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# Fabricator

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**Custom Castings**

**Opportunities With  
Pool Fencing**

**The Paradox of Design**



# The Concern For Pool Safety

**Ornamental fencing and gate systems can save lives while giving fabricators a profitable new market niche.**

By Eric Minton

**M**erle Stoner likes to gaze out at his newly remodeled swimming pool from the family room of his North Vernon, Ind., home. Abutting the house at one end, the pool extends out between two five-foot brick walls and is enclosed at the other end by a black wrought iron fence.

"That opens up the pool so I can see my woods," says Stoner, president and owner of Poolguard/PBM Industries, Inc., manufacturers of pool, door and gate alarms.

As founder of a business concerned with keeping pools safe from wandering children, Stoner knows the merits of having his pool surrounded by walls and fences, even if local codes didn't already require it. He also knows the value of a pool to his property, in recreational and realty terms, so he didn't want to sacrifice aesthetics for safety. With the iron fence, he didn't have to. "It looks better," he says simply of his choice for iron over plastic, wood or chain-link fences.

Fabricators can look to homeowners like Stoner for an increasing amount of business. Swimming pools and spas are in a growth boom in the U.S., where tighter discretionary dollars are turning families toward home entertainment rather than long but periodic vacations. Around the world, middle classes are expanding and spending their newfound discretionary budget on pools and spas. Growing as rapidly as the pool industry is concern for pool safety.

The U.S. Consumer Product Safety Commission (CPSC) estimates that about 260 children ages 5 and under drown each year in residential swimming pools and spas. Another 3,000 children are treated in emergency rooms after "submersion accidents." Many of those who do live through such prolonged submersions end up with permanent brain damage. Nationally, drowning is the fourth leading cause of death to children under 5, and in California, Florida, and Arizona, drowning is the leading cause of death for children under 5. The thing those three states have in common over all other states: lots of residential pools and spas.

The commission found many telling trends in studying the incidents of submersion accidents. Only 31 percent of the chil-



Protecting a pool area with fences and gates can be a pleasant challenge. On this project, the customer wanted something "simple, unusual, and fun." The fabricator came up with this design, which features an angular gate seam that actually becomes the stem of the umbrella. The top part of the umbrella is made of 20 oz. copper with a clear lacquered finish. Total fabrication and installation time: 48 labor hrs. Fabricator: Colonial Iron Works, Petersburg, Va.

dren were actually around the pool before the accident. Almost half of the victims (46 percent) were last seen in the house before being found in a pool or spa, another 23 percent were

last seen in the yard or patio. That means almost 70 percent of victims were not expected to be at or in the pool, yet they were found in the water. Even more frightening, 75 percent of the victims had been missing from sight five minutes or less.

Much of the safety measures the commission recommends, seconded and pursued throughout the swimming pool industry itself by the National Spa and Pool Institute (NSPI), involve slowing the child's progress to the pool with pool covers and fence-type barriers while alerting the adult to the child's progress

“**Much of the recommended safety measures involve slowing the child's progress to the pool.**”

by sounding door, gate and pool alarms. NSPI calls it “layers of protection.” According to the NSPI Model Bar-

rier Code, which is based in large part on CPSC staff recommendations:

- The fence around the pool or spa should be at least 48 inches high. If the ground slopes or is decked, the height should be measured from the grade outside the fence away from the pool or spa. NSPI arrived at this height based on the ability of children under 5 years old to climb barriers according to anthropometric and developmental characteristics of children that age.

- The maximum clearance between the grade and the bottom of the fence or bottom rail on an ornamental fence should be 4 inches. Any subsequent horizontal railings or ornamental work should be no less than 30 inches apart. This precludes children from being able to climb the fence.

- The horizontal open-air spacing between pickets should be a maximum of 4 inches. Based on the head breadth and chest depth of a 13 month old infant, this size opening will keep children from squeezing through the fence.

- Gates should be self-latching and swing outward away from the pool or spa. By swinging away from the water, if

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the gate latch fails, a child who pushes the gate will not get through immediately, and may even engage the latch.

• The latch on a gate should be at least 54 inches above floor level, or require a key or electronic opener. The 54-inch standard is based on the average reach of a 5-year-old, and though it is higher than the fence requirement (48 inches), manufacturers such as DAC Industries, Inc., of Grand Rapids, Michigan, make latches that extend above the gate to meet the standard.

