West Coast Wine Producer Automates CHEP Pallets with AGVs

Transbotics- A Scott Company

Transbotics was hired to design, build, fabricate and install an AGV system at a customer facility in California. A system capable of moving inspected CHEP and fiber pallets at the customer's Material Sequencing Center. With the new AGV System operating at 87.7% utilization, it is able to keep up with 100% of the customer's total throughput, with just 15% of time allocated to recharging the vehicle when the battery is low. The customer has now increased the efficiency they were looking for in the CHEP pallet wrapping process, while decreasing labor costs associated with traditional methods of moving loads. The changes have in turn increased their ROI and worker safety.

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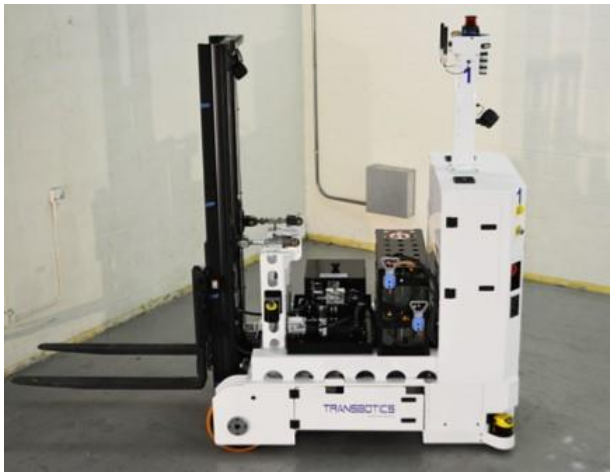

Growth & Impact

Dramatic Benefit
Decreased labor cost

38
Pallet Stacks Per Hour

Increased ROI
87.7% Utilization

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Overview

When a major West Coast wine producer wanted to automate their CHEP pallet delivery process to increase throughput, they opted for an AGV system to do the job. Transbotics was hired to identify the best solution that would meet very specific production requirements. The customer needed automatic guided vehicles that could deliver CHEP pallet stacks from an inbound conveyor, to nine (9) different packaging lines. The intent for the customer was to integrate an expandable platform that meets current and future production needs and can be easily adjusted.

As a leader in the design and build of AGVs since 1982, Transbotics was well equipped to meet the customer's desired solution. Starting with an end to end analysis of their facility, structure, layout, and load description, the team at Transbotics was able to narrow down the options to an FC30 Counterbalanced Forklift AGV. This vehicle type is well suited to meet their loads of up to 3,500 lbs. and measuring 48" X 40". To preserve efficiency while finding the most cost-effective solution for the customer, is was determined that laser guidance, and tricycle steer-drive would be the best fit for the AGV.

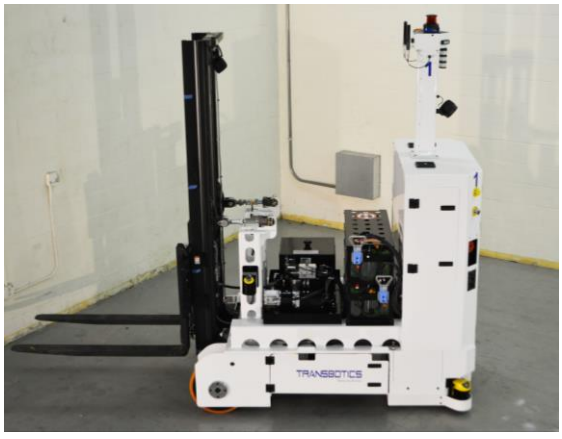
System Throughput

With a vehicle type identified, throughput calculations would also be required to determine the number of vehicles needed. The charts here, represent the various throughput calculations presented.

Veh Qty	55% Production			System Utilization
2.4	AGVs	at	-11.7	% idle
3.0	AGVs	at	10.4	% idle
4.0	AGVs	at	32.8	% idle
5.0	AGVs	at	46.2	% idle
6.0	AGVs	at	55.2	% idle

Veh Qty	100% Production			System Utilization
3.9	AGVs	at	-11.7	% idle
4.0	AGVs	at	-9.7	% idle
5.0	AGVs	at	12.3	% idle
6.0	AGVs	at	26.9	% idle
7.0	AGVs	at	37.3	% idle

After careful consideration, it was decided that a total of 5 AGVs would be required, two (2) AGVs for the CHEP pallet transfer and three (3) AGVs for fiber and other materials. The maximum number of loads to be transported by the Transbotics system solution is thirty-eight (38) pallet stacks per hour, and fifty (50) for fiber, plus other loads per hour. The following tables show vehicle count and AGV Idle time with production at both, 55% capacity, and 100% capacity.



About the Company

Since 1982, Transbotics has specialized in the design, development, installation, and support of automation solutions with an emphasis on Automated Guided Vehicles (AGV) and Automated Guided Carts (AGC). The company is a complete material handling, automation solutions integrator. Transbotics manufactures and installs, standard and custom AGVs, AGCs, heavy load AGVs, and supports and sells other related products such as conveyors, batteries, chargers, etc. Transbotics is a part of the Scott Group having a wide array of material handling expertise.