Welcome to the ROCK SHOW

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AND... A BUNCH OF OTHER COOL STUFF AND A CHANCE AT AN iPAD
Two trusted names join to bring you more

L & M Construction Chemicals is now a product brand of LATICRETE International, Inc. To meet the challenges of today’s building industry, the two family owned businesses have come together in a move that strengthens both LATICRETE and L&M.

Under the new ownership, the LATICRETE® L&M™ product portfolio will leverage the many resources and opportunities LATICRETE offers including:

• Nationwide manufacturing facilities,
• Expanded team of sales representatives,
• Global research and development capabilities,
• World-class marketing and technical services,
• Access to global markets,
• Enhanced architectural presence, and
• Access to a nationwide distribution system.

The L&M product brand name will reside under the LATICRETE corporate brand identity, with manufacturing and sales functions to be assumed by LATICRETE. The characteristics of quality, innovation, and integrity will continue for the L&M product line under the guidance of LATICRETE, as it continues to be a manufacturer of globally proven construction solutions for the building industry.

“My family and I thank our customers, distributors and partners for their many years of support,” said Greg Schwietz, former owner of L&M Construction Chemicals and publisher of L&M’s Concrete News. “This is a very exciting time for the L&M product brand. I am confident we have found the right company in LATICRETE to provide the best future support and growth opportunities.”

L&M’s product lines will continue to carry the L&M Construction Chemicals name under the LATICRETE corporate brand identity.
Distributor Profile with Jeremy Schutte, Carroll Construction Supply

Carroll Construction Supply began selling concrete form ties in 1955. Carroll progressed into forming systems, developing into a full-line concrete supply house with 23 locations spanning the Midwest.

Carroll Construction Supply's relationship with L&M spans over 40 years. Carroll had been buying Debond from L&M when Greg Schwietz, president of L&M, called on them as his first sales call in 1974. He must have 'done good' because the relationship blossomed into a full-fledged construction chemicals sales and marketing partnership.

We spoke with Jeremy Schutte, operations manager at Carroll Construction Supply, about its relationship with L&M.

Carroll customers are mainly small to large residential and commercial concrete contractors. There are a few large general contractors as well, catalyzing Carroll's growth.

When Carroll customers walk into one of their stores, they expect excellent customer service, one of their main points of differentiation. They want quality products and the education to back them up. Their customers rely on the long-term relationships they’ve developed with their Carroll reps. Schutte says they push hard for exceptional customer service. Schutte emphasizes they regularly exceed customer expectations, especially when it comes to solving concrete problems. This creates deep loyalty with their customers and repeat business.

Another differentiating factor for Carroll is their manufacturer relationships, specifically with L&M. Schutte says this has been vitally important to Carroll. Clearly, Omaha has an advantage with local manufacturing. Schutte says L&M has fantastic products and believes in exceptional customer service just like Carroll.

The Midwest L&M Sales Managers, Kevin Cooper, Bill Butler, and Craig Jared, ensure that everyone is educated on the L&M products. Schutte says this is key. The L&M team travels to various Carroll locations regularly, educating Carroll's salesmen as well as concrete contractors on the products and on concrete problems they encounter in the field. Schutte says having the L&M sales team around to answer questions is instrumental to Carroll's success.

A recent EmeryPlate FF installation required a pre-construction, on-site visit in Omaha. The Midwest L&M team consulted on the project, coordinated by Carroll, and provided installation instructions and precautionary steps to make the job successful. The local Carroll rep, Harlen Kittrell, was already well versed with the EmeryPlate FF installation through his years of experience and additional technical education from L&M. This is a brief example of Carroll teaming up with the Midwest L&M team to ensure a successful concrete project before it starts.

Carroll Construction Supply continues to grow, adding a new location in Illinois and one in Indiana over the past year. Carroll's growth has been a big part of president Steve Carroll's vision. He sees opportunities in the market and takes advantage of them. Steve attributes the success of Carroll Distributing & Construction Supply to its people. "We have been extremely fortunate to have attracted and kept the quality of people that we have. The things that we have accomplished would not have been possible without them."

www.lmcc.com
Project Profile
Gordon Food Service

Project statistics
Location: Grand Rapids, MI
Contractor: Burgess Concrete Construction
Concrete Foremen: Steve Burgess, Gale Baartman
Concrete Polishing Foreman: Randy Kraima
Concrete Supplier: Grand Rapids Gravel
Total Sq Ft: 30,000 sq ft
Existing substrate age: New construction
Owner: Gordon Food Service

Award winning floor: L&M’s fgsPermaShine polished concrete floors help Burgess Concrete Construction and Gordon Food Service earn two prestigious honors.
—Grand Rapids, Michigan

Burgess Concrete Construction is a full-service concrete contractor. Burgess performs everything from footings in the ground to foundation stabilization to mix designs to placing concrete to polishing the finished product.