Aside from these standards, fabricators need to reinforce their own standards of quality, says Jim Scheide, vice

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**“Don't use fasteners that are going to be easily removed, either naturally (by wind vibrations) or with a screwdriver.”**

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president of marketing for Anchor Fence Inc./Monumental Ironworks, which is based in Baltimore, Md. “A lot of fences are not strong enough,” he says. “You

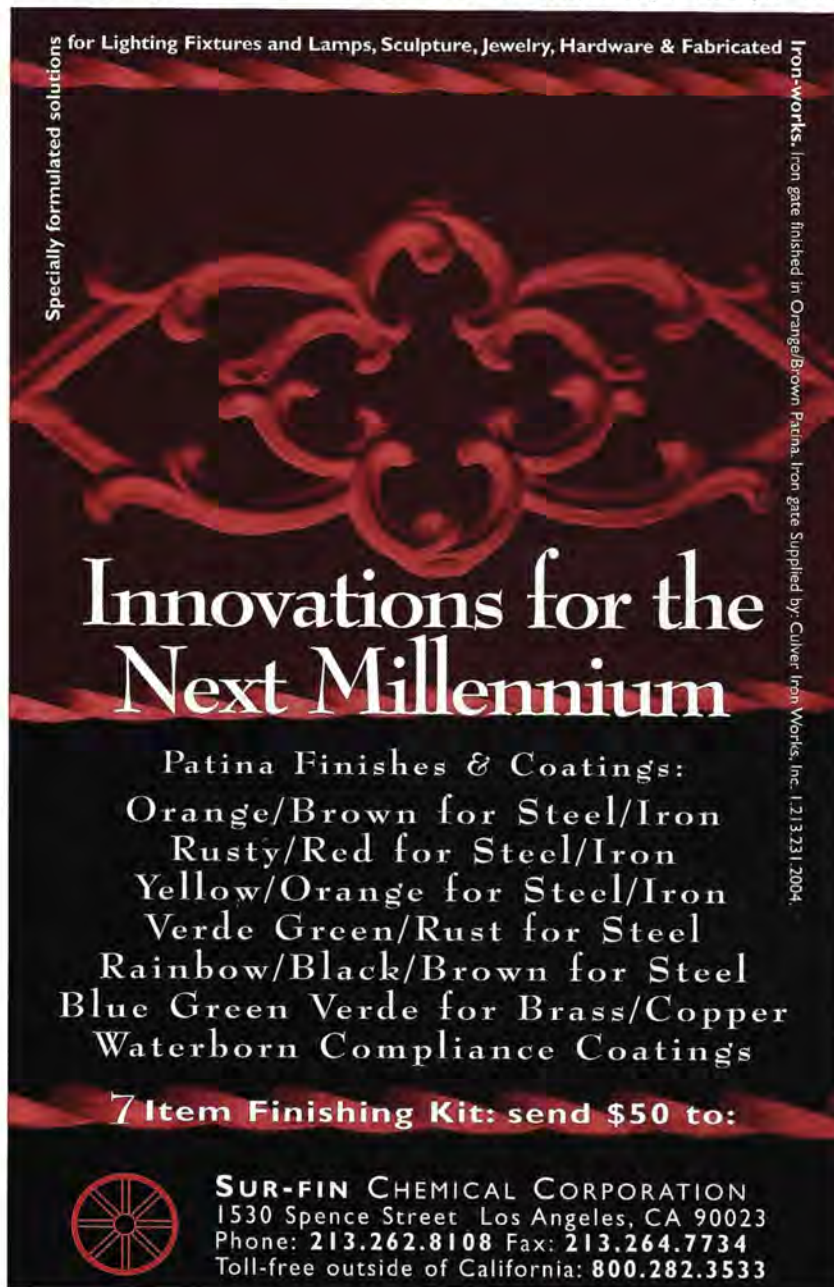
have to use heavy enough material and adequate fastening of parts. Don't use fasteners that are going to be easily removed, either naturally (by wind vibrations) or with a screwdriver. If I can take a pocket knife out and take out the fasteners, they're not adequate.”

