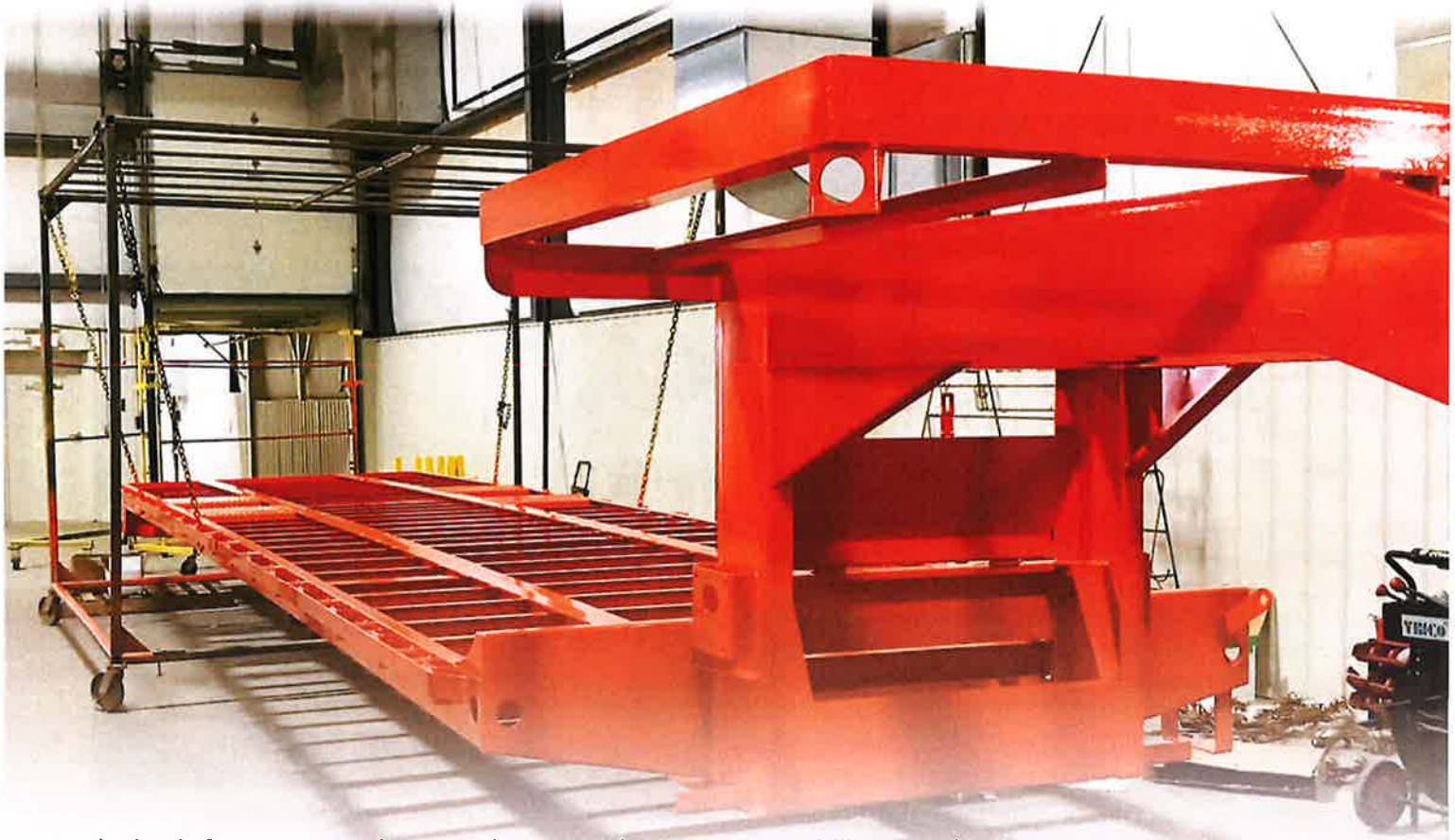
Extreme Parts for Extreme Conditions

by Troy Newport



In its infancy, powder coating may have seemed like an elusive dream at times. As with most technologies, a passionate group of pioneers pushed powder coating chemistries and equipment to their boundaries, achieving innovations some thought impossible. Lifelong finishing professional Ted Schreyer has been in the industry for the entire ride.

In June 1978, while the rest of the country was flocking to the movies to make *Grease* the highest-grossing musical ever, Ted Schreyer was looking for a summer job in his hometown of Mankato, MN. He ended up taking a job at Associated Engineering that summer and continued to work in the afternoons once the next school year began. When he took the job, Ted looked at it like many teens: a part-time job to make ends meet and save money for college. He says, however, it didn't take long for him to fall in love with the craft. "I loved the variety of challenges with making an ugly piece of metal look great."