Burgess markets include K-12 schools, universities, commercial and industrial buildings. While Burgess gets a lot of repeat business and word-of-mouth referrals, they also actively market their full-line of concrete contracting services to architects and specifiers, general contractors, and engineers. They target the design community specifically for mix designs and polished concrete.

Burgess's marketing and proven track record created an exceptional professional reputation in the flooring space. Architects and specifiers know their work. Engineers know their work. General contractors know their work.

Sales Manager Tim Burgess took the project architect and owners to locations of Burgess’s past concrete projects. The owner liked what he saw and selected Burgess Concrete for the job.

This new construction project was a design-build for the concrete placement and polishing. The owner had an idea of what they wanted—something unique—and Tim's team helped to make their vision come to fruition. It was a collaborative effort, from the initial design all the way to the polishing.

Due to the nature of the unique floor designs, Burgess performed several samples for the owner. They drew-up various mix designs for the project and showed them different colors and depths of grind of the polishing. Initially, they decided to use glass as aggregate, but after they performed an Alkali Silica Reaction (ASR) test, the test sample produced undesirable results. So, they decided to use alternate aggregate.

Then, they presented several different-sized stones and aggregate-types to the owner. After several suggested samples, they decided on a 2-inch limestone and 5/8th-inch heavy coarse aggregate natural stone mix.

Burgess explained that what made this concrete project difficult was placing the unique mix design on metal decks. Burgess needed to pour and place the concrete in a way that they knew the aggregate would be consistent, and then consolidate it at the edges to match the tile. Burgess employed terrazzo strips to separate the differing...
aggregate appearances. Working in sections, the Burgess team was able to place the unique concrete properly according to the specification.

After the concrete cured, Burgess began the FGS PermaShine polishing process. Working the set of steps in room modules, they began polishing in the basement. They started grinding the surface with 40 grit metal bonded segments. Then, 80 grit metal bonded segments. Then, 150s. Next, they moved onto the resins: 60s, 80s, 100s, 200s, 400s, 800s, to a 1,500 grit finish. After the 400s, Burgess dyed the concrete using L&M's Vivid Dye. The owner picked a custom olive green and black for its floor colors. After putting down the Vivid Dye and cleaning the excess dye from the surface, they hardened and densified the floor—and locked-in the dye—using FGS Hardener Plus. They then put down L&M's Petrotex guard product to protect the floor from spills, and finally burnished the floor to really make it pop.

From the initial pour to polishing the floor to a 1,500 grit level, the project took 6 months and approximately 2,000 man hours.

Burgess says the number of samples they showed the owner is one of the keys to success on this concrete project. “We performed lots of samples for them. We showed them many different types of aggregate. We also showed them what we are capable of with our track record of successful concrete projects by showing them floors we had polished in the area. This gave them confidence in our abilities. Since we performed so much of the pre-construction work, we felt there was little chance of losing the project to a competitor.”

Burgess continued, “It's incredible how well it turned out. All this concrete is on metal decks, at different depths based on aggregate type and size, which made the placement very tricky. We had to figure out how to place 2-inch stone on metal decks. These guys really wanted a unique floor that had to be consolidated right up to the tile. We learned what we were capable of. We learned how much you really can do with concrete. There's nothing that would intimidate us after this. We made deep aggregate happen.”

Burgess feels you can accomplish anything with polished concrete. It makes a floor that everybody talks about. This floor was a true construction team effort: from the design phase to the multiple mock-ups to the various mix designs to the actual placement of the concrete to the polishing, many project teams were involved, many meetings held, many samples and mock-ups created, and many stakeholders had a say.

Gordon Food Service's floor is an award-winning FGS Permashine polished concrete floor. It won the 2013 ABC excellence in concrete construction and the 2013 ASCC award for polished concrete over 5,000 sq ft.

Thank You to Gordon Food Service for allowing us to be a part of your winning facility.

