

## Metering Out Powder Profits at Milbank

In a stalling, skidding, slipping, housing market, most companies who manufacture products for new home construction have pulled their heads into their shells to weather the recent economic storm.

Not Milbank Industries. Milbank, a Kansas City based manufacturer of the utility boxes that enclose your electric meter happily invested in a brand new powder coating system.

“Cutting costs doesn’t mean cutting corners” observes Tom Weiss, Milbank’s production manager. “Investing in a new powder system has paid us back every day since we started it up. So while overall sales in housing may be down, our business is improving through better market share and paint costs that are lower than ever.”

Milbank, a leading supplier in the field, reports impressive savings stemming from less powder use, lower scrap, and a significant reduction in labor on their paint line.

“We’ve been able to go from painting on two ten-hour shifts a day to a single, eight-hour shift” explains Weiss. “That’s because the new line requires less manpower through automation, efficiency and increased throughput. You can imagine all the good stuff that results from eliminating a shift of painting” Weiss says smiling.



Milbank decided to upgrade the paint facility over a year ago when they were loaned a trial handgun and a full 12-automatic gun application system by Wagner Industrial Systems. “They invited us to try the equipment on our line. We figured if they were

willing to loan us a 12-gun system they must be pretty confident in how well it would work. We tried it - and became quickly convinced it was time to make some changes” recalls Weiss.



Powder savings are adding up fast for Milbank. “We started up the new system up at the beginning of the year and we’re saving from 80 to 120 pounds of powder a day” says Wise. “And we are making steady

improvements as we learn more and more about how to fine tune things. That’s a 40% improvement in powder utilization for us” says Weiss. “With powder savings added to labor savings, throughput and less maintenance and spare parts, the decision to spend money to save money was clearly a winner”.

“We paint a lot of deep boxes” says Jay Franke, paint line supervisor. “They are the kind of parts used in textbook examples of a ‘tough’ part to paint.” The boxes, (or ‘sockets’ as the industry calls them) present a challenge because of the deep recesses and corners that



make electrostatic power coating more challenging. “We used to have a couple of operators painting the insides of sockets and we had awful transfer efficiency. In order to get the right thickness in the corners we had too much powder in other places.”

“It was a combination of better guns and better controls that really moved the needle” says Franke. “The Wagner C4 guns are equipped with the DigiTech electronic controls which allow us to dial in the system to get very consistent film build.”

To achieve the UL specifications required for their product, the coating needs to be durable enough to stand up to rain, sleet, ice and constant outdoor exposure. “Our specification is for a minimum of 1.5 mils” says Weiss. “We used to apply as much as 6.0 mils in some spots to get 1.5 mils in others. Today the variation is half that figure ranging from 1.5 to 3.0 mils. That’s all improvement brought about through better equipment” adds Weiss.

The next step for Milbank was to address replacing their powder booths. “We had two powder booths before the new system was installed” explains Franke. “One booth was used for our big runner color, gray, and the other for spraying various other colors. We had powder containment problems with powder escaping the booth openings, and booths that were time consuming to clean and tough to paint in”.

The new paint facility, installed in a single week over the Christmas holidays, is a clean, well lit and spotless. “We tore out two booths, modified our conveyor and installed the new booth and collector in just a few days” says John Franke, maintenance supervisor at the plant.

Although Milbank does very few color changes each week they were committed to invest in a fast color change booth that allows them to do color changes in under ten minutes. “We are looking ahead to where our business is headed” explains Weiss “traditionally our products were sold directly to builders, contractors and utilities – but we are beginning to sell our sockets through retailers like Lowes. We know that as we move ahead there will be more and more demand for color change and we felt we should be prepared from the outset.”



The booth Milbank chose is the first of its kind in the United States. The PrimaCube booth has been successfully deployed in Europe, but Kansas City is its first US stop.

