

CASE HISTORY

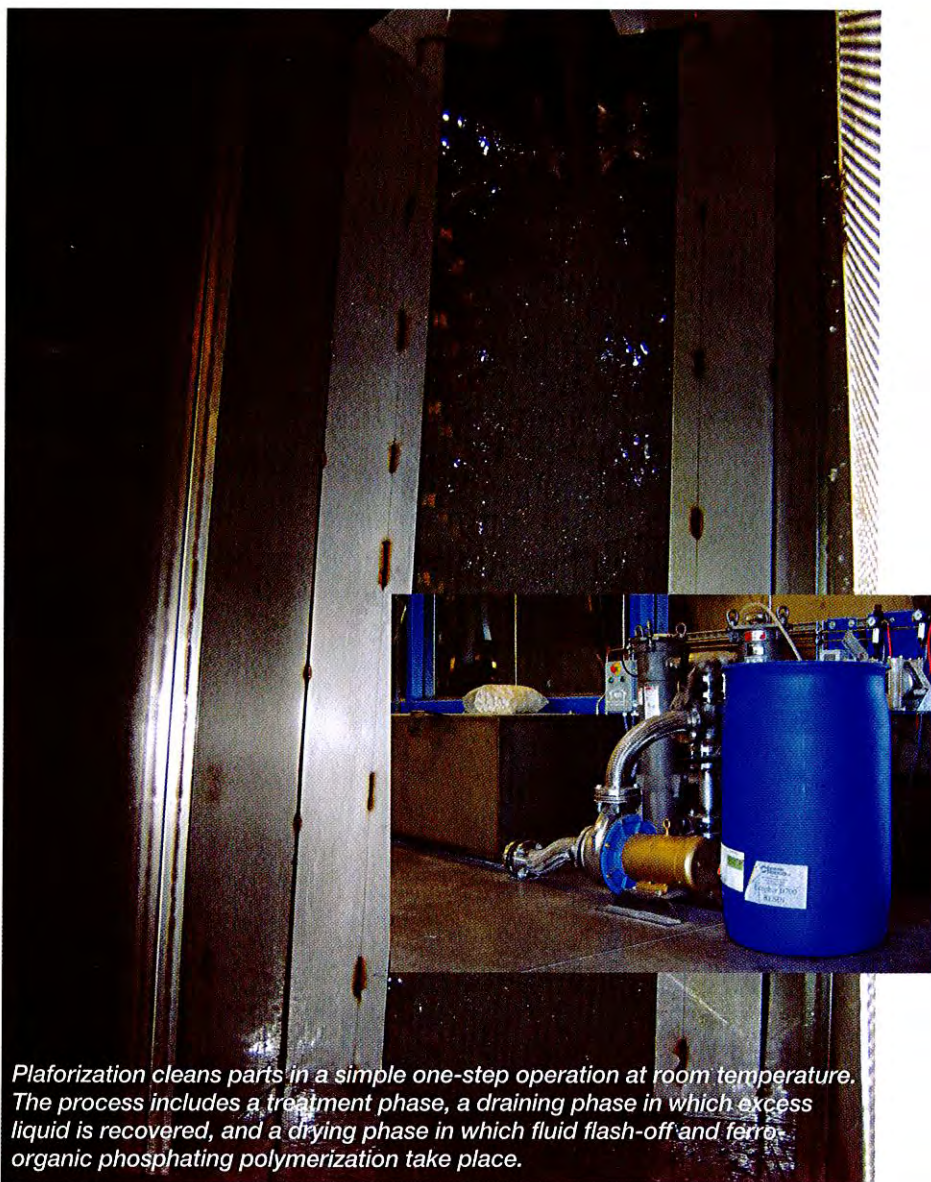
Powder coating broadens company's markets in a tough economy

Hesitant at first, a family owned Nevada ornamental iron business reinvents itself when it finally switches from liquid to powder coating to meet home builders' demands.