Gordon Food Service Photos:
1. Test kitchen
2. Coffee bar / Greeting area
3. Main Lobby: 2 different aggregates: Natural and Black Diamond
4. Hallway: 5/8” stone
5. Main Staircase: 2” Limestone and 5/8” Natural

“Architects and Specifiers know their work. Engineers know their work. General contractors know their work.”
Petrography: A branch of Geology that uses methods and techniques to determine the optical properties of minerals and thin sections of rocks to identify mineralogy and conditions of rock formation.

Concrete is mostly comprised of aggregates. The applicable petrographic methods and techniques are utilized for examination of concrete, concrete raw materials, and other construction products. The scientific instruments of choice commonly used by Concrete Petrographers are microscopes: stereomicroscopes, transmitted light petrographic microscopes and/or scanning electron microscopes, or SEM, to identify the basic components in concrete.

Concrete Petrography is mainly utilized as a troubleshooting tool. It can help in providing answers “after the fact” when deficiencies arise. It can evaluate the material in question as to “Why did it occur?” or “How bad is it?” There are limiting factors to the scope of petrographic examinations, the “Can Do’s” and “Cannot Do’s” (see Right Column). Constraints also include adequate sampling and adequate field information.

Routine examinations of hardened samples and raw materials commonly follow the guidelines of ASTM C 457-12 “Standard Test Method for Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete” for air-void content and/or air-void system parameter determinations and ASTM C 856-11 “Standard Practice for Petrographic Examination of Hardened Concrete.”

Investigative choices are based on experience and competence of Petrographer and can provide definitive answers in a limited time. Concrete Petrographers are usually “looking through the keyhole,” trying to see what’s in the room—the big, jobsite picture. Pertinent information from the field is key to better answers and more useful reports as the quality of a report reflects the quality of information provided.

“One measure of the petrographer’s skill is knowing when to stop...”

So, what information is contained in a Petrographic Examination?

The sections typically encountered are as follows:

1. INTRODUCTION
   Sample information, location, statement of reported problem, sample markings, reported information, etc.

2. METHODS
   ASTM Test Methods, Practices and Standards and other industry accepted test methods utilized in the examination.

3. GENERAL CONDITION
   Includes descriptions of both macro-features and micro-features present in the sample. These include the type of finish, evaluation of curing and carbonation (if present), distribution of components, and any workmanship effects. This is a cross-sectional or “Top-to-Bottom” examination of the sample.

4. CEMENTITIOUS MATRIX
   Includes descriptions of paste color, water absorptivity, amount of unhydrated cement particles, hardness, and any pozzolanic materials, if present. These features are used to evaluate the condition of the paste and are directly related to the water:cementitious or w:c(m). There is no industry accepted standard or test method for determining w:c(m) for field concrete.

5. AIR-VOID CONTENT
   Includes the volumetric amount of air-voids present and/or Air-Void System parameters, size, shape, distribution of voids, and identification of secondary deposits present in voids.

6. COARSE AGGREGATE
   Includes descriptions of observed topsize, condition, shape, distribution, rock types, and any potential or occurring deleterious reactions, such as alkali-silica reaction or ASR.

7. FINE AGGREGATE
   Includes descriptions of condition, shape, distribution, rock types, and any potential or occurring deleterious reactions.
The sections of a Petrographic report (as shown on left) are objective. The observed features are evaluated by the Petrographer and related to the reported problem in a subjective Discussion section of a report. The evaluation of features present is dependent on the ability, experience, and skill of the Petrographer. The report results are summarized and the most probable cause(s) of the reported problem are in a Conclusion section.

The most common problems encountered are low compressive strength, loss of surface or surface distress, improper mixing and/or retempering, cracking, concrete deterioration related to durability, such as freeze-thaw damage, alkali-aggregate reactions, chemical attack, and corrosion. Concrete Petrographers can also assist in understanding issues such as floor covering failures and other applied repair product deficiencies or failures.

The following quotation from K. Mather (1966), serves as a mission statement for concrete petrographers:

“The best petrographic examination is the one that finds the right questions and answers them with maximum economy in minimum time, with a demonstration clear to all concerned that the right questions were answered with all necessary and no superfluous detail. In practice, the approach to the ideal varies depending on the problem, the skill with which the questions are asked, and the skill of the petrographer. One measure of the petrographer’s skill is knowing when to stop, either because the problem is adequately solved, or, in some cases, because it has been shown to be insoluble under the circumstances.”

