



Shaping Dreams — Shotcrete Makes it Happen

by Susan Swagler

Some of the world's dreamiest pools are formed from very concrete ideas.

According to the National Spa & Pool Institute (NSPI), an international trade association of more than 5,200 manufacturers, distributors, retailers, service companies, and builders in the pool/spa and hot tub industry, some 7.5 million people in the continental U.S. currently own pools.

Some of these pools are used for entertaining and keeping cool; others serve as private venues for water exercising. Some are sleek and sophisticated; others are full of water features designed for family fun. And still others follow natural lines of local stone and man-made meandering streams and waterfalls. In short, today's pools are designed to fit almost any space, any budget, and any lifestyle.

A vast majority of these pools are inground models, and most of them are made of concrete. When it comes to concrete, though, shotcrete—pneumatically applied concrete—is the choice of some of the pool and spa industry's top builders and designers for several reasons. For one thing, shotcrete allows for complete freedom of pool size and shape, since it follows any excavated shape.

Pools formed of shotcrete are extremely strong and durable. And, in addition to being versatile and sturdy, shotcrete is readily adaptable to form the very smallest or the very largest pools.

Underlying Strength

Skip Phillips, an NSPI Certified Building Professional, is the president of Questar Pools & Spas in Escondido, CA. He has been named “internationally, the most influential pool designer” by the *Robb Report* of Boston and *I.Q. Magazine* of Hamburg, Germany. Also, he is a co-founder of the internationally renowned Genesis 3 design group, which specializes in instructional and educational progression for those involved in the design, engineering, and construction of swimming pools, spas, and outdoor living areas. He is also the recipient of numerous NSPI International Awards of Excellence, and he builds dream pools with shotcrete.

“For what we do,” he says, “for the ability to form the concrete into unique and unusual shapes and have good design strength, this is what we use.”

According to the *NSPI Builders Reference Manual*, the thickness of a shotcrete shell and the number and size of the rebar can be adjusted to meet any structural requirement. These requirements will vary throughout the country due to type of soil, freeze-thaw, and other weather conditions, but one thing is certain—a shotcrete pool is a strong pool.

Richard Flippin, general manager of the southern division of Anthony & Sylvan Pools, says he considers shotcrete to be a much stronger product than anything else used to build pools. “It holds up longer,” he adds. That means a great deal when you're part of a company that builds some 5,000

pools each year with a commitment to stand by each product.

Brian Van Bower is an NSPI Certified Building Professional, another co-founder of Genesis 3, and a principal in the award-winning Miami-based construction company Van Bower & Wiren, Inc. He says shotcrete is easy to work with, especially in tight areas, “yet the ultimate strength exceeds our demands for swimming pool application.”

John Bently is an NSPI Certified Building Professional and executive vice president and co-owner of Rosebrook-Carefree Pools in Highland Park, IL, which specializes in high-end residential and commercial pools, spas, and water features. A member of the American Shotcrete Association and the American Concrete Institute, he says shotcrete offers “extremely high versatility and a strong, long-life product for a competitive price.” Beneath the concrete is a cage of reinforcing rods, he explains, that produces an extremely strong wall and floor. “A shotcrete pool has tremendous structural integrity. It lets us stand behind our product,” he adds.

Designing Dreams

A recent poll taken by NSPI found that only 24 percent of people actually use their pools for swimming. It’s little wonder, then, that instead of the traditional rectangular design with shallow and deep ends, today’s pool is more apt to resemble a pond, complete with a faux beach and a lyrical, rocky waterfall or two.

Bently, who is the recipient of several NSPI International Design Awards (and, in fact, is a judge for this year’s design contest), says the gentrification of society, fueled by affluent baby boomers, has more and more people asking for beautiful designs. “Pools have become much more of an aesthetic area rather than just a place for the kids to play. But if properly done,” he adds, “the pool can be a magnificent thing in addition to being an awful lot of fun for the family.”

Shotcrete, by definition, offers a freedom of design necessary to build pools to suit just about anyone. It also lends itself to a couple of the most popular designs in new pools—beach entries and vanishing edges.

