

# CASE HISTORY

## Whirlpool installs second generation of ITW Ransburg finishing systems

### New Ransburg PPS 2001™ electrostatic system takes over.

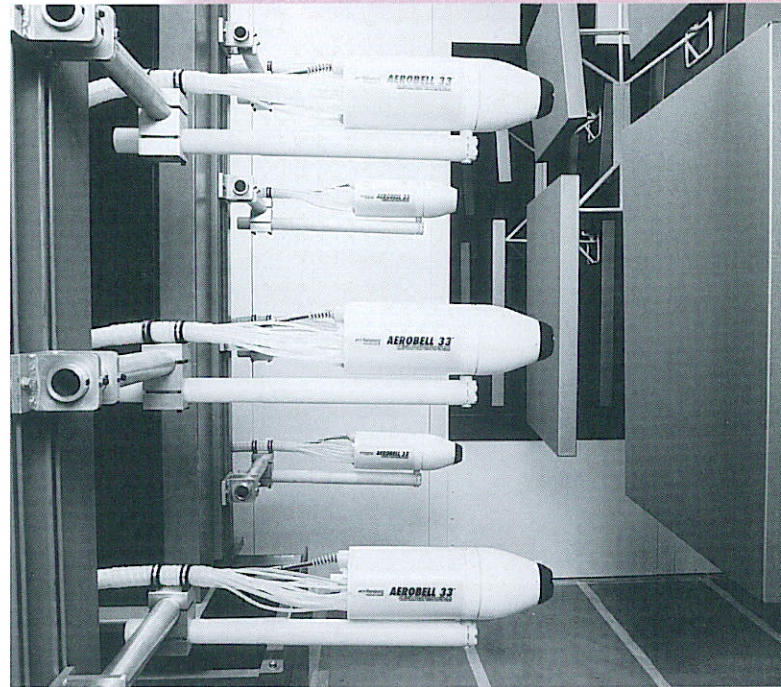
For Whirlpool Corporation's division in Evansville and ITW Ransburg, it was déjà vu all over again.

Whirlpool-Evansville says it is the world's largest top-mount refrigerator production operation under one roof. The plant's first ITW Ransburg liquid finishing system had been installed in 1965. By 1995, Whirlpool was ready for an updated system to handle today's new finishing materials, and the company's growing production.

The search for the best all-round solution, according to Bob Young, technical supervisor for the finishing system project, led them right back to an electrostatic liquid system and ITW Ransburg.

"We'd gotten 30 plus years out of our Ransburg system," says Young, "and their new system offered everything we needed."

Brad Vogt, process engineer in charge of the project, agrees. "This new system is helping us out quite a bit. It's shortened up the process, opened up floor space, improved the potential for new processes, and minimized cleanup."



*The new system supplies more material per bell with greater consistency so line speeds could be increased with no loss in quality.*

### The instant payoff.

Young says moving 1.3 million units annually inside one facility makes floor space a precious commodity. Keeping the operation under one roof became a pivotal cost-saving issue, and identified the first of many advantages of the Ransburg system.

"Switching to a new powder system would have required putting up a new building and relocating other departments in order to make room,"

Vogt says. "Going with the new Ransburg liquid system solved that problem." Vogt says eliminating those costs by staying with a liquid system saved 25-30% of the capital earmarked for the entire project — capital better invested in the process.

## Less space, faster installation.

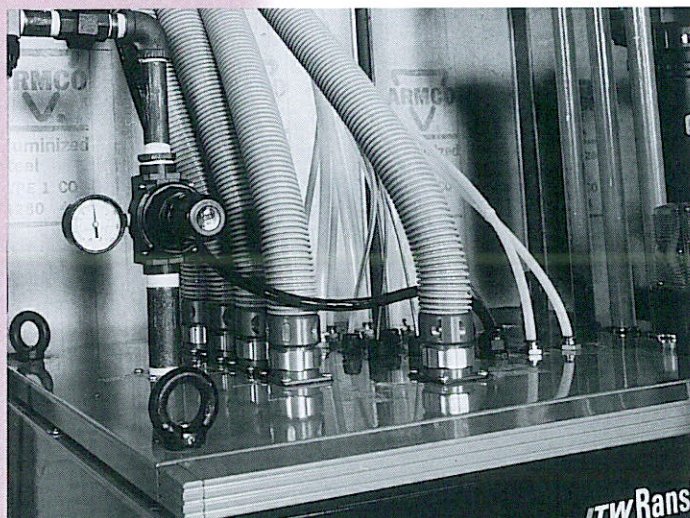
The new system requires 70% less floor space than the previous system, estimates Dan Sanker, the Ransburg representative who worked with Vogt and Young to design Whirlpool's new electrostatic system.

