

VELOCITY VIDEO CASE HISTORY

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Where the rubber meets the robots

Robotic Industrial Trucks make smart moves at automotive supplier YUSA.

TODAY'S AUTOMOTIVE MANUFACTURING PLANTS operate under lean principles. They keep very few assembly parts on hand and instead rely on suppliers to deliver them just in time when needed at production lines. That is why a supplier such as YUSA Corporation must design its own systems to be highly dependable so that its production flow keeps up with its customer's manufacturing demands.

YUSA is a producer of rubber components for Honda. Its manufacturing facility in Washington Court House, Ohio, produces over 400 different parts, such as engine mountings, bushings, hoses, and just about every part that vulcanizes rubber to metal.

As a Japanese-owned company, YUSA operates on a framework of continuous improvement, always seeking ways to be more efficient in its operations. Last September, YUSA installed three GP8 Robotic Industrial Trucks from Seegrid to automatically transport finished parts from 52 production and packing lines to a staging area in the warehouse, where they are made ready for shipment to Honda's manufacturing plants. These Robotic Industrial Trucks, a new category of industrial trucks that operate without a worker, use vision guidance to automate their way throughout the facility.

"We wanted to reduce the traffic coming from the manufacturing area to the warehouse, as we have a lot of associates that must walk there and there is little room for lift trucks," explains Adonis Bristow, plant industrial engineer. "Secondly, our flow changes continuously, so we also wanted a system that would be flexible to adapt to our changing business needs."

The Seegrid robotic trucks fit these requirements perfectly. They travel along pre-learned routes directed by their vision-guidance systems, which allows them to work very efficiently in the facility's tight travel lanes. If an object happens to block the path, safety sensors quickly stop the truck to avoid any impact. As a result, the risk of accident and injury has been virtually eliminated compared with manually operated vehicles.

Joe Guard, a warehouse associate, sees the advantages in using the robotic trucks to make work easier in his area. "I'm pretty impressed with them. We can see how much of a help in manpower they provide," he says.

Each robotic truck starts its work at a home position adjacent to the packing areas located within the manufacturing cells. A worker known as a wrangler manually places the truck into position, loads a pallet of finished materials, and inputs the code for a pre-determined route into



the truck's keypad. The robotic truck then begins its quick journey to the warehouse, guided by Seegrid's vision system. Upon arrival, the truck automatically deposits its load at a staging position. From there, a conventional truck places the load into racking until readied for shipment to Honda's plants. The robotic truck then returns to manufacturing to pick up additional products. As containers are emptied in the warehouse, the trucks can also be programmed to return the containers to the manufacturing cells.

The robotic trucks maintain a continuous flow from manufacturing that keeps products moving. "They never take a lunch break. They are always there when needed," says Bristow.

The dependability of Seegrid's Robotic Industrial Trucks has also allowed YUSA to reallocate three workers to other tasks, saving labor costs.

"We've also been able to reclaim half of the area where we had to previously stage the products for forklifts to gather them," adds Darla Barnes, engineering specialist.

The trucks additionally provide flexibility, as they can easily be programmed for new routes and more can be added as other transport tasks are needed.

For YUSA, Seegrid's Robotic Industrial Trucks have definitely proven to be a move in the right direction.

For more information on Seegrid's Industrial Robotic Truck solutions, call 877-SEEGRID or visit www.seegrid.com.

To watch a short video showing Seegrid Robotic Industrial Trucks in operation at the YUSA manufacturing facility in Washington Court House, Ohio, go to www.dcvelocity.com and click on the Velocity Video.