

Case Study: Switching to a Powder Coating System from Liquid

by:

Monica Cunningham
Midwest Finishing Systems, Inc.
1906 Clover Rd.
Mishawaka, IN 46545 USA
www.midwestfinishing.com

Installation of a powder coating system gives wire partition maker the quality required to grow its business.

WireCrafters, LLC, Louisville, KY, USA, has been manufacturing wire partition products since 1967. As part of the company's continual improvement process, WireCrafters was considering ways in which to upgrade the finishing of its product.

Previously the company had been liquid coating on two lines, which did not meet the quality requirements of certain customers. After researching powder coating for a period of over a few years, WireCrafters, LLC determined that a powder coating system would offer the company the quality required to grow its business.

Custom System — A Team Effort

WireCrafters chose Midwest Finishing Systems, Inc., of Mishawaka, IN, USA, to supply the washer, ovens and conveyor system, and Nordson Corporation of Amherst, OH, USA, to supply the application equipment. Together, this team designed a powder coating system that operates at 10 FPM and is capable of processing all of WireCrafters' light and heavy-gauge wire products.

A smooth start-up from Midwest Finishing Systems allowed wire products coming off the new powder coating line to be shipped within a few days of system delivery.

System Configuration

In the system at WireCrafters, parts begin by being hung on an overhead monorail conveyor, where they then advance into a two-stage wash system. An alkaline wash removes all of the surfactants from the drawing process and parts are rinsed off and ready for powder coating.

After parts are dried in a combination oven they continue into the environmental room where the powder coating is applied. As the powder coating is applied with automatic guns, hand reinforcement is available when necessary. Parts then continue into the cure oven, where they are cured. Products coming off the line, once cool, can be immediately packaged and shipped.

Advantages of a Powder Line

WireCrafters said that it has seen numerous benefits with the implementation of a powder coating line—the largest benefit being overall aesthetic quality of the finished product.

With the increased durability and high tech appearance that the powder coating delivers, the firm is able to reach a broader marketplace. Other benefits include decreased lead time as products coming off the line can now be shipped same day, whereas

Powder coating system installed WireCrafters by Midwest Finishing Systems, Inc.



WFTI EMPHASIS: Surface Treatment, Coating & Cleaning



Various close-up views of the powder coating system installed at WireCrafters are seen above.

before the firm required a three-day drying time for customized colors.

Flexibility in colors is another advantage of the powder coating system. As a result of this flexibility, WireCrafters has expanded its stock color selection to include eight colors as compared to one color with the previous liquid line.

Finally, the switch to a powder coating finishing

system has allowed WireCrafters to become more environmentally friendly with a reduction in hazardous material waste.

Conclusion

With the addition of this powder coating line and the colors and quality finishing of the products, WireCrafters has already won back lost business and the company said it hopes to continue their expansion into other markets which were previously unavailable to them.

To receive additional technical information on powder coating systems like the one installed at WireCrafters by Midwest Finishing Systems, Inc., visit the websites listed below.

www.wirecrafters.rtrk.com

www.midwestfinishing.com

www.nordson.com

WFTI

Company Profiles...

WireCrafters LLC is a ISO 9001:2000-certified custom manufacturer of woven wire partition systems, storage lockers and secured storage areas for safety/security applications. Wire partition systems include storage lockers, guards and physical barriers for safety, protective railing including guardrails and handrails and wire mesh. Types of wire mesh include square, rectangular, expanded and welded. Standard color is gray with optional buff, yellow, blue and flat black with custom color matching capabilities available. Optional finishes are galvanized, powder coat, plain steel and stainless steel electro polished.

www.wirecrafters.rtrk.com

Midwest Finishing Systems, Inc. manufactures energy-efficient ovens and washers. Modular design allows for significant efficiencies in powder coating equipment production and installation. The company serves customers from engineering through system start-up by providing custom design, engineering, fabrication and installation of complete state-of-the-art finishing equipment. Midwest can design a system to meet a client's powder coating needs, maximizing production capability and quality requirements while keeping floor space savings a priority.

www.midwestfinishing.com

Nordson Corporation is a leader in precision dispensing equipment for applying industrial liquid and powder coatings, adhesives and sealants to numerous consumer and industrial products during manufacturing operations. Nordson solutions also include test and inspection equipment and curing and surface preparation systems. www.nordson.com