

Patties Foods

Baked goods manufacturer pleases their insurance company, saves money on their expansion project, and finds a smoke detection system that works in their challenging facility. How? By installing a Xtralis VESDA very early warning smoke detection system from Xtralis.

Patties Foods Pty Ltd

Australia's largest family-owned manufacturer and distributor of frozen savoury products, including pies, pasties and sausage rolls.

Size: 300 employees

Location: Bairnsdale, Victoria, Australia
www.patties.com.au

Industry

Manufacturing - Food & Beverage

Products used

14 x Xtralis VESDA VLP-000 detectors
1 x Xtralis VESDA VLC-505 detectors
3 x VSR-2222
1 x VSR-3002
1 x System Relay Module

The challenge

Patties Foods is very successful with their range of baked goods that includes the Four and Twenty range of meat pies beloved by Aussie Rules football fans. So successful that they had to expand their manufacturing plant to cope with the demand.

Whilst in the planning stage it was realised that a smoke detection system was required to ensure the safety of their employees and to protect the investment in the additional asset.

From a fire safety and protection standpoint a large bakery and food processing plant is a very challenging design problem. A multitude of different environments exists under one roof. They range from the ovens and other heat-producing equipment to the extreme cold of the refrigerated areas storing raw ingredients. This cocktail of difficult conditions becomes even more problematic when flour dust, oven smoke and steam are added to the mix. It was desired that nothing be installed on the ceiling that could trap dust or flour, as this makes cleaning more difficult. The smoke detection system also had to withstand the regular wash-down procedure of steam cleaning the facility. A further challenge was the very small window of time when the installation could be carried out as a result of the strict regulations delineating when such work could be done within a food processing and bakery operation.

The solution

Patties Foods' managers called in Deanmac Emergency Services, one of the largest private emergency services equipment companies in Australia, providing a full range of emergency and fire equipment maintenance services.

Peter Hopkins, Deanmac's Fire Systems Supervisor, looked at the initial fire detection designs drafted by a local building consultant for the plant expansion.



VESDA®

Whilst it met local building code requirements, the design relied on the use of analogue smoke detectors and a dedicated evacuation route. The smoke detectors would warn of a fire incident and occupants of the building would be evacuated through appropriate egress points. Hopkins recognized that flour dust had the potential to cause the analogue smoke detectors to continually false alarm and that the regular wash-down would quickly ruin them. There had to be a better solution.

After an extensive site visit and discussion with Patties Foods' managers, Hopkins knew that the better solution would be a Xtralis VESDA very early warning smoke detection system, coupled with automatic sprinklers. Patties Foods' management agreed and the project began.

The first challenge facing Deanmac during installation of the Xtralis VESDA system was the large size of the plant and its construction from Bondor aluminium foam-filled sandwich panels, including the suspended ceiling panels. It was absolutely critical that drilling into this panel was performed during the limited times when the bakery's production schedules were off line as the small foam particles could distribute widely throughout the bakery, potentially contaminating the food products.

Using a Xtralis VESDA air sampling smoke detection system, according to Hopkins, offered the advantage of being able to design the air sampling system in advance. The holes for the Xtralis VESDA sampling points could then be drilled at one time, quickly and efficiently. In contrast, point detection systems first require the cabling to be installed and routed through the ceiling before the detectors are fitted in a second step. "At first glance, this does not appear to be a great advantage, but if you think about it in a practical sense, it is a huge advantage when time limits are so critical," he said.

The results

Since installation of the Xtralis VESDA system, the plant managers at Patties Foods have been delighted with its performance. "Patties realised that the overall success for this fire detection system relied on its workforce being able to use the system. Simple operation and real time feedback was very important" Hopkins said, "Patties Foods runs practically 24/7 with different personnel manning each shift. The Xtralis VESDA system allows the various shift supervisor/fire wardens to assess a possible situation at a very early stage and make appropriate decisions quickly and effectively."

The Xtralis VESDA system also saved a substantial amount of money during the construction process – both in building design and compliance and in the installation of the Xtralis VESDA system itself due to its flexibility of the sampling points. As an example, the building code requirement called for adequate exit points for personnel in the event of fire. In the initial design, exit tunnels were to be constructed, but as a result of installing the Xtralis VESDA system, no such tunnels were needed. Company managers estimated the savings to be about A\$80,000. And the Xtralis VESDA system will continue to save money during future expansions as it can be easily expanded from the existing plant to any new extensions.



Joe Rettino,
Assistant General Manager,
General Manager Purchasing and Logistics,
Patties Foods.

“Our insurance company was impressed by the very early warning that the Xtralis VESDA system offers. They were convinced that it will protect our manufacturing facility, and the plant assets in it, from fire and that it will continue to do so, even in such a difficult environment”

Joe Rettino

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