

> Technology, not magic, ensures carpet rides into the future

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- Forward planning prevents costly breakdowns, downtimes
- Older equipment swapped out during scheduled maintenance
- Production can continue well into the future

When Godfrey Hirst was tasked with reducing the risk of obsolescence of carpet-making equipment and extend the lifecycles of the machines, the company turned to Siemens.



Established in 1865, Godfrey Hirst, an Australian family-owned company, was one of Victoria's first textile mills. The 7-hectare Geelong site is now home to numerous production plants as well as the head office and is recognised as one of the top 10 carpet manufacturers in the world.

Producing hundreds of kilometres of carpet each month, the plant must constantly operate two shifts a day, five days a week.

In 2012, the company recognised that the drive systems on the Wet Goods Dryer and Finishing Line (where dyed carpets are dried and rolled) had a remaining service life of roughly five years. After that time, if the equipment failed, it would cause massive disruptions to the plant while new parts were sourced and configured into the existing equipment. The resultant downtime would be extremely costly and unacceptable.

pTherefore, Godfrey Hirst set in place a three-year plan to replace the ageing drives with the latest available technology from Siemens that would not only prolong the life of the existing equipment, but run more efficiently and safely. Because of this forward planning, they were also able to install the upgraded components when the production line was due for scheduled maintenance.

With the help of the Siemens service team, the new components now can support Godfrey Hirst's production well into the future.

The solution

The old single-speed drives have been swapped out for new variable speed drives (VSDs), which not only reduce energy and associated costs, but also include Safe Torque Off (STO) which, when activated during an emergency, ensures the drive is reliably torque-free.

The master drives, which were replaced in these two projects, had been supported with service contracts but were 15 years old and spare parts were becoming scarce. The company didn't want to take the risk that spare parts would no longer be available.

The old components were replaced two years before absolute necessity to avoid any extended downtime if the equipment failed unexpectedly.

Godfrey Hirst contacted Marc Revelant (Siemens Services & Support Specialist for Process Automation & Drives) and together worked out a plan.

Siemens recommended S120s variable speed drives, which Godfrey Hirst approved, taking into account Siemens' service record, product knowledge and competitive quote. Siemens SINAMICS S120 modular motion control drives are designed for high performance applications in mechanical and systems engineering. The S120 offers technology functions that feature maximum flexibility and performance, allowing individual complex tasks to be efficiently and directly implemented in the drive itself.

Planning avoids stress

Having the time to plan, budget and execute the tasks took away much of the stress associated with the decision to upgrade.

While Godfrey Hirst understood there was always a risk [replacing old equipment for new] the process was well managed and any teething problems were easily fixed without causing any extended downtime, the company said..

Siemens Marc Revelant said: "As digital factory experts, we are confronted by these types of scenarios often. Many manufacturers are subject to operating expenditure environments, rather than capital expenditure ones (opex vs capex). Nearly every company is trying to extend the life of their equipment but many are waiting too long and taking unnecessary risks. In some cases, an unexpected breakdown can cost up to hundreds of thousands of dollars in lost production."

"Godfrey Hirst's decision to plan ahead and make the necessary changes before a critical failure has potentially saved the company a lot of money because they avoid lost production," said Revelant.

Advice for others considering upgrades

Revelant says the more time companies allow to plan, the more likely they are to enjoy a successful outcome. "While this advice might sound stereotypical, it's often true," he says.

Get good business partners. It's important to feel confident that suppliers understand the systems your company have in place before removing the old components.

**About Godfrey Hirst**

Established in 1865, Geelong-based Godfrey Hirst uses world class technologies to produce high quality wool, nylon, polypropylene, triexta and blended carpets.

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