About the Author:

Jeff Varga, CPG/AIPG

Jeff Varga, CPG/AIPG, is President/Petrographer with The Rock Doctor, Inc. based in Hudson, Ohio. Jeff is an active member of ACI and ASTM including ASTM Subcommittee C9.65, Petrography. Jeff has 25 years of experience as Concrete Petrographer and received his BS in Geology from The University of Akron.

www.Rock-Doctor.com

Petrography Can:

- Evaluate Proportioning of Mix Design – including proportions of aggregate, paste and air-voids and determine whether the Air-Void system parameters are suitable for freeze-thaw durability.
- Evaluate Mixing - including aggregate, paste and air-void distributions
- Assess degree of cement hydration
- Assess degree of compaction - including any workmanship effects.
- Segregation – distributions of aggregate, paste and air-voids
- Over-vibration and placement issues
- Verify proper curing and determine carbonation zone detection
- Describe w:c or w:cm from paste characteristics
- Detect Retempering
- Detect freezing of plastic concrete
- Freeze-thaw distress of paste and/or aggregates
- Identify aggregates
- Soundness and deleterious reactions of aggregates
- Identify Contaminants
- Assess bonding
- Evaluate discoloration and staining
- Evidence of external or internal attack
- Pre-job evaluations – examinations prior to any repair procedures
- Potential problems / Troubleshooting

Petrography Cannot:

- Determine TYPE of cement
- Determine Quantitative amounts of cement, water, fly ash, GGBF slag, other pozzolans – cementitious materials observed are residual components and the ORIGINAL amounts prior to chemical reaction or hydration cannot be determined.
- Use of chemical admixtures – but some effects can be observed.
- “Who” cut corners
- Water:cement ratio – Again, there is no industry accepted standard or test method for determining w:c(m) for field concrete.
- Why air-void content of concrete at plant differs from job-site air content?
- Determine type of AEA used
- Determine setting characteristics

continued on page 8...
Concrete Petrography: Case Study 1

Material in Question: Less than One-Year Old Hardened concrete driveway  
Customer: Homeowner  
Reason for Request: Weak, wearing, and dusting finished driveway surfaces.  
Symptoms: Early-age distress in service life with wearing of exposed, fine broom finished concrete driveways.  
Diagnosis: The exposed top surface exhibited a carbonation zone from 1/16 of an inch thick up to 3/16 of an inch thick. The paste of this zone was softer as compared to the bulk paste. This suggests that the top surface had dried and carbonated at an early age. No evidence of a curing compound was found.  
All Portland cement based concretes will carbonate over time. When carbonation occurs early in the life of the concrete, the strength development of the affected area can be compromised. Abrasion and/or wear in service of the affected zone should be expected. Proper curing, that is, the timely application of a suitable membrane curing compound can prevent carbonation from occurring. Other industry accepted methods, such as water curing, fogging/misting with water, etc. that prevent early evaporation and loss of moisture at the exposed surfaces of freshly placed concrete can also be used. The essential factor is to prevent water loss at the exposed surface and allow the concrete to properly hydrate. The observed condition of the concrete surface was likely the result of early carbonation.  
Result: Based upon our report, the most probable cause for the reported surface distress was early carbonation of the concrete due to lack of adequate curing. The concrete driveway was removed and replaced at no expense to the homeowner.

Concrete Petrography: Case Study 2

Material in Question: 30 year-old concrete deck  
Customer: Parking Structure Owner  
Reason for Request: Widespread cracking and suspected loss of durability.  
Symptoms: Cracking at exposed concrete surface and white, gelatinous exudations.  
Diagnosis: Reactive chert particles present with widespread cracking within paste and aggregate particles. Alkali-Silica Reaction (ASR) takes place between certain reactive, poorly crystalline or metastable silica minerals, volcanic or artificial glasses, and other siliceous-bearing aggregates (e.g., opal, chalcedony, cherts, rhyolites, dacites, etc.) and the alkalis from Portland cement paste or external sources. A reaction product gel forms that, in the presence of water, expands and may cause cracking and/or expansion of mortar and concrete.  
Three conditions, (1) sufficient moisture, (2) alkalis, and (3) reactive forms of silica or aggregate(s), must be present for ASR to occur. If one of these components is not present, the reaction will not occur. Numerous fine cracks and microcracking were observed with associated gel exudations in cracks and aggregate particles.  
Result: Based upon our report, the most probable cause for the reported cracking was active and ongoing ASR. Potential repairs of the structure were postponed and mitigation/service life studies are being conducted.

