Global industrial manufacturer sees the future of floor cleaning and sustainability in autonomous mobile robots (AMRs)

CNH Industrial | Lebanon, Indiana

BACKGROUND

CNH Industrial is world-class equipment and services company serving the agriculture and construction industries. With a history spanning over two centuries, CNH Industrial works to continually advance its offerings and evolve as a company—with innovation, sustainability, and productivity at the center of its work.

CHALLENGE

Always at the leading edge, CNH Industrial produces exceptional machines and cutting-edge technologies that put the company at the forefront of the agriculture and construction sectors.

At the CNH Industrial Parts Distribution Center in Lebanon, Indiana, cleanliness on the floors presented a consistent challenge, requiring over 40 hours a week of an employee's time. Eager to enhance cleanliness while cutting down on chemical usage and labor expenses, the local team set out on a mission. The goal was to redirect valuable labor resources toward revenue-generating activities within the warehouse operation.

"We had an operator tied up on the machine all day and we weren't getting the quality of clean we wanted," said Neil Dellinger, Facility Manager at CNH Industrial. "We were interested in learning more about floor care solutions that leverage robotics and this gave us the opportunity to figure out the best way to implement this technology moving forward."

SOLUTION

In mid-2022, CNH Industrial contacted a Tennant Strategic Account Manager to explore the latest innovation for industrial operations—autonomous floor cleaning machines. After learning about CNH Industrial's cleaning needs, Tennant presented its T16AMR industrial robotic floor scrubber powered by lithium-ion batteries.

The Tennant team also equipped the T16AMR with its ec-H2O NanoClean® technology to show CNH Industrial how using a detergent-free solution in an autonomous floor scrubber helps to clean effectively, save money and reduce impact compared to daily floor cleaning chemicals.

Impressed with the results, CNH Industrial purchased a T16AMR robotic floor cleaner equipped with ec-H2O NanoClean technology. It was the first autonomous floor cleaning machine at its Lebanon site, reflecting its forward-thinking and commitment to sustainability. "Our floors are a lot cleaner, plus the machine doesn't require any chemicals to clean the floor," said Dellinger.

To ensure a successful implementation of the T16AMR system, CNH Industrial conducted rigorous pre-work, thoughtfully pre-planning routes before the machine was installed. The company also talked to its team about the importance of ensuring everything was in the correct place and aisles were kept clear—which resulted in far fewer machine assists and more efficient floor cleaning. They clean approximately one million square feet each week in their 250,000 square foot packaging facility.

RESULTS

Greater Productivity, Cleaner Floors

Thanks to the autonomy and efficiency of the Tennant T16AMR, CNH has redeployed the operator who used to clean floors with its old manual ride-on system to the plant's packaging area, where he can be more productive. The Tennant system runs autonomously between 38-44 hours a week, and the floors are much cleaner, less dusty, and require no chemicals to do the job.

"We were interested in learning more about floor care solutions that leverage robotics and this gave us the opportunity to figure out the best way to implement this technology moving forward. It has resulted in a much cleaner facility."

- Neil Dellinger

FROM NOVELTY TO ACCEPTED TEAM MEMBER

At first, employees viewed the Tennant system as a novelty and CNH Industrial even had a naming contest for the machine—with GhostRider selected as the winner. Now that GhostRider has been up and running for months, employees who were apprehensive of the new technology now view the system as part of the team.

MAKING A SUSTAINABILITY STATEMENT

In turn, the CNH Industrial Lebanon team is impressed by its robotic floor cleaner and looks to move toward more autonomous systems that are battery-powered and support chemical-free cleaning to help advance sustainability initiatives. To that end, the company has ordered additional T16AMR robotic floor cleaners with ec-H2O NanoClean technology for other North American facilities.

"This machine does align really well with our sustainability values," said Dellinger. "We are very happy with the T16AMR."