Peggy Koop *Editor*

The Sclafani family has spent more than 2 decades forging its ornamental iron business from a small 600 square foot building to its current 20,000 square foot shop in Henderson, Nev. Founders Fred and Sylvia moved to Henderson, the state's second largest city (pop. 270,000) in the early 1980s from Southern California. "My father was always involved in some type of construction trade," said son Tony Sclafani, vice president and general manager in charge of daily operations.

For 15 to 20 years, Fred Sclafani was a brick layer. He also worked for Kaiser Steel in Fontana, Calif., where he gained experience in the work his own company would later pursue. Out of necessity, and looking for a change, the family moved to Nevada, opening AR Iron, LLC, in 1989. The company's focus has always been in ornamental iron for the residential housing and commercial office building industries. As far as the Sclafani family is concerned, it's always been about relationships. "We've built up pretty good relationships with general contractors and residential customers throughout the last 20 years," Tony Sclafani said. As a result, AR Iron established a niche in the housing industry, doing work for all the large home builders, such as Pulte Homes, William Lyon Homes, and



PlafORIZATION cleans parts in a simple one-step operation at room temperature. The process includes a treatment phase, a draining phase in which excess liquid is recovered, and a drying phase in which fluid flash-off and ferro-organic phosphating polymerization take place.

Pardee Homes. "They would build a tract of 200 or 300 homes at one time," he said. "And we'd come in and do all the elevation iron, such as the railings, balconies, side gates, fencing, and so forth."

As things progressed, the housing market began to explode, especially during the early 2000s, Tony Sclafani said. With it, came a demand for powder coating. "And that's how we ended up getting into this area of the business," he said.

Housing explosion creates powder coating demand

For 20 years, AR Iron did electrostatic liquid coatings. "That was kind of the norm here in town," Sclafani said. Tract house builders wanted the elevation iron all different colors to match their color schemes. "To do multiple color changes would be quite extensive, expensive, and labor intense," he said. "So, we'd typically primer liquid coat all the elevation iron, and when the builders were done with construction, the painters would go over and topcoat it."

As AR Iron got more involved, however, the industry shifted from liquid

Home builders started to specify powder coatings on all their applications. "They were starting to say, 'hey, we want a better finish,' said the company's vice president and general manager.

to powder coating. Powder was attractive not only because of its environmental safety, but also because of its longevity and appearance properties. "There's no VOCs, and all the other good stuff that comes with it," he said.

Although AR Iron started to think about powder coating around 2000, it took another 5 years before the company began actively finding out what it would take to apply powder coating. "We never really wanted to get into powder coating," Sclafani said. "My father was very hesitant, one, because of the cost factor, and two, because in our industry we're moving product quite a bit back and forth from our shop location here to a job site to install it."

AR Iron does everything from sales to fabrication to coating to installation for each customer. By the time materials reach the job site, they might get a little nick or a scratch, Sclafani said. The company was concerned about getting a touch-up liquid paint to match the powder-coated finish. "We weren't comfortable with that," he said. "We weren't real secure with being able to offer that to our customers."

A few times, the company used custom powder coaters nearby; however, timeliness was a factor. "When we sell a job, we fabricate it, coat it, and install it within 3 to 5 days from the day you sign your contract," Sclafani said. "We have a very quick turnaround. Custom coaters weren't meeting our demands."

But demands from the builders themselves changed everything.

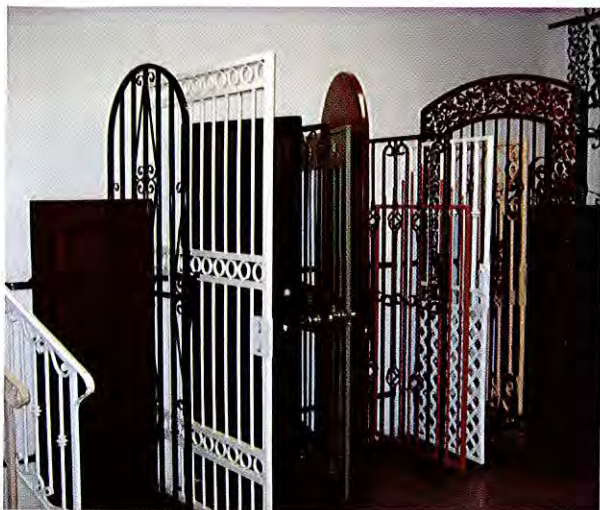
Response to market demand prompts in-house powder coating

Home builders started to specify powder coatings on all their applications. "They were starting to say, 'hey, we want a better finish,'" Sclafani said. "It's kind of funny, we're kind of like the California North: Whatever seems to move from California, comes up here. And that seemed to be the trend. We're just getting caught up with them."

