



HOW OSRAM SYLVANIA USED AGV TECHNOLOGY TO REDUCE LABOR, FORK TRUCK COSTS

In Versailles, Kentucky, OSRAM SYLVANIA operates an 800,000 square foot facility that manufactures and distributes T5, T8 and T12 fluorescent lamps. The plant's quality and environmental management systems are certified to the International Organization for Standardization (ISO) 9001 standards for product quality and ISO 14000 standards for environmental practices.

By installing two Automated Guided Vehicles (AGVs) from AutoGuide, OSRAM SYLVANIA was able to reassign four fork truck driver positions to more meaningful work within the plant, as well as reduce congestion on the facility floor.

FEWER FORK TRUCKS

OSRAM SYLVANIA's manufacturing process is mostly automated, but the Versailles plant was using fork trucks to move pallets of lamps throughout the building. In many cases, fork truck operators were driving very routine routes or even moving empty pallets. The high number of fork trucks also meant that the floor could be congested with traffic. Seeing an opportunity to become more efficient, leadership at the plant began to consider AGVs as a replacement for its fork trucks.

After speaking with several AGV providers, OSRAM SYLVANIA chose to work with AutoGuide. Mike McNulty, the plant manager, appreciated the durability and simplicity of AutoGuide products, and its flexibility to adapt to particular needs at the Versailles location.



“AutoGuide offered creative solutions to make sure that their AGVs would work in our plant,” McNulty said. “They were very hands-on and always had a quick reaction time for the requests we made.”

AutoGuide’s central location, in Georgetown, Kentucky, also meant that it could easily service the AGVs.

A CUSTOM AGV SOLUTION

AutoGuide custom-designed a

pair of AGVs that include an industrial tuggy with a fixed trailer to haul pallets of lamps. The AGV follows magnetic tape laid on the floor on a guidepath route between production output conveyors and accumulation conveyors in the warehouse. Each AGV can carry two pallets up to 63 inches long, or one larger pallet, which eased congestion on the floor. The AutoGuide AGV fully automates the process of moving finished goods from the production line to OSRAM SYLVANIA’s warehouse storage facility.

When operators need to move finished goods to the warehouse, they press a call button and AutoGuide’s AVINU® traffic-control software automatically dispatches AGVs to the production line. AVINU uses RFID tags located along the guidepath route to track the AGV’s progress as it automatically completes this entire transport sequence. Managers in the plant use the AVINU data to monitor how the system is functioning.

The magnetic tape guidepath and user-friendly operator interface allow for quick and simple changes that can be done by OSRAM SYLVANIA staff themselves, with little help from AutoGuide. OSRAM



OSRAM SYLVANIA needed just a day to alter the AGV route for reduced cycle time and congestion. They adjusted the magnetic tape on the floor. Then they added new guideway and routing information to AVINU, and used a touchscreen human-machine interface (HMI) to update the AutoGuide vehicles, too. AGV operations were only minimally affected during the update.

AutoGuide AGVs use opportunity charging stations along the path so they never need to be taken offline to recharge.

“There is no manual intervention with the AutoGuide AGVs, and that’s great for us,” McNulty said. “They are durable and require very little maintenance.”



ROI IN JUST 2 YEARS
by reassigning 4 fork truck drivers

AutoGuide AGVs meet or exceed ANSI B56.5 Safety Standards. These AGVs are equipped with Category-3 safety laser scanners, contact bumpers, infrared obstacle detection sensors, and easily accessible emergency stop buttons to prevent collisions.

“If you step in front of a fork truck, that driver needs time to react and brake,” said Rod Thompson, supply chain manager at the plant. “The AutoGuide AGVs stop immediately when their sensors detect someone. By eliminating that human lag time, we’re saving a few seconds that can be the difference in whether or not a collision happens.”

TWO-YEAR ROI

OSRAM SYLVANIA earned a return on investment in just two years because the AGVs allowed it to reassign four fork truck driver positions to other areas within the plant.

“The AutoGuide AGVs help us to be more competitive in the global market by reducing the fixed overhead costs we had with our fork truck drivers,” McNulty said.

The remaining fork truck drivers can now focus on more skilled tasks, as the AutoGuide AGVs have eased their workload by assuming more of the routine routes around the floor. Even when a large



snowstorm hit the community and prevented some employees from getting to work, OSRAM SYLVANIA 's AGVs continued to operate normally.

OSRAM SYLVANIA immediately began saving about \$8,000 per year in maintenance for the aging fork trucks that are no longer needed. It will save even more by not having to eventually replace them, as they cost about \$45,000 each.

The plant also eliminated congestion issues of having so many fork trucks moving across the floor. Incidents of damaged lamps have declined, too, because the AutoGuide AGVs follow a pre-set path and use lasers to avoid collisions. Fewer fork truck drivers means less human error.

The system is working so well that OSRAM SYLVANIA is now considering adding even more AGVs to its Versailles building.



“AutoGuide AGVs help us to be more competitive and offered excellent support throughout this process. Our decision to work with them has paid off in a good way.”

- Mike McNulty, Plant Manager