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SEW Eurodrive's Lyman Plant Uses Wonderware Production and Performance Management Software Solution to Gear Up for Success

Lyman, South Carolina — No company knows more about gears than SEW Eurodrive, the world-renowned producer of motors, gears and gear boxes. SEW Eurodrive began as a small, family-run motor-manufacturing company in Germany. It soon evolved into the number one manufacturer of gears, gear boxes and motors in Europe.

With over 12,000 employees worldwide, SEW Eurodrive's products can be found in virtually every type of manufacturing plant in the world. This includes airport logistics; materials handling and packaging; food processing and bakeries; bulk materials handling; water and wastewater; forestry and lumber; automotive; bottling; and even Las Vegas stage shows!

The Wonderware Software Solution Boosts SEW Eurodrive's Overall Efficiency by 75-100%

SEW Eurodrive credits its Wonderware Production and Performance Management Software Solution for helping to boost their overall efficiency by 75-100%.

"We use Wonderware software because it's very user-friendly, very flexible and very reliable," says Ernie Gerdts, Superintendent of Technology. "Because of the Wonderware Application Server, we now spend 50% less time developing applications. Plus, now we can record and track events. We know exactly what's going on. It's all right here." He gestures at the screen in his control room.

The Wonderware software solution has been an integral factor in the success of SEW Eurodrive's Lyman assembly plant, which is the only production center in the U.S. that makes K-BOX bevel gears. These gears work in various angles, can be mounted on shafts and change the direction of a shaft's rotation. There are two-million variations of the K-BOX, many done by hand.

In fact, Ernie Gerdts estimates that SEW Eurodrive's plant-floor operators have realized a 40% increase in productivity as a result of the Wonderware software's easy-to-use features for productivity improvement. The end-result is that plant employees do not have to work as many long hours.



**Gear boxes along the paint
assembly line**

Evolving from an InTouch 1.0 HMI to a Completely Centralized System

Lyman's assembly plant has used InTouch HMI software since the late 1980s, when Wonderware introduced the very first industrial HMI utilizing the Microsoft Windows® operating system. Today, the plant has a comprehensive Wonderware Production and Performance Management Software Solution, which includes a Wonderware Industrial Computer that comes with the latest version of InTouch software pre-installed.

"SEW Eurodrive's control system has evolved from the InTouch HMI that was localized on several machines to the Application Server system, which is centralized," recalls Jim Blackstone, Account Executive for InSource, the local Wonderware Distributor. "The main benefits they are seeing are that they've gone from these islands of automation — where they have several different touch points that they had to maintain — to a centrally located database in the Application Server, where they have all the logs centralized. All the scripting is centralized. So they can deploy those applications to different areas, and that saves them a lot of time."

John Dado, President of AATIS, the system integration (SI) firm that installed the current Wonderware Production and Performance Management Software Solution at the Lyman facility, comments, "My favorite part about the Wonderware Application Server is that you can centralize so many different types of systems. You can tie in systems that communicate through the OPC® protocol. You can tie in legacy systems that only talk DDE. You can connect to the Wonderware Historian, other historians based on Microsoft's SQL Server™ software, or Oracle® systems. Basically, the Application Server is just a fantastic piece of glue that makes our job a whole lot easier — especially when we work with customers with legacy applications."

Not only is the SI a fan of the Wonderware Application Server. The customer also raves about this powerful product, which uses Microsoft® .NET technology to centralize and simplify the development, deployment, maintenance and administration of distributed industrial automation and information applications.

"Wonderware object deployment is a great thing. It's as easy to add functionality with the Application Server as it is with the InTouch HMI. In fact, I'd say it's the greatest thing that ever came out — and we are very, very happy with that here at SEW Eurodrive."

Producing more than 1.2 million possible product configurations, SEW Eurodrive's Lyman plant meets its customers' exact specifications. The Wonderware Application Server manages these configurations by integrating information — whether within the plant, across multiple locations, or from the plant-floor to the business systems.

Development Time Goes Down 75% per Furnace

In addition to being used at virtually every stage of the painting process — from accessing the paint recipe in Application Server to coating the gears with primer — Wonderware software optimizes the plant's top-of-the-line IPSEN Furnace for atmosphere supercarb carburizing. This furnace uses a very complex technique to thoroughly clean, seal, harden, dry and de-stress the gears, boxes and other components. The InTouch HMI software with its SmartSymbol technology simplifies this process.

Craig Beaver, an In-Field Service Engineer from IPSEN comments, "One of my favorite things is SmartSymbols. The nice thing about the Wonderware software is the fact that the SmartSymbols are very realistic, and easy to use and develop."

The Wonderware software solution not only simplifies a very complex heating and cooling process. It also significantly speeds up development. AATIS' John Dado explains why.

"Here at SEW Eurodrive, the development savings derived from the Wonderware Application Server don't come from the initial development of the template," says Dado. "The savings come as you deploy additional instances of it. For example, when we built the first machine, the development time was probably very close to the time we used to spend. But, as we add furnaces to the system, the development time for each additional furnace is reduced by probably 75%."

Reducing Exposure to Extreme Heat and Flames

Running Wonderware software on computer-operated furnaces not only saves time; it lessens the plant staff's exposure to the extreme temperatures and flames generated by the furnaces. The Lyman plant operates several furnaces of different types concurrently to maximize productivity.



Operator on the plant floor

The gears in the older furnaces in particular must be checked periodically to ensure proper heating and sealing of the gears and gearboxes. But, when the furnaces are full, challenging production quotas must be met, and plant workers are rushing around trying to check on the red-hot gears inside a variety of fiery furnaces located throughout the plant floor, safety is a concern.

"With the Wonderware software, we don't have to go check on the gears as much as we used to," says Jonathan McAbee, Heat Treat Operator at the Lyman facility. He checks the heating status of a gear by studying an InTouch screen, which he touches to adjust the temperature in the atmosphere supercarb carburizing process.

Also, if a problem should develop on the plant floor, Wonderware's SCADAalarm software can alert plant staff immediately via telephone, email, PDA and over the loudspeaker. No matter where personnel are in the plant, they will be able to react quickly — not only in case of emergency, but also so as to stay up-to-date with plant operations in real time.

A Close Relationship with Wonderware

As Gerds answers the phone, checks the screen and grabs his PDA, he comments on how much he values the close relationship he has established with Wonderware over the years. The quality of Wonderware Customer Support and Services is one reason why SEW Eurodrive's Lyman plant has consistently selected Wonderware software solutions over the past two decades.

SEW Eurodrive's personnel complete Wonderware Training courses and receive 24/7 Technical Support through InSource. InSource also provides support for AATIS. As Wonderware's local representative, InSource collaborates closely with the Wonderware Training and Technical Support experts at Wonderware's headquarters in Lake Forest, California. This close relationship ensures that customers will receive Wonderware support throughout the system's lifecycle.

As Wonderware celebrates its 20th Anniversary, it particularly values long-time customers like SEW Eurodrive, which has been with us from the beginning. As Wonderware's software, solution and services continue to evolve, we are pleased to continue doing business with leading companies like SEW Eurodrive, which achieve operational excellence with our software solutions.



Ernie Gerds checks his PDA for real-time information on the plant floor

In The End, It's All About Profitability

"Even though I like a lot of things about Wonderware software, the bottom line is that we use it because it boosts our profitability," Gerds comments. This off-hand remark illustrates why SEW Eurodrive's Lyman plant is considered a "best-in-class" manufacturing plant — and Wonderware is proud to be an integral part of this success.



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