Once AR Iron started getting requests for powder coating, though, it had to start seriously thinking about an in-house system. "During those times, we would push out 3,000 to 4,000 linear feet of rail every week to 2 weeks," Sclafani said. "We were pumping. We were moving."



Powder coatings that provide maximum protection from the hot Nevada sun are applied in a temperature-controlled environmental room.



AR Iron's showroom displays a variety of ornamental iron products.

The company didn't think it could keep up with production by putting in a batch system. Another factor was cost. With a batch system, it would need multiple ovens and multiple booths.

By 2005, however, the company had finally reached a point where it had to meet market demand or limit its growth. So, it turned to turnkey contractors, starting with an East Coast company where a relative worked. Unfortunately, price was a concern, and the company ended up meeting with San Diego-based Coast Industrial Systems and Doug Smilor. "We met with him," Sclafani said. "He was very knowledgeable and very helpful and knew exactly what we wanted to do. Once we met with Doug, the job sold itself. And that's when we made the decision to go into powder coating."

Custom powder coating system fits company's needs

Coast Industrial Systems put together AR Iron's equipment, building a system to fit into half of the company's 20,000 square foot space. The system's power-and-free conveyor runs up to 10 feet per minute. The company can process parts 21 feet long, 2 feet wide, and 8 feet tall. After parts are loaded, they go into a washer system that uses an ambient temperature cleaner. "When designing the system, we wanted to reclaim a lot of our costs," Sclafani said. "We didn't want spray-to-waste in our powder. We didn't want spray-to-waste in our cleaner either."

To meet its needs, the company chose Carpenter Chemicals' Plaforization, a reclaimable cleaner that doesn't require heating. As a result, AR Iron didn't need a burner. "Those were major factors that swayed us to go into powder coating," Sclafani said.

Most steel comes in pretty clean from the company's suppliers and can be hung directly on the line. If needed, employees prep

the steel by wiping off excessive dust, dirt, or other debris. The Plaforization process rinses, degreases, and seals the parts in a single washer at ambient temperature. Parts then go into a blow-off tunnel with a reclaim drip system. Air knives at the end of the tunnel blow off any remaining cleaner or moisture. Total wash, drain, and blow-off time is 8 minutes.

After the washer, parts spend time in a dry-off oven (gas-fired convection). AR Iron's dry-off oven stacks three bars at a time. The bars don't turn. They parallel bank, that is, they come in and slide over and exit, Sclafani said. The parts then move about 150 feet to 200 feet into an environmentally controlled room with two 50-ton air conditioners. The room also houses a 250-pound hopper and the powder coating application equipment. The downdraft spray booth has eight automatic guns and two touch-up guns. The company can reclaim or spray-to-waste if necessary.

The system includes application equipment from Parker Ionics, recommended because of the spray guns' Pulse Power, a technology that creates a charge for overcoming Faraday cage areas, which AR Iron found necessary. "A lot of our stuff has tremendous Faraday cage areas," Sclafani said.

After powder coating, parts go into a gas catalytic infrared boost oven to gel (flow and melt). By the time parts exit the gel oven, they are up to

metal cure temperature. The parts then go into a gas-fired convection oven for the final cure, which can be 35-40 minutes, depending on part thickness. Parts exit cure, travel back down the line, and in about 10-15 minutes, employees are taking them off the line and loading them on a truck, Sclafani said.

