perspectives

Quality improvement found in design-build project

Improving the quality of the product is a goal of any food producer, but how to achieve that goal can be a stumbling block. Many companies look to smaller, less costly solutions and generalize about the future. Abbyland Foods, Inc., saw the expansion of its facility as an opportunity to take a big leap ahead.

"We wanted to improve the quality of our product. We knew we needed to renovate and expand to do so," said Jane Langman of Abbyland.

Based in Abbotsford, Wisconsin, Abbyland is a major producer of bratwurst, wieners, and summer sausage with a market area that extends across the Midwest. When investigating ways to improve the quality of their product, company leaders decided that the best way to achieve this goal was the expansion and renovation of their plant. A design-build process allowed them to construct quickly while minimizing down time.

To design and construct its project, Abbyland contacted the design-build team of Westra Construction and Mead & Hunt. In the early design stages, Mead & Hunt looked for ways to improve product quality, including processing and refrigeration practices, while remaining flexible for future expansion.


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"I think Abbyland selected us because we offered a fully integrated package of design