Diamond Facility Achieves Fast Payback With New LEDs

The new 300,000 square foot Diamond Pet Foods facility in Ripon, Calif. went online in May 2012 with more than 500 high efficiency, Class II Div 2 LED fixtures. Through combined energy and maintenance savings, the company expects a full return on its investment in less than two years and will benefit from improved visibility thanks to the clear, white light of the Dialight LEDs.

The Challenge

Planning to construct a new manufacturing facility, the Missouri-based company had been so impressed with the work ethic of employees at its Lathrop, Calif. plant, Diamond chose neighboring Ripon, Calif. for the new site, just 30 miles away. The 300,000 square foot plant would be a Class II Div 2 facility as dictated by its raw materials, which arrive in powder form, are extruded into a pellet and then dried through an oven.

Aiming to minimize energy consumption and achieve more sustainable operations at the new facility, the company installed solar panels designed to provide roughly one-quarter of the electricity to power the building.

The manufacturing environment posed a number of lighting challenges. First, the company needed an ultra-energy efficient system to reduce consumption and fully leverage the benefits of its solar system. Second, they required Class II Div 2 certified fixtures that would offer safety and reliability amid the high-vibration and dusty conditions. Ambient heat and humidity was also an issue, driving a need for lighting that would safely withstand up to 120 degrees F and high humidity in the extrusion areas. With many hard-to-reach and low-clearance areas near process equipment, Diamond also needed dependable fixtures that offer longevity, low

maintenance, and ease of installation.

The Solution

All things considered, LED lighting was the natural choice. Diamond consulted with Nelson & Sons Electrical, the company's electrical service partner for more than 15 years and a specialist in lighting and electrical needs for the food processing industry, to help specify the best solution. Diamond began with a trial of 16 Dialight DuroSite High Bay LEDs in the receiving area, prior to the facility coming online.

Satisfied with what they saw, the company gave the green light to outfit the entire facility, including 304 2-foot and 4-foot LED Linear fixtures, 145 LED High Bays and 89 LED Area Lights, for a total of 538 Dialight LED fixtures.

The Result

The low profile of the LED fixtures enabled mounting in areas that would have been difficult with other bulky conventional lighting fixtures, and the company can expect to use at least 50 percent less energy compared to other options.

Not only did the Dialight products offer the rugged durability Diamond required, but each fixture is also backed by a 5-year full performance warranty. Based on performance history, Diamond will likely enjoy up to a decade of reliable illumination, for a truly maintenance-free solution that adds to the significant energy savings. As a result of the energy and maintenance savings, the company easily hit its goal of less than two year pay back.

Employees immediately recognized the difference in the crisp, white, glare-free light at the Ripon facility compared to other plants that do not yet use LED. In fact, the project at Ripon has been such a success, Diamond is considering an LED retrofit at its Lathrop plant just up the road.

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