

BUILDING ON A SOLID FOUNDATION

Introduction

Look up, look right, look left. What do you see? If you're inside it will be a wall or ceiling made of plasterboard – It surrounds us yet is overlooked, however it is what provides us with shelter and the comfort we have become accustomed to.

Winstone Wallboards is New Zealand's only manufacturer and largest marketer of gypsum plasterboard, drywall systems and associated products and services for the residential and commercial construction markets.

Until the mid-1920s, most of New Zealand's plasterboard came from North America. In 1927, Winstone Wallboards helped pioneer the local industry, with demand soon outstripping the capacity of its modest factory in Auckland.

Today, Winstone Wallboards has factories in Auckland and Christchurch, and distribution centres in Auckland, Wellington and Christchurch.

Project Overview

At the end of 2017, Winstone Wallboards undertook a comprehensive review at its Auckland Plaster Mill. After over a year of planning and projection justifications, combined with six months of design and development, the decision was made to upgrade the site, with safety, reliability and production efficiency front of mind.

"Winstone Wallboards, much like NHP takes pride in delivering local products and expertise custom made for local conditions. By combining our extensive knowledge attained over 90 years of operations, we deliver enhanced results for our clients and strive to provide the safest working environment for our employees," said Shaun Sanders, Winstone Wallboard's Manufacturing Safety Engineer.

Installed in 2002, the Joint and Finishing Compounds (J&F) Area at the Auckland facility was the focus of the upgrade. Being the only production facility of its type in New Zealand, it handles large quantities of materials and packaged products in three separate production areas; dry mix, wet mix and the final merger of these materials.

The robot palletising system in the J&F area was no longer meeting demand, and two new products were being manually palletised due to the robot gripper system limitations.

An upgrade was required to deliver a robot system that would address these limitations, increase overall productivity, reduce unplanned downtime and enhance safety for onsite personnel.

To ensure minimal manufacturing disruptions and subsequent loss of revenue, the project was installed and commissioned over 21 days during the 2017 Christmas period.

NHP Electrical Engineering Products, in conjunction with Rockwell Automation, worked with local contractors SPEC Automation and Demack Engineering to partner with Winstone Wallboards' internal engineering team to install a state-of-the-art Smart Safety solution that substantially improved system performance and machine productivity and capabilities.

To meet the increased demands on machinery, NHP specified the Allen-Bradley® 1756-L83ES GuardLogix platform and the Bulletin 1734 POINT I/O™ for increased control and monitoring ability that ensures quicker reaction time and increases operator efficiencies.

Winstone Wallboards also used the Allen-Bradley® Guardmaster® 442G Multifunctional Access Boxes to deliver enhanced operator safety on the floor and allow for safe access to risk areas.

This was supplemented with the Allen-Bradley® GuardShield™ POC Safety Light Curtains providing a barrier between machinery and personnel to ensure automatic shutdown of operations when an obstacle crosses into the danger zone. Complimenting this product, the Allen-Bradley® 100S Safety Contactors were specified to facilitate safe power interruption in the event of unsafe action on the manufacturing floor.

The Solution

The solution from NHP in conjunction with Rockwell Automation, delivered faster system performance, an overall increase in production and capacity, reduced downtime and increased safety for personnel in risk areas.

"NHP prides itself on providing world-class, locally tailored solutions designed to fit seamlessly into our client's specifications in a time efficient manner. Not only do we provide the support our customers need, but our partnership with Rockwell Automation delivers an extensive range of industrial and automation products to ensure a safe environment," said Adam Kane, NHP's Technology Specialist- Safety & HAE.

The collaboration brought together local companies who understand the New Zealand conditions and requirements, successfully delivering a reliable and innovative solution underpinned by safety and local support.



Project Fact File

Project: Winstone Wallboards Plaster Mill Upgrade

Location: Auckland, New Zealand

Details: NHP worked closely with Winstone Wallboards to install a Smart Safety solution that substantially improved system performance and machine productivity and capabilities at its Auckland Plaster Mill.

NHP Products/Services:

- Allen-Bradley® 1756-L83ES GuardLogix platform
- Bulletin 1734 POINT I/O™
- Allen-Bradley® Guardmaster® 442G Multifunctional Access Boxes
- Allen-Bradley® GuardShield™ POC Safety Light Curtains
- Allen-Bradley® 100S Safety Contactors