Acknowledgment / Reference
Special thanks to the late James A. Ray for writing “Things Petrographic Examination Can and Cannot Do with Concrete” Proceedings of the Fifth International Conference on Cement Microscopy, 1983, pp. 66-85, a still relevant guide document for Concrete Petrographers.
An Interview with Mike Poppoff, President of ASCC and owner of Poppoff, Inc., a concrete contracting company.

Mike Poppoff, president and owner of Poppoff, Inc., is a 1972 graduate of the University of Washington with a BA in business administration. After several years in the concrete-related industry, he began his own contracting company in 1977. Mike is President and board member of the American Society of Concrete Contractors, where he is also a member of the Technical Review and Education Committees, as well as Chair of the Membership Committee.

He is an enthusiastic speaker at universities in the Pacific Northwest for their Construction Management programs. Poppoff, Inc. is active in the Associated General Contractors of Washington at the local and regional levels, as well as Yakima Valley Construction Federation, and ACI International.

JB: Please give us a little background on your concrete contracting company and what type of concrete projects you guys take on.

MP: I started out working for my neighbor, who was a concrete contractor. I worked for him in college and then for 5 years out of college. I travelled all throughout the northwest. I started Poppoff Inc. in 1977, working on my own the first year, doing garages and patios. I slowly worked into the commercial market. In the mid-80s, I began getting small commercial projects. Then, in 1989, CostCo moved into town and I started doing big box retail. This began the jump Poppoff experienced. We grew from there. We were going through a technical revolution encompassing the F number system, the new riding trowel, and laser screeds used in placing concrete. I joined ASCC and thought I could learn something from the organization, which has been a huge part of Poppoff's success. The networking and expertise available in ASCC is a game changer for business information as well as concrete technical expertise.

JB: What industry changes have you experienced over the years?

MP: The technical concrete revolution was a big one. This kicked-off in the early 90s. These trends generally start in the east and slowly make their way to the west. I first heard about the laser screed in an ad in Concrete Construction. About that same time, we joined the ASCC. Its members recommended the laser screed. It was great having that big purchase vetted by the ASCC members. How we did business was changing, and the product was changing—we could now make better floors. We thought we were installing good floors up to that point; however, we learned we were not installing great floors before the F-Number system. The F-Number system quantified what we were doing: you either met the specification or you didn't. Another thing that makes us different is we provide medical insurance and a pension plan here at Poppoff.

JB: What's your favorite part about the concrete business?

MP: Every day is different. This is a great industry. Every day has a different set of challenges that turn into opportunities. This industry provides a lot of satisfaction for a lot of people in our company and in our industry. Our inside joke is, “We should wait 5 minutes because things will change.” This industry makes me think hard every day on challenges and how we can make them opportunities. And it's fun.

JB: What's your least favorite part about this business?

MP: Government regulations and the stronger hold the government is getting on the contracting business. Sometimes these can go too far.

JB: Do you actively market your concrete contracting services or have you earned a lot of repeat business from past customers?

MP: We don't actively market as such. The majority of our work is negotiated and through referrals. When the economy was bad, it was low price. But the majority of our work is referrals, repeats, and negotiating. We want to get a customer and prove to him that he'll want us back.

continued on page 10...
JB: Poppoff does quite a bit of international concrete work. What's the difference between international concrete and domestic concrete?

MP: You work twice as hard internationally. You have language and culture challenges, and we respect those. The challenges begin with mix designs. Very, very high shrink mix designs. These are designs we used back in the 80s. Their means and methods are different than ours. We find we can tweak and modify theirs to be better. We specify tools, equipment and products that we know are superior, such as laser screeds, chemical hardeners and joint fillers to use. Each country is different. Japan is different from Singapore which is different from South Korea which is different from China. Each provides its own set of challenges. But there is a lot of L&M’s Seal Hard in Asia.

We will help them produce a better slab. It is still not perfect, but it is better than if we weren't there. We assist the crews. We have both consultants and crews overseas.

JB: From your new perch as president of ASCC, what direction do you see concrete going in the next 5 to 10 years? What challenges do you foresee?

