on providing custom integration services to On-Screen Takeoff and Quick Bid users and the capability to move data to major estimating and accounting tools.

NSpin (www.nspin.com) helps construction companies design, build, deploy, and manage critical computer systems.

On Center Software (www.oncenter.com) provides estimating and takeoff software for the construction industry.

#### Surface retarders/ concrete photo engraving process

Grace Construction Products now offers a comprehensive line of products for architectural concrete, including Top-Cast surface retarders for exposed aggregate concrete and an exclusive process for photo engraved concrete. Both products were developed by Pieri SA, which Grace acquired last year.

Top-Cast is a top surface retarder designed for exposed aggregate concrete applications. Top-Cast's water-based, film-forming formulation employs a surface-protective polymer that eliminates the need to



cover the concrete surface with plastic during the curing process.

Top-Cast is available in a range of formulations to control the depth of etch.

Grace also offers a photo engraving concrete process for reproducing images and photographs onto concrete.

Grace Construction Products (www.graceconstruction.com) manufactures a wide variety of concrete admixtures.

#### **Colored concrete sealants**

Silverback Sealants (www.sbsealants.com) offers a complete line of colored concrete sealants that may be applied over original colors for restoration projects. The sealants come in kits that contain clear acrylic, epoxy, or polyurethane (factory adjusted to gloss requirements) and 1 of over 600 colors of tint.



The sealants provide a clear, glossy, interior and exterior acrylic seal finish and are designed to maintain a desirable appearance for a variety of exposed aggregate substrates. They are fast drying, non-yellowing and excellent for exterior concrete, especially stamped and colored concrete.

The sealants are a two-component, high-solids, polyamide epoxy enamel-coating system formulated to provide excellent resistance to chemicals, abrasion, and impact in interior applications.

#### Diamond grinding wheel

Sawtec offers a diamond grinding wheel for use with concrete grinding tools. The Supreme cup wheel is designed to remove coating, level, and grind softer materials without loading up. It features a unique combination to tapered long and short



segments with larger diamond chips, cutting through material quickly and leaving a rougher profile for better coating application. Angled cutouts channel air down to the wheel surface, keeping the segments cool. The flat design allows the operator to use a single set of arbor and blade nuts when changing between Zec abrasives and the Supreme cup wheel.

Sawtec, a division of USF Surface Preparation Group (www.surfacepreparation.com), offers portable dust-free surface preparation equipment, including air-powered saws; grinding equipment; tile cutting; tuckpointing and crack chasing equipment; joint cleanout equipment; and dust collection systems.

#### Diamond blades/ abrasive blades/ demolition tools

Wacker offers blades, hammer drill bits, and demolition steel for a variety of applications.

The company offers a new line of 136 diamond saw blades that are color coded by quality and marked with the appropriate application. The blades can be used for wet and dry applications.

Also available are abrasive blades in 16 models with 12-in. or 14-in. diameters and 1-in. or 20-mm arbor holes. Each blade size is available for many applications.

Wacker offers hammer drill bits and demolition tools and is

introducing a ratio drill system. The ratio system economically expands the life of the drill bits by matching the adapter to your hammer.





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CIRCLE #11 ON READER SERVICE CARD



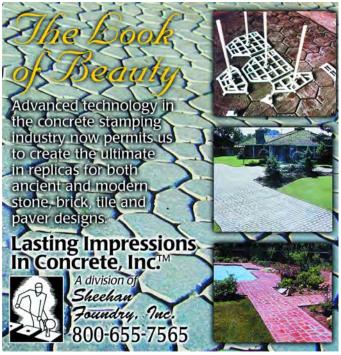
#### **Project in Focus** (Continued from page 7)

Two different methods were used to attempt to repair the problem. The first method involved sawing out the crack approximately two inches wide and one inch deep. This was then chipped out and filled with a polymer-modified cement repair mortar and coated back with the original base coat and spray texture. This attempt failed due to the fact that the concrete was still moving on either side of the crack, and subsequently, delamination reappeared.

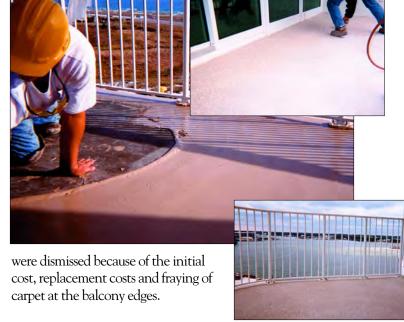
The second method involved routing out the crack with a 3/8" wide diamond blade or a crack chaser blade. A flexible caulking or sealant was then applied to this joint, followed by a reapplication of the original base coat and spray texture. While this procedure potentially stopped the migration of water into the crack, it too was unsuccessful because the decorative topping did not move with the concrete as much as the caulk and failed when applied over it.

A third repair method was then attempted: A urethane coating was applied on the remainder of the balconies. Urethanes are very flexible, can bridge the cracks, and also keep the units watertight. A color was selected and the topcoat had a colored aggregate broadcast on the surface for aesthetics and slip resistance.

This system was ultimately rejected for two reasons. First, the owner simply didn't like the way it looked. The color with sand sprinkled over it turned out to look too one-dimensional and had a "plain Jane" appearance. Since the units were to be sold for well over \$300,000 each, the owner was not prepared to settle for function over design. Second, the urethane lacked the ability to hide imperfections and broom marks in the concrete, which resulted in an unsightly appearance. Additionally, the urethane was more expensive than the originally specified spray texture. Discussions about applying exterior carpet ensued but



CIRCLE #45 ON READER SERVICE CARD



#### The Successful Solution

The cracks in the concrete decks were caused by movement of the concrete and also cold joints present from initial placement of the concrete. Finally, a successful repair method was identified. The first step was to rout out all existing cracks and fill them with a semi-rigid epoxy, which allowed slight movement of the concrete. Using a very rigid epoxy sometimes causes another crack to form near the repaired crack. In those instances, reinforcing mesh was applied over the crack and secured by troweling it with excess epoxy. Dried sand was sprinkled over the mesh, and the epoxy allowed the cure. Another layer of reinforcing mesh was then applied and imbedded with a flexible, waterproof, elastomeric cement. Next, the flexible cement and repair mesh was installed over the entire deck. The concrete had essentially been "glued" together at the crack, but allowed slight movement so another crack wouldn't appear later. The repair mesh reinforced this restricted movement, and the flexible cement prevented moisture intrusion.

The last step was to choose a decorative topcoat. The original spray topping selected could not be used because of incompatibility with the flexible cement as well as its limited amount of flexibility. Consequently, a compatible polymer-modified spray system was selected instead. The base color and colored aggregate were closely matched to the original specified product. Two coats of clear acrylic sealer were applied to complete the project.

The decorative concrete industry has created excellent products to beautify concrete, and their use has grown exponentially. More innovations in applications and systems will help solidify these products as alternatives to traditional (improperly specified) repair methods and materials.

For more information on the repair and resurfacing products used please call CEMTEC Repair and Resurfacing ph:706-654-4706 The decorative concrete contractor for this project was Flexible Concrete Surfacing Systems, Inc. ph: 404-925-4251.

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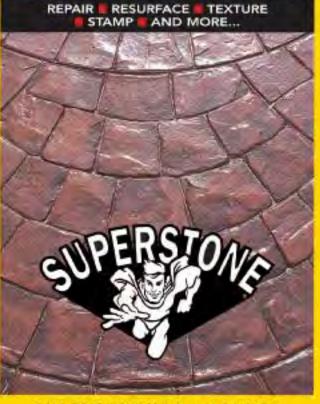
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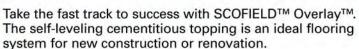
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