



High Volume Vertical Powder Coating Arrives at Patrick Metals

Mishawaka, IN – Patrick Metals has begun full production using their state of the art vertical powder coating system. Patrick chose Trevisan Tellkamp as the equipment supplier for the project because of their unmatched experience and the innovative technology that they were able to offer. Several technological advantages including a Cascade washer design, Zero Down Time for color changes and high powder utilization were key factors. Trevisan Tellkamp are the world leaders in vertical powder coating systems with more than 140 installations worldwide.

- Cascade Washer Design

The innovative design of the 8 stage Cascade washer on the Patrick vertical powder coating system is designed pre-treat extrusions that meet AAMA 2603, 2604 and 2605 specifications. The Cascade washer uses a “waterfall” design to deliver the pretreatment chemicals and rinses over the extrusions and profiles being processed, eliminating the spray nozzles typically associated with a pretreatment washer. The energy efficiency Cascade design lowers the horsepower requirements and heating requirements of the washer providing the lowest hourly operating costs. The efficiency of the Cascade washer also reduces the water usage and pretreatment chemical usage of the washer as well. Pretreatment costs per square foot of extrusion are approximately 50% of the costs when compared to traditional spray washers.



Vertical Powder Coating Booth Designed to Process Aluminum Extrusions with a Maximum Length of 25'-0"

Recent Business Announcements

- ◆ **Western Extrusions**

Carrollton, TX – Total Enclosure VOC Abatement System with the Roxidizer® RTO, recirculating spray booths and flash-off area enclosures. This expansion allows Western to use AAMA 2605 high performance coatings and meet the new MACT standards.

- ◆ **Indalum S.A.**

Monterrey, Mexico – Vertical Powder Coating System Designed to Handle Extrusions with a Maximum Length of 23 ft. The new vertical powder line compliments the horizontal powder line that Tellkamp installed in 1997.

- ◆ **Keymark Corporation**

Lakeland, FL – Converted an existing horizontal line into a combination high performance liquid/powder system with the addition of a Roxidizer® RTO, catalytic infrared oven for powder pre-gel, dry-off oven and liquid primer spray booths.

- ◆ **Alenco Holding Corporation**

Bryan, TX – Model 15 Roxidizer® RTO with Air Volume Reduction System added to an existing Vertical Liquid Paint System to allow Alenco to use high VOC coatings for better coating performance.

- Zero Downtime For Color Changes

The high volume vertical powder coating system at Patrick includes two (2) vertical powder coating booths and a unique powered conveyor system to maximize production uptime even during powder color changes.

Each vertical powder booth is located in a powder coating cell. The powered conveyor system moves extrusions through the powder coating cells allowing the vertical powder booths to be used individually (powder coating in one booth while cleaning the other) or use the 2 booths in tandem during the powder coating process to maximize production throughput. No line stoppages or gaps in the line are required to change colors.

- High Efficiency Powder Utilization

The design of the quick color change Trevisan Tellkamp vertical powder coating booth also provides high powder utilization efficiencies. The ITW Gema automatic powder application equipment which is mounted on a vertical full stroke reciprocator that provides high first pass transfer efficiencies and tight control of the powder film thickness along the length of the extrusion. The powder overspray is capture in the booth and sent to the powder recovery cyclone system for reclamation. The



Gas fired catalytic infrared minimizes contamination in the powder curing oven.

cyclone separates the powder from the airstream and returns it to the powder feed center for reuse in the vertical powder booth. Depending upon powder formulations overall powder utilization efficiencies can be greater than 97% which makes vertical powder coating of aluminum extrusions competitive with liquid coated extrusions.

- High Return on Investment

The high volume vertical powder coating system at Patrick Metals uses the latest in technology to provide the lowest hourly operating costs and the lowest applied powder coating costs allowing Patrick to have the flexibility required to stay competitive in today's marketplace



High efficiency powder application equipment mounted on a full stroke reciprocator.



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