MP: Government regulation. Make sure they're not a big burden on the contractor. I see manpower being a challenge. During the downturn, we lost a lot of craft workers. They simply left the industry. As this economy improves, we'll struggle getting qualified craft workers out in the field. We can improve the advertising for concrete as a profession. Advertise what a good industry this is to make careers.

I see the next 5 years being great. We're climbing out of the economic doldrums now. And there is a heap of optimism out there. I remember after 9/11, there was a boom—it shot straight up, which made it tough to handle all the work. It'll be a good 5 years.

JB: How has your ASCC role helped Poppoff, Inc., professionally?

MP: It has, but it is tough to measure. My mission as president is to keep a diverse group of contractors and suppliers aimed in the same direction: to enhance the capabilities of those who work in concrete. This is a very diverse group. We have different types of contractors: flatwork, paving, decorative, etc. My job as president is to further our mission and make this industry better. It is a very humbling job because there have been big shoes to fill over the last 20 years.

JB: What advice do you have for green concrete contractors just starting out?

MP: Produce high quality work. Get help because you can’t do it all yourself. Get educated. Join ASCC because of the wealth of knowledge and networking this group provides. Stay as advanced technologically as you can in the concrete industry. And stay profitable! If you show red year after year, you won't be around long.

JB: How do our readers contact you?
The Problem:

Mortenson, the general contractor on the eclectic and beautiful Radisson Blu construction project on the south side of the Mall of America in Bloomington, MN, had a big concrete problem on their hands.

The concrete recently placed, cured, dyed and polished in the lobby and skyway curled.

Compounding troubles, this new slab was decorative, exposing large aggregate, making it very tough to match up with a new pour or overlay product.

Vexed, Mortenson project managers wondered what to do. This concrete was brand new, appearing beautiful and sound in some areas and curled in others.

The general contractor needed a quick-turnaround solution to the concrete curling and a floor that would closely resemble the large, exposed aggregate appearance.

As usual, in new construction situations, time was of the essence.

The Solution:

The Mortenson project managers called Tom Graf, owner of Hudson, WI, based Concrete Arts. Graf analyzed the job and recommended a decorative, polishable overlay product called Durafloor TGA. This versatile product could be placed in severely curled areas, specifically in the lobby and the skyway—both high traffic areas.

Graf and his crew cut-out the severely curled concrete areas and used a milling machine to create enough surface depth so that the TGA section could be flush with the existing new floor.

From there, they applied an epoxy primer to the properly prepared surface and seeded it with silica sand to rejection. After allowing the sanded epoxy to dry, the excess aggregate was vacuumed and broomed from the surface. Concrete Arts then placed and cured the Durafloor TGA overnight. The next night, the overlay was ground down to a full polish. It was then dyed to match the existing concrete’s color.

By recommending and placing the decorative Durafloor TGA overlay, Concrete Arts’ crew enabled Mortenson to complete the new construction project on time with a match that exceeded the owner’s expectations.

The Radisson Blu Mall of America opened in March 2013.

Find out more about L&M Durafloor TGA at www.lmcc.com
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ometime in the last decade, decorative concrete stopped being a niche product, and became recognized as a mainstream hardscapes / flooring option.

While those in the industry are biased, and would say it occurred far earlier, the truth is that sometime in the last 10 years architects, home owners, and building managers acknowledged decorative concrete as equal to conventional flooring and hardscapes such as wood, tile, vinyl, pavers, and plain concrete. This recognition is a double-edged sword, which cuts both ways. On one side, the decorative concrete market is no longer viewed as a niche market, once classified as “specialty” and “artistic.” This means the decorative concrete market is now on a level playing field with all the traditional flooring and hardscapes products and systems, no longer having an advantage solely because it's unique. This also means the job of selling just became that much more difficult for those in the decorative industry, as they need to work that much harder to get their product selected from a broad field of established competitors. On the other side of that edge, the benefits of being mainstream bring recognition and respect for products and systems that not so long ago may have been passed over as being “too new” or “unproven.” Product recognition and acceptance has opened new markets for many decorative concrete systems that did not exist a few years ago.

