

# Volvo Truck Achieves High Plant Standards with Wonderware Software

When Sweden's Volvo decided a few years ago to enter North America truck manufacturing, it built a 1 million sq.ft. manufacturing facility in Dublin, Va. The challenge was to make sure the plant could meet the production and quality demands of the U.S. truck market.

This objective was achieved, and Volvo Truck Corp. is now considered to be a leader in the heavy-truck industry in safety, research, and development, quality manufacturing processes, and environmental care.

Achieving this objective was the responsibility of Jamie Sypniewski as manager of business analysis and applications. Because of the large number of options, every truck order is virtually a custom order. Currently, the Volvo plant is capable of producing more than 500 "custom" trucks per week. The Dublin plant, because of its outstanding performance, was selected by Volvo to produce the company's new VN Series trucks.

The idea was to continue building the existing products while at the same time increasing production of the new series. The switch from one to two assembly lines—although it took years of planning—happened virtually overnight.

In fact, according to Sypniewski, the actual transformation took place in less than a week. "We had a golden opportunity to build this plant right from the ground up," says Sypniewski. "We found the total process control we were looking for in an MES (manufacturing execution system) solution that would become our way of doing business."

Sypniewski's goal was to eliminate as much of the paper trail as possible. The automated solution he selected would need to provide decision support tools while providing integration between the business systems and the plant floor.

To meet these objectives, Sypniewski selected InTouch human-machine interface (HMI), InTrack production management, and WIP (work in progress) tracking software running under Windows NT from Wonderware Corp., Irvine, Calif. Volvo's computer system hardware consists of a server running the Oracle database under Windows NT.

While the infrastructure may sound intimidating, the value of the system lies

by **Marty Weil**  
staff writer



in its ability to identify and communicate key business and process indicators to the personnel who need the data most. According to Sypniewski, the new system has resulted in clean integration between the MES level and the shop-floor level, and provides product tracking and data collection, as well as ease-of-decision support.

"In the manufacturing environment, if you can control the process, you gain quality—it's that simple," says Sypniewski. "Now, we can collect data across the network, for example, that might tell us that a paint oven is running a few degrees above normal. With this data, we now

have the application that allows us to run statistical analysis and take preventive measures before we have a nonconformance issue."

At Volvo, quality is essential. For most truck customers, the interior trim of a truck speaks volumes about the quality of the entire vehicle. Materials must have the right feel, luster, and sound-absorption properties. Every panel must fit precisely. To meet these performance standards, what is needed is real-time shop-floor data.

"Before, we had a huge paper trail that we had to follow to understand our processes," says Sypniewski. "Now, it's all right in front of our eyes. Our work force is excited about working with these systems. It makes their jobs better, and they do their jobs more quickly and have much more focus on quality."

Summing up the impact of the new computer system on the manufacturing process, Sypniewski said, "Imagine coming to work every day with sunglasses on. You could see well enough to make it through the day, and eventually you would not even realize you were wearing shades, but if you took them off, imagine how much brighter everything would be. This is one way to explain the impact of the new system we installed at the Dublin facility. We've gone from merely being aware of our situation to the ability to manage our operations on a real-time basis." □

## Problem:

*Increasing demands of a new truck line required a paperless plant and a reduction in the paper trail. In addition, the new line needed to offer decision support tools, while providing integration between the business systems and the plant floor.*

## Solution:

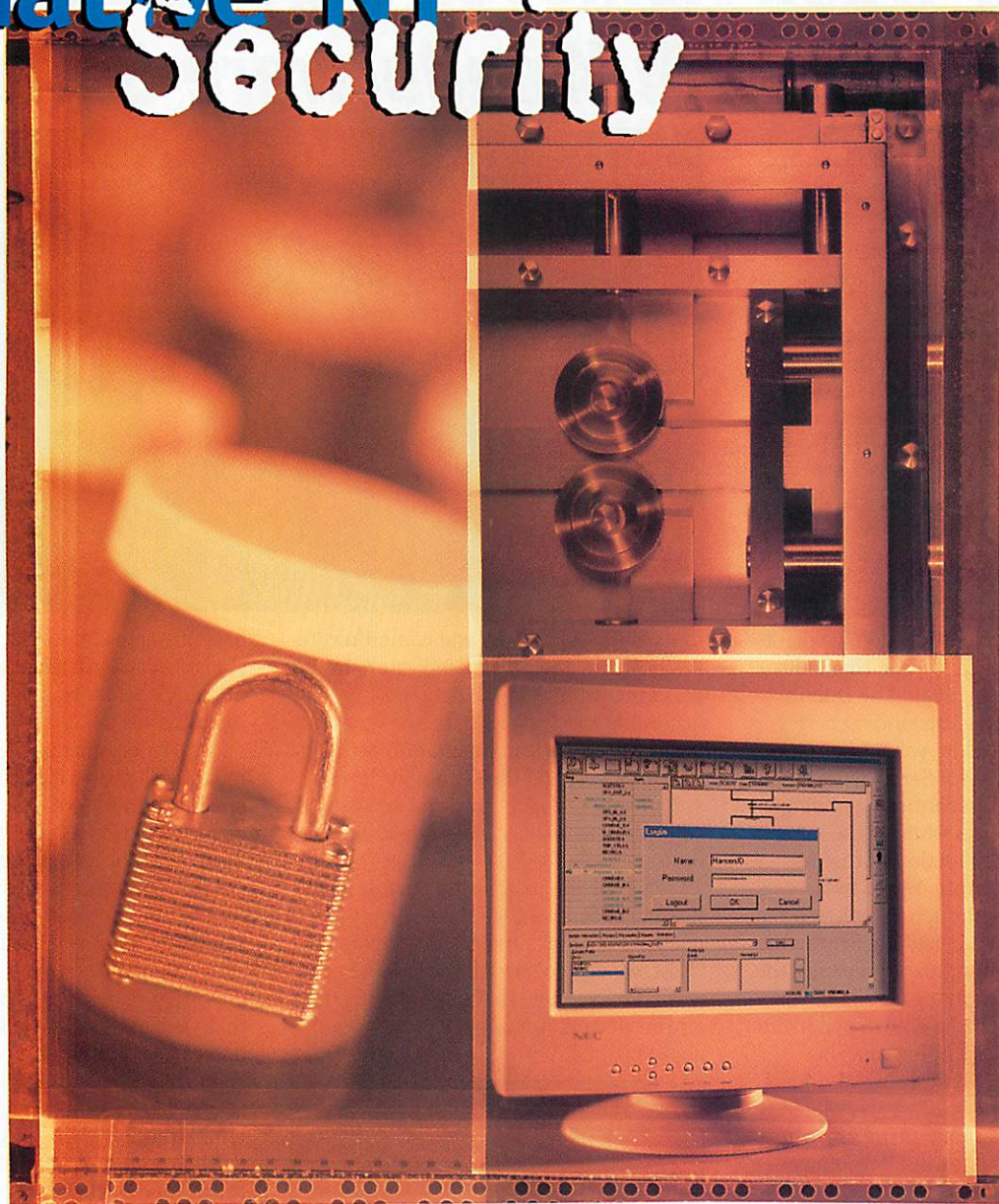
*A Windows-based human-machine interface (HMI), production management, and work in progress (WIP) tracking software that provides product tracking, data collection, and ease-of-decision support.*

## Payoff:

*To provide a clean integration between the MES (manufacturing execution system) and the shop floor and the ability to identify and communicate key business and process indicators to the personnel who need the data most.*

(above) a view of the Volvo production line. Once painted, the cabs are assembled, wiring harnesses are added, and they're attached to the chassis and wheelbase.

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