“Looking back at our old booths, the PrimaCube is amazing new technology” says Franke. It’s a super compact booth that’s got a perfect combination of automatic guns and the capability to do manual touch up from either side of the booth.

“You just have to look at a PrimaCube to know it’s something really different and special” says Loren Keene of Wagner Industrial Systems. “From one end to the other, floor to ceiling, you are looking at new technology”. The PrimaCube is the latest variation on the SuperCube technology that has led the fast color change market in the



U.S. and abroad. The booth sports a bright, easy to clean single wall, plastic enclosure along with the patented “front-porch” architecture pioneered by Wagner on the popular SuperCube.

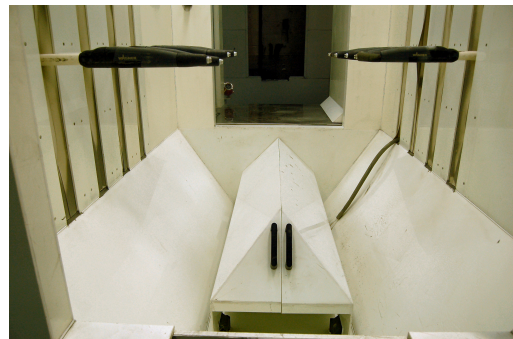
Like something out of the movie *Transformers* the PrimaCube converts magically from one form to another when it’s time to change color. Collection ducts hinge open and walls pivot to form doors that close the booth off at the front porch to facilitate cleanup.

Milbank’s booth is outfitted with two ling stroke reciprocators on each side of the booth that paint the majority of the parts before they reach the manual coating station. “Our old system had twelve automatic guns” says

Wise, “but the crutch we had were manual painters killing themselves to do most of the work”. Now a light curtain just outside the booth entrance takes measure of parts coming to the booth and recalls a Milbank recipe that’s customized to paint that particular package of parts. “We can paint many of our parts completely automatically now with no manual touchup and no rejects” says Franke.

The reciprocators can be completely controlled by the systems computer controller. “The speed, start and end of stroke, vertical and horizontal position, spray gun trigger times and durations are all pre-programmed and change as sockets pass in front of the spray guns” says Frank. “So powder gets put exactly where we need it” says Franke.

“We have over 3,000 different catalog numbers” says Weiss of Milbank’s large product offering “and we typically paint 1,000 units a day of over 50 different part styles. We are a captive manufacturer but sometimes when you look at the paint line you would think we are a custom coater.” He jokes. “So a system like the DigiTech controller that can respond to on the fly to different parts but paint them all with so much efficiency is a big savings of time and effort.”





The Digitech system is so full of capability that it's changed how Milbank technicians and engineers think about powder coating. "DigitTech lets us see make a change to any parameter and see how that effects our production" says Franke. "It used to be hard to isolate just one thing and really be able to dial it in. But now we have so much power over the process. Our people now think about the 'science' behind powder coating. They can really how changes improve things."

"Fortunately, although Digitech is really powerful, it's also really simple and intuitive to use" says Keene. "It's Windows CE based with familiar menus and shortcuts that allow operators to set things using sliders and graphs, and to take everything back to factory preset conditions with the push of a button. But for customers like Milbank who take advantage of all the features it can be incredibly rewarding".

The new paint line is one of long list of innovations by Milbank to help them improve service and quality to their customers. "We have transformed the plant through implementing a lean cell approach to manufacturing" explains Weiss pointing to the upstream and downstream processes. "But every product gets painted. So the powder line sort of the center of our manufacturing process – no paint. No product."



### **Milbank's Tale of the Tape ...**

- ✓ Powder utilization improved by 40%
- ✓ Powder savings of 80-120 pounds a day
- ✓ Labor reduced by 60%
- ✓ Scrap/rework reduced from 5% to nearly zero
- ✓ Color change reduced from hours to under 10 minutes
- ✓ Worker satisfaction improved
- ✓ Spare parts/maintenance improved