**Decorative concrete sets trends among top flooring choices**

Now listed among top choices for flooring and hardscapes, decorative concrete also has the ability to set trends and be a leader in a large and diverse industry. As mentioned, gone are the days of achieving success just because you stain or stamp concrete. From the design community to the residential homeowners, the desire runs deep for new trends in exceptional floor finishes. Since the products and systems themselves have graduated to mainstream, this means the color, design, finish and quality must differentiate themselves from the competition, not just the general concept of “decorative concrete.” This is where being aware of and utilizing current trends plays an important part in the future success of your business and the decorative concrete industry as a whole. The decorative concrete industry must now compete against established corporations in the flooring and hardscapes industry that have millions to spend on marketing and trendsetting. How can a relatively small industry by comparison compete against these giants? The same way the industry achieved equal status with these giants in the first place: creativity, originality, durability, and providing something these other “manufactured products” cannot—one-of-a-kind finishes unique to the project and/or individual.

In early 2010, I was contracted by concretenetwork.com to begin a multi-year project of writing a series of books outlining current trends within each decorative concrete market segment. Over the last four years, I have had the privilege of speaking with hundreds of top industry installers and experts on the subject of what is trending in their particular region and market specialty. While there were some regional anomalies, as a whole the industry is experiencing similar trends across the entire US marketplace. It was not long into the research before two distinct trends—macro-trends and micro-trends—became apparent.

**Macro-trends: Clean, bold, bright, and warm**

Macro-trends are those that crossed product lines and were relevant in all regions. The common macro-trends I found in most decorative concrete work today included clean linear patterns, large bold designs, brighter and warmer colors, industrial gray finishes, and the drive toward using eco-friendly or sustainable products and systems. It is interesting to note that in many cases a current trend is less about a new product or system, and more about taking proven techniques from the past and updating them with new design techniques and colors, creating the trend of today. This can be clearly seen in the stamped concrete
industry where the process of stamping has not changed, but rather the trend is all about large, bold, linear patterns and softer, natural colors. These new, large, bold designs replaced the smaller, busy patterns that were popular a decade ago. In the stain market, the macro-trend is all about environmentally-friendly products and systems that have spurred industrial gray finishes, along with more vivid colors not readily available with older stain technology.

A macro-trend all to its own, polished concrete is the hottest trend in decorative concrete. It’s only been 14 years since Home Depot tested the concept of polishing concrete floors to save money on maintenance and lighting. Their success ushered in the age of polishing concrete as a mainstream flooring option, and the industry has not looked back.

**Micro-trends: exposed aggregate and microtoppings**

While macro-trends affect popularity and what is trending across all market segments, micro-trends impact specific markets or regions. In my research, I found that exposed aggregate is a micro-trend within the integrally colored concrete market segment in certain regions of the country. Exposing glass, metal and other recycled material is part of the exposed aggregate trend that is growing in popularity. Another prominent micro-trend is the growing popularity of microtopping flooring in both residential and commercial applications. The broad spectrum of available colors, along with the ease of application and variety of finishes has made microtoppings a trend-setting flooring system that is growing in popularity. Along with colors, the level of gloss, specifically the trend toward matte and satin finishes, is a micro-trend that is growing in popularity. While gloss sealers are still the most popular, the trend with sealers is definitely moving toward more natural finishes with less shine.

No matter the type of decorative concrete work you are involved with, trends impact the bottom line. Being aware of what is trending in a particular market, or across all market segments, will allow you to be better prepared when competing against other flooring and hardscapes systems.

You can read the full text of all four books on current trends in decorative concrete at www.concretenetwork.com/ebooks/

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**About the Author**

Chris is a frequent presenter at the World of Concrete trade show and has written extensively on different aspects of Architectural Concrete for various magazines including: Concrete Expressions, Concrete Homes, Concrete Décor, and Concrete Products. He authors a column in Concrete Decor magazine called Trowel and Error as well as managing a blog on ConcreteNetwork.com called Sullivan's Corner which deals with solving decorative concrete technical issues.

Chris has over 300 published articles dealing with the proper installation of all facets of decorative concrete as well as solving common installation issues. He recently published his 4th book on current trends in decorative concrete. Chris received his B.S. in Chemistry from the University of Pittsburgh in 1992 and is a member of the American Society of Concrete Contractors (ASCC) and American Concrete Institute (ACI).

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Learn more about concrete on YouTube
Decorative concrete has rapidly become the norm in today’s construction, indoors and outdoors. This has happened because we have continued to master the techniques to create the look the client wants. Color, textures, shapes and energy efficient designs are now created with cast-in-place or pre-cast concrete.

