

ORGANIC finishing

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Leaner Coating, Greener Retailing

Refurbishing old store fixtures is new, environmentally friendly business for L.A. Darling

For retail fixture manufacturer L.A. Darling, green means growth. As major retailers around the country look for ways to support both environmental sustainability and profitability, refurbishing used store fixtures is quickly becoming a big business.

L.A. Darling Company, a Marmon Retail Services firm, has been manufacturing wood and metal store fixtures and point-of-purchase displays for more than a century. Its products are found in discount, general merchandise, department, and specialty stores throughout the world. Its fixture manufacturing business has grown steadily, but the company recognized a new opportunity in refurbishing used fixtures.

Most retailers follow a remodeling schedule whereby older stores might be demolished and rebuilt or departments remodeled, creating the need for fixtures in a wide range of colors to help keep their retail image fresh and new. (The typical life span of a fixture in its original use ranges from three to 10 years.) Rather than clogging landfills with bulky used fixtures, paying to store the fixtures, or spending money on completely new fixtures, retailers are looking for cost-effective solutions to reuse older fixtures.

To respond to this growing need, L.A. Darling decided to build a new facility entirely dedicated to refurbishing used fixtures. "This was a new concept; a few other companies offered fixture refurbishing—but as part of their regular business," said Terry Hufhand, operations manager,

L.A. Darling. "No other retail fixture manufacturers offered a service like ours. As far as we knew, we are the only full-time, dedicated refurbishing facility in the U.S."

A LEAN PROCESS

One of the major decisions regarding the new facility in Rock Hill, S.C., involved the coating process. Since L.A. Darling powder coats over existing paint, accurate control of mil thickness is critical. The facility also operates with a one-piece-flow lean process, so fixtures are processed and moved directly from cell to cell to eliminate bottlenecks and improve productivity. Within 24 to 48 hours, fixtures can be received, coated, and prepped for shipping.

L.A. Darling needed a powder coating system with reclaim capability that could provide the throughput and efficient operation required



L.A. Darling chose the Nordson Excel 2000 System with Versa-Spray II automatic guns because it required a powder coating system with reclaim capability that could provide the throughput and efficiency needed in a lean environment.

to operate in such a lean environment, and still allow for growth as more business—and more colors—to be added. "To be profitable, handling of the product had to be minimal so it didn't sit still until it entered the warehouse waiting to be shipped out," Hufhand explained.

The new Rock Hill facility offers fast turnaround to help the end customer save as much as 40% off the cost of new fixtures. L.A. Darling looked at powder coating systems from three major manufacturers for their refurbishing facility. The goal



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was finding the technology that would deliver what L.A. Darling needed: easy application, efficiency, environmental friendliness, and durability. Ultimately, L.A. Darling chose the Nordson Excel 2000 system with Nordson Versa-Spray II automatic guns.

For Huffhand, the system was installed and up to speed just in time, as the warehouse was more than half full of customer fixtures to be coated. After a smooth start-up, L.A. Darling now coats scores of different styles of parts each day. Items range from four-way garment racks, end frames and shelving decks, to wire grid in a broad variety of sizes, from 14 to 144 inches long and in various heights.

The process begins immediately with delivery of the fixtures, where employees determine if they should be refurbished or scrapped. Fixtures to be refurbished are either sent to disassembly cells to be broken down for painting or directly to paint cells. Parts are hung on a 1,800-ft conveyor line for a three-stage wash process and then passed through a drying oven. After cooling off, they enter the environmental room for powder coating and 20 minutes in a curing oven. At the end of the line, they are unracked and proceed to an assembly cell to be reassembled, or they are palletized and stored in the warehouse. In less than 24 hours, parts can be received, coated, and placed in the warehouse for delivery. Inventory is owned by the retailer and stored until customers place orders.

The wash system, ovens, and conveyor were designed by Midwest Finishing Systems, Inc., in Mishawaka, Ind. (Coatings are provided by TCI Powder Coatings.) L.A. Darling uses roll-on/roll-off Excel spray booths with one dedicated color per booth (silver or oyster white). Because its refurbishing programs are built around large quantities of products in the same color, fast color changes are not currently a pressing issue. But, the company will offer several additional



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colors in the future, so that it may take advantage of the system's faster color change features, such as a low-conductivity booth canopy for faster cleaning between color changes and quick disconnect collector modules.

A COMPETITIVE ADVANTAGE

L.A. Darling is running at full production at 24 fpm, and it plans to add a second shift in 2008 to accommodate a very busy production schedule. "We're growing this new business venture because we're keeping costs down in all areas, which allows us to be more competitive," Huffhand said.

The company is controlling powder costs through efficient powder recovery and superior part coverage. The coating system's filters, collector/color module, canopy, and fan section facilitate constant, uniform spray booth airflow to provide powder coating performance and operating efficiency.

The coating line also uses photo eyes for part identification to ensure the appropriate guns are triggered based on preset part recipes. Managed through Nordson's iControl integrated control system, it accepts input from the part identification sensors for gun triggering—and in/out positioning—and the system can accommodate up to 255 presets. This allows operators to adjust various gun control parameters such as flow rate, atomizing, KV, and current for various part styles. Because



L.A. Darling often powder coats over existing paint on the refurbished fixtures, making accurate control of mil thickness critical.

L.A. Darling coats so many different styles of parts each day, automated control keeps the production line running.

"We may get as many as 10 trucks a day with dozens of items that all have to be coated quickly," Huffhand said. "We can hang shelves for 30 minutes and then instantly shift to upright fixtures for the next 20 minutes. The controls help us easily manage the coating process—and the amount of powder used."

Both L.A. Darling and its customers are seeing green from the new refurbishing operation. "We've built a profitable business from scratch, are saving our customers money, and helping them be more environmentally friendly," Huffhand said. "It's really a win-win situation."

BIO

Robert Allsop has been with Nordson for 34 years, serving in various capacities, including field service, technical communications, and marketing communications. For the last 17 years, he has worked in powder coating systems, first as product manager and now as marketing manager of the Industrial Coating and Automotive Systems Group. Robert is an active member of the Powder Coating Institute and the National Association of Pipe Coating Applicators.