Like any standard, these, which are written into model codes by the Council of American Building Officials (CABO), the International Conference of Building Officials (ICBO), the Southern Building Code Congress International (SBCCI), and the Building Officials and Code Administrators International (BOCA), are at the mercy of state and municipal codes, and enforcement standards by local building inspectors. In Indiana, for instance, where Stoner lives, the state code calls for 5-foot fences, a foot over the NSPI standard, but the town of Columbus uses a 6-foot requirement. “There's a zoning ordinance that supersedes in this particular area that any fencing around a pool must be 6 foot in height to serve as a sound barrier, even though you have open barriers like wrought iron,” says Randy Landberg, project coordinator for Bradbury's Pool and Patio, Inc. in Columbus, Indiana, which remodeled Stoner's pool. He points out, too, that the Columbus area, about 40 miles south of Indianapolis, has a number of private subdivisions with their own individual covenants.

Aside from the variance of codes across the country, fabricators and pool builders encounter variance among individual building inspectors who have their own unique interpretations of the codes. “Building officials put their own spin on things,” says Dan Hickey, president of DAC Industries. He has worked with the CPSC when it was formulating its standards, and says of the experience, “You know what's going through their head and why they did what they did. But the way you see it coming down and being interpreted by local building officials is not clear.”

Ironically, another important player in the process, the homeowner, may be more than indifferent to pool safety standards; he or she may be incensed at their intrusion. “Some people don't care for government involvement when it comes to putting a pool in their backyard, even though it is to increase safety,” Hickey says. “They cry tears when people are →


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hurt, but it's hard to pry money from their pockets to spend more on products."

David Karmol, general counsel and director of government relations for NSPI in Alexandria, Virginia, says that parents with small children are the only pool buyers who seem concerned with

safety, and they make up only about 30 percent of the market. "In general, a lot of folks don't have safety as a primary concern," he says, even though residential pools entice neighboring children or may be used by the children of extended family.

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**Aesthetically and for openness view, wrought iron fencing in my own personal opinion excels.**

The primary concern among pool buyers, Karmol says, is "aesthetic issues." "A lot of consumers are willing to pay for something that's aesthetically pleasing. So there is a market out there for folks who want something that looks good."

Few things fit the bill better — providing safety while looking good — than ornamental metal fences. "Aesthetically and for openness view, wrought iron fencing in my own personal opinion excels," says Landberg at Bradbury's Pool and Patio. "The only drawback is that people think it costs more than it does." Nevertheless, he says wrought iron has "strong market appeal" in his area.

Scheide at Anchor Fence Inc./Monumental Ironworks says the fastest growth product for his company, which sells a variety of fence materials, is ornamental picket. "People have gotten to the point of being tired of looking at the industrial look of chain-link fence and are looking for things more ornamental," he says. Though the pool industry has a number of companies supplying prefabricated metal fences, fabricators can build more singular fences that are stronger, and hence, provide more stability and safety.

Many pool builders offer their customers construction packages that include fencing; often, the fence installation is subcontracted. Hickey at DAC Industries frequently sees homeowners directly contacting fence installers. But he recommends that fabricators seek partnerships with pool builders, for leads and contracts, and to build a consortium of experts involving, in addition to the pool builder and fabricator, building officials, and the homeowner. Such a consortium can come to an early agreement on code application and build a safe pool.

"I think there's a lot of opportunity →

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for the fence industry to partner with pool companies," says NSPI's Karmol. "Our industry has not gotten too involved in selling fencing. So there's a void, nobody coming in saying, 'Hey, we'll design something that enhances your environment.'" And make that environment safer, too.

## Safety Consciousness

By Eric Minton

For years, the pool industry avoided the word "safety" like the plague. To market something as safe was to refer to that product's inherent dangers. But as safety concerns among the general public grew, more and more pool builders began promoting the concept.

"The attitude of the industry is changing," says David Karmol, general counsel and director of government relations for the National Spa and Pool Institute (NSPI) in Alexandria, Virginia. "Now the leading builders in their markets — the ones who are really outmarketing their competition — recognize that safety is an integral part of the business. They not only talk about it at the outset, but deliver materials to the owner of the pool. As part of the sale, you can increase your sales volume on safety items."

Pools today run in the price range of new automobiles, and this comparison is more than apt for Rick Clark, president of Cover-Pools Inc., Salt Lake City, Utah, which manufactures safety covers for pools and spas. "You wouldn't let your 5-year-old drive your car, or if you do you can expect to have problems with your car. You are not going to park your car in street and let anybody in the neighborhood drive it whenever they want it."

But residents let their children have ready access to their pool, and leave it "unlocked" by providing no barriers to stop neighboring children from climbing in. This is just one more good argument for fabricators selling pool safety through the use of their iron fences.