Powder coating spurs growth into other markets

When the company started powder coating, it focused only on powder coating its ornamental iron and wrought iron fencing. "We weren't interested in coating other people's parts or coating parts outside our industry," Sclafani said.

With in-house powder coating, however, the company has been able to broaden its focus, which has turned out to be crucial in today's economy. The company has been exploring other avenues and re-inventing itself, becoming more competitive in the marketplace. "Now we're coating for other ornamental iron shops," Sclafani said. "We're also doing custom coating for the general public."

In the past 6 months, the company has also been coating slot machines, ATM machines, and coin boxes. About 90 percent to 95 percent of what it coats is steel, but the company also powder coats aluminum. Plaforization works for both substrates. "There's no media blasting or other pretreatment needed other than sending it through the washer," Sclafani said. "It works fine."

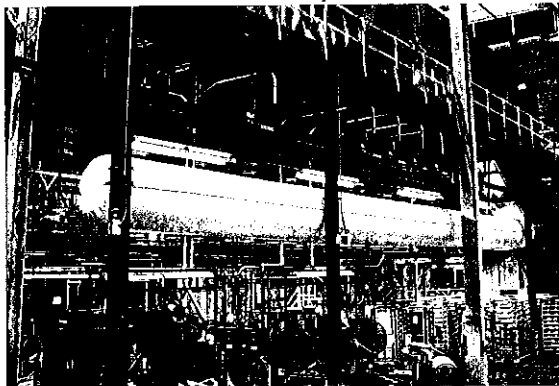
The company's reject rate is less than 2 percent, with most of those rejects caused by employee mishaps, such as moving the line too fast, or not minding the reciprocator properly, or hanging a part incorrectly, Sclafani said. "Knock on wood, cross my fingers, we've been very lucky not to have had any failures," he said. "We've had great success with Carpenter Chemicals doing what their product says. Our system is very efficient."

Because of the Nevada climate, the company doesn't have to deal with high humidity or salt-spray issues. However, it does have that big old hot

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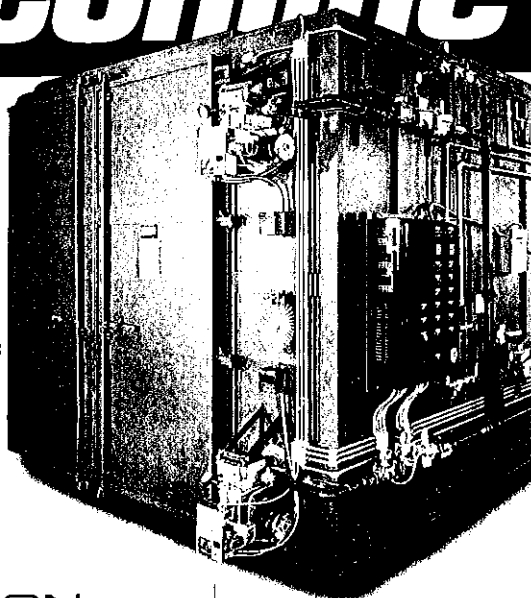


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desert sun, Sclafani said. "Because of the UV protection in our powders, we don't get failures," he said.

The company uses mostly triglycidyl isocyanurate (TGIC) polyesters from Rohm & Haas, but also uses powder coatings from Cardinal, Sherwin Williams (architectural super-durables), and TIGER Drylac USA.

Powder coating allows company to reinvent itself

While other coaters are closing their doors, AR Iron remains open, partly because of in-house powder coating, but also because of good business management and strong faith. "The fact that we grew a business that was debt-free for 20 years has allowed us to sustain the tough economy," Sclafani said. "Through our faith, and through hard work with our family, we've been able to grow."

AR Iron's family run business includes not only Fred, Sylvia, and Tony Sclafani, but also cousins, nieces, nephews, and other family members. As they work to reinvent the company and increase their business, they also look forward to being more involved in the powder coating industry. After all, for the Sclafani family, it's all about relationships. "This is a really good industry and really good people," Tony Sclafani said. "I enjoy it. And I'm absolutely in love with powder coating."

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Editor's note

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