Ted painted his way through the remainder of high school and then through college, staying with Associated Engineering after he graduated, but transitioning to management responsibilities. Ted came to appreciate the history of the company, which was founded in 1952 by Fred Cords, an engineer who started the company to provide part-time engineering and design work. Soon they were providing painting services for companies like Johnson Reel, now Johnson Outdoors Inc. (NASDAQ: JOUT), which hired them to paint their fishing reels. In 1965, the company was sold to Bill Klammer, Sr. and his wife, Irene. They began to grow the finishing side of the business by providing liquid spray painting services. William "Chuck" Klammer, Bill's eldest son, took over operations of the still-growing company in 1976 when Bill's health began deteriorating. Chuck was a forward

thinker who saw the immense potential in a new finishing technology called powder coating. They added a powder coating line and continued to grow and expand for the next several decades. Today, Associated Engineering is known as Associated Finishing Inc. (AFI), and Ted Schreyer, that teenager who was simply looking for a part-time job, owns the company with his business partner, John Kapsner.

Better Technology Brings Bigger Possibilities

Back in the '70s, it was very uncommon to see powder coating ovens larger than 10 to 12 feet in length. Today, 20-, 30- and even 40-foot ovens are becoming much more common. You can only powder coat parts as large as the curing ovens you have in your shop, so when AFI noticed job shops adding capabilities to powder coat longer and heavier parts such as railings, trailers, dump truck boxes, and agricultural equipment, they planned an expansion. In 2017, once they found another space to expand their operation, they equipped the facility with a powder booth, curing oven, blast room, and wash station that would handle parts up to 40 feet long. Indeed, not long after AFI built their new powder line to accommodate 40-foot parts, they decided they wanted to purchase a 46-foot trailer and powder coat it themselves. "No matter how big you go, you always wish you went bigger," quipped Ted, recalling the moment. They dutifully modified their oven to accommodate the additional footage, showing they will go to any lengths to powder coat parts.

Bigger Possibilities Bring Bigger Challenges

Now that AFI had the capability to powder coat larger parts, they determined a need for a larger trailer to transport finished parts to their customers. They purchased a gooseneck trailer from a local manufacturer that only had liquid painting capabilities. AFI ordered the trailer without paint because they wanted to powder coat it themselves and use it as an example of the durability one can achieve with powder coating. The 46-foot long trailer weighed almost 6,000 pounds, so they had to fabricate a carriage that would allow them to move the trailer from station to station with a forklift. They blasted the trailer to an SP-5, applied a nano-pretreatment with a spray wand, primed it with an epoxy powder, and then top-coated with a bright orange TGIC that matches the orange in their logo. (That's called branding, folks!) Ted says after two years of daily use on Minnesota's salt-covered roads, the finish still looks excellent. As a bonus, the trailer manufacturer has been so impressed by

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the length of time the finish has held up, they now use AFI's services when their customers request a powder coated trailer.

That trailer anecdote is just one example of the types of challenges custom coaters experience with coating extreme parts. One of the first challenges to overcome when working with larger parts is naturally the size and weight of the parts. When planning the new facility, AFI had to carefully calculate the layout of the building to allocate enough room in which to navigate massive parts. AFI's facility manager is a manufacturing engineer, so he's often tasked with devising a variety of carts and fixtures to help with navigating long, heavy parts from station to station. They also had to purchase a forklift with a 12,000 pound capacity.

Besides the sheer weight of large parts, there are also inefficiencies that arise from using such a large oven for curing. When you open the doors to a colossal oven, imagine how quickly the heat escapes. To diminish some of these issues, the addition of RollSeal doors provides better heat efficiency, and Ted says they've even added a remote control on the forklift to control the oven doors. This helps workers move parts in and out of the oven as fast as possible while minimizing heat loss from the oven.

Newer pretreatment equipment technology also allows for processing larger parts without requiring an immense multi-stage tunnel washer. AFI uses a PEM SprayWand that can inject chemicals at a consistent rate into a high-pressure stream of water. Ted says the process is like spraying off your car in a handheld car wash, but it allows a job shop to apply a three-, five-, or even seven-stage pretreatment onto a part.

Ted also points out that without advances in gun technology, they wouldn't have the capability to coat large parts. "The stiff, high voltage cables of the past would have never allowed for the large parts we coat today. Forty-foot low voltage flexible cables allow us to climb and reach into tight spaces," Ted says. He continues that something as simple as having control adjustments on the gun itself saves time, preventing the operator from having to walk back and forth to the control box to make adjustments.

Undoubtedly, 41-1/2 years later, Ted Schreyer has seen just about everything. People like Ted who have been in the powder coating industry since its inception have a lot to teach us, if we're willing to listen. Not just from the finishing side of the business, but also about how small companies and big ideas have shaped the industrial landscape of our country.

Troy Newport is publisher of Powder Coated Tough *magazine.*