"The Ransburg system Eurorack design is very compact," Vogt says. "It's actually opened up floor space, which opens opportunities for new processes."

Pneumatic hookups and streamlined controls offer, as Vogt puts it, "A cleaner, quicker installation."

"Basically, you wheel in the unit, install a few air hoses, and you're done," Vogt says. "There's less wiring and conduit running to various stations. All the solenoids and controls are housed right in the control panel in 4x6 cards."

*The Ransburg PPS 2001 features pre-bundled pneumatic connections for quick installation.*



## Automatic savings throughout.

In production, Whirlpool is looking forward to even more savings accumulating at every step of the process.

Vogt says the new electrostatic liquid system will bring

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the company as much as 40% savings in material costs, compared to the previous system, and 50-60% savings compared to going with a powder

system. The higher film builds of powder systems become too costly for Whirlpool's lower film build requirements, Vogt explains.

Much of the savings is due to the superior flow control and consistent coverage of the Ransburg PPS 2001 system. Material flow is monitored with computerized precision, checked 20 times per second and adjusted automatically to maintain a consistent 1.5 mil film thickness.

That precision will earn added savings with first-pass

transfer efficiency, especially with the Evansville operation's high production volume. Compatibility with the latest materials will help cut VOC emissions by 60%, a benefit for both company and operators, Vogt says.

"The new system will allow use of more worker-friendly coatings, and

reduce the amount of solvents in the air. The new coatings have a much higher flash point, too," he says, "which also improves worker safety."

## Faster, more responsive production.

Whirlpool's new system squeezes time out of the process, as well as costs.

"Our processing time is cut by a third," Vogt says. "We can offer reduced lead times with more responsive production. We can change colors much easier. And faster line speeds will meet any capacity issues we can foresee."

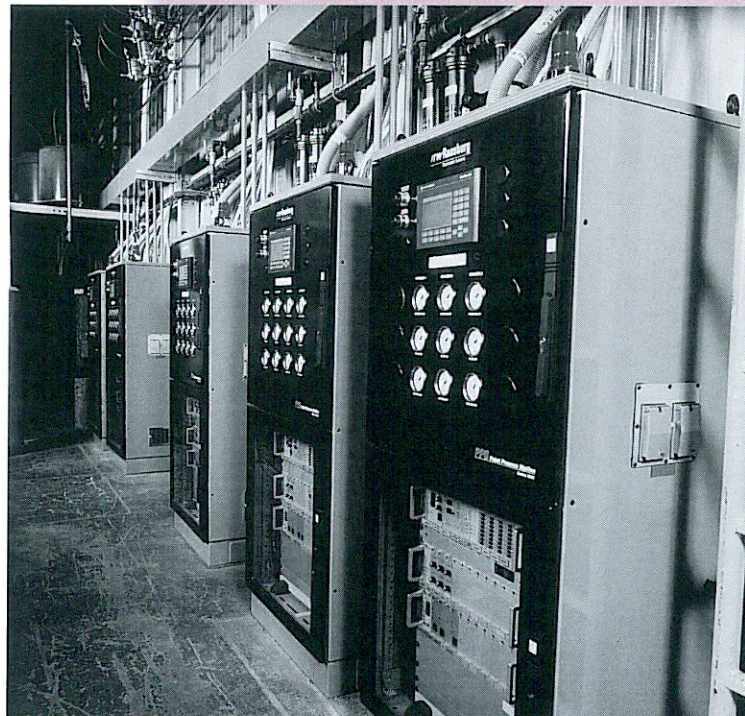
**"Our processing time is cut by a third..."**

Today, Whirlpool operators can change or add colors in seconds. Because the new system supplies more material per bell with greater consistency, Vogt explains, Whirlpool can use fewer bells per station at increased line speeds with no loss in quality.

In today's competitive consumer market, where an inconsistent

finish can put a refrigerator sale in the deep freeze, appearance is everything. Vogt says the precision film controls with the new Ransburg electrostatic system will resolve key quality issues, cut training costs, and boost labor savings and cost-effectiveness even higher.

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*Material flow is checked 20 times per second and adjusted automatically with computerized precision.*

"One of the reasons we went with all the controls is because we could set the process parameters and get consistent coverage time after time," Vogt says. "We're depending totally on automation to get the job done."

## High praise for service.

Installing the system without disrupting production was no small feat, both men from Whirlpool agree. Installation was allowed, "Only at certain times," Young says. "It was quite a juggling act with all the coordination required."

But the system was up and running according to schedule. Vogt and Young gave credit to ITW Ransburg engineers for the smooth transition.

"It's gone pretty smoothly," Young says. "They worked with us and handled it very well."