With a beach entry, or zero-depth area, the entry point at the pool’s shallow end is nearly even with the deck. Your bare foot enters, say, a half inch of water, and as on a natural beach, the water gradually gets deeper with each step. The color of the interior of the pool can be done in such a way that it actually looks like a beach—sandy beige giving way to green, then blue, the deeper you go.

With a vanishing edge treatment, the water appears to be flowing out of the pool (in actuality, it’s flowing into a trough or a structural wall, where it is re-circulated). This feature is espe-

cially nice when the pool is situated atop a hill; the water looks as if it is flowing downhill. And where there is natural water in the background, such as on the coast, the pool looks like it is part of a much bigger picture.

Imagination Takes Shape

Flippin says, “We can do anything with shotcrete.” The possibilities, he adds, are limited only by someone’s imagination. “We’ve done (pools shaped like) guitars and boxing gloves. We’ve done basketballs for basketball players, hockey pucks and hockey sticks for hockey players and footballs for football players.”

In addition to versatility of shapes, shotcrete lends itself to integrated design because steps and spas can be “shot” at the same time the pool is being “shot.” That’s important for an overall, seamless finished product. Phillips says that his company has “never done the same shape twice.” Known for disregarding traditional dimensions, most of the pools his firm turns out are cover material.

They just finished an \$800,000 pool in La Jolla, California, that is similar to Neptune’s Pool at the Hearst Castle. It features small blocks of gorgeous blue quartz, an elevated grotto with a fountain overhead, and a swim-up spa underneath. And, short of the grotto walls, everything was constructed with shotcrete.

Van Bower says shotcrete was used on a recent pool project in Miami Beach that features a large shallow area (approximately 30 feet by 8 feet) covered with about six inches of water. This area is surfaced with Saturnia stone, which is also used on the adjacent patio. The shallow area is home to a mounted beach umbrella and comfortable beach chairs. Where the floor of the pool drops off, foam jets set into the shotcrete shoot balls of aerated water into the air—it’s a visual element with a pleasing sound, and it serves to delineate where the pool changes depths. Elsewhere on the patio, shotcrete was used in the construction of a fireplace with a shimmering sheet of water falling in front of it.

Bently says shotcrete allows him to fashion curves easily and at relatively little expense. He, too, has used shotcrete as the foundation of some impressive projects, including one pool with some 40 tons of Wisconsin limestone as the focal point. In this plan, a waterfall was incorporated to make the pool sound as good as it looks.





Fancy Finishes

Of course, shotcrete forms the structure of these fabulous pools. Unseen by the people enjoying the pools, it serves as the foundation for a variety of fancy finishes.

A shotcrete pool can be veneered with any number of diverse materials including granite, marble, limestone, indigenous rocks, tile, glass tiles, and plaster. New composite materials made of smooth pebbles and sprayed concrete make beautiful, natural-looking surfaces that are very forgiving, extremely durable, and maintenance-free. These surfaces, with exposed pebbles from rivers and beaches around the world, can make the bottom of a pool look like a natural riverbed. And they are tough enough to take directly up out of the water, making a beach entry an easy element to include.

Concrete, of course, can be finished in a variety of patterns and colors. And masonry products such as brick, flagstones, pavers, and cobblestones are yours for the choosing. Most

people prefer to mix and match materials. For example, the pebble finish looks great with a limestone travertine deck and accent pieces of cut and polished granite.

Van Bower, who has received numerous international awards, sums it up with this: "Today, many pools are considered artwork."

And for many pool and spa professionals, shotcrete provides the canvas for this art—these dream pools—to take shape.



Susan Swagler is a freelance writer based in Birmingham, Ala., where she swims with her three children as much as possible. For nearly a decade, she has been writing for the National Spa & Pool Institute (NSPI), the international trade association for the pool and hot tub industry. NSPI serves as the industry educator, promoter and information bank. Its members share a commitment to public health and safety in the installation, maintenance, and operation of pools/spas and hot tubs.