Color is perhaps the most sought after change in the way that we have traditionally done things. We have many ways to color concrete. Let’s take a minute to look at the methods that we’re using to create different colors:

**Integral Color**

Integral Color is where we add color to the concrete mix and/or the bagged product. Water-based, liquid, Universal colorant or powdered iron oxide pigments are blended and added to the mix. They then react with the Portland cement, which in turn creates a colored finished product.

Some people think that full-depth color is critical. It isn’t. The top 1/8th of an inch of the surface, known as the near surface wear zone, is really all that matters in color. Once this layer is damaged, it must be repaired, regardless of how deep the color is. Also, integral color is very sensitive to batch size, mixing equipment or trucks, precise control of water, etc.

The positive side of integral color is that it is easy to specify and order. Simply pick-up the phone and order your concrete whatever color you’d like. It may not turn out as that exact color, but it should be close.

**Staining**

Staining the surface of concrete is perhaps the most popular coloring method. You can create very elaborate designs. The downside is that staining is mostly topical. Muriatic acid burns the color into the surface.

Stained color needs protection from abrasion. In most cases, multiple coats of sealer are recommended, followed by periodic waxing in order to have a barrier between the surface and the traffic.

*Remember: the quality of the concrete determines the quality of the stain. Sometimes stain just doesn’t take.*

**Dry Shake Floor Hardeners**

Dry Shake Floor Hardeners are the toughest and most uniform method of coloring a floor and making it almost
Oh...
You’d like that in color?

Coloring

You can see examples of decorative polished concrete at fgs-permashine.com

bulletproof at the same time. L&M’s Quartzplate comes in many designer colors, including brilliant white. The downside to dry shakes is finding craftsmen that know how to properly install them. Since shake-ons are not used as frequently, it is sometimes difficult to find experienced dry shake concrete finishers. Dry shake hardeners are applied to the fresh concrete and then troweled into the surface as a monolithic topping.

Dyed Concrete

Dyed Concrete is perhaps the current product of choice as it is versatile, easy to create interesting schemes, can be done to any age of concrete, and comes in a wide array of colors. (See Vivid Dye color chart and brochure at http://www.lmcc.com/products/vivid_concrete_dye.asp.)

The downside to dye is human perception. The mind thinks dye is opaque, but dye is translucent. It sounds simple, but it is not. It is very important to show a customer a dyed floor before choosing this method. To properly manage the owner’s expectations, a mock-up is imperative. It is very human to expect a solid-color floor and then to look at it and see that it is a concrete floor with color in it. Some people have a tough time grasping this fact.

Dye is penetrating. It goes into the concrete and does not require topical treatments to protect it. It is normally used in conjunction with polished concrete as the surface needs to be ground in order for the dye to penetrate into the pores. Typically, we use the LiON Hard™ lithium ion densifier after the dye has been applied to “lock in” the color and retain its inherent beauty, ensuring it is as vibrant as possible.

Before you start your next decorative concrete project, call L&M’s Technical Support Team. We’ll do our level best to make sure that your concrete dreams don’t turn into a concrete disaster. Call 800-362-3331 before you start.

contact

Bill Butler is a sales and tech rep for LATICRETE International. He has worked in the concrete industry since 1976 and has been involved with ready mix trucks, concrete admixtures and construction products for the concrete industry. His approach to helping contractors and installers “do things right the first time” or when necessary “doing things right the second time” is to ask good questions, be thorough, use common sense and logic.

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Find answers to your questions:

Did you know that there are ConcreteNews articles dating back to the year 2000 online? (That’s a lot!) Search articles by keywords and get the concrete answers you need anytime, anyplace. Get them all at www.lmcc.com/concrete_news

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Find Chris Sullivan to Win an Apple iPad Mini!

Chris Sullivan decided it was a good day for fishing with an older guy and a younger guy. Is he in the boat, the bushes, maybe the hat, or somewhere else? Don't let this one get away! Find the hidden picture of Chris (See page 13) in the photo below.

Give us Chris Sullivan’s coordinates (Like A-1 or B-17) to be entered into the random drawing of correct answers.

Put your answer on the reply card and mail it to us or enter online at www.lmcc.com/contest for your chance to win a brand new 16 gig Apple iPad Mini.

Random drawing of correct answers to be held on June 16, 2014. (If you don’t win the iPad, you might be 1 of 2 lucky Omaha Steaks winners!)

You could win an iPad Mini®

Enter with the enclosed reply card or online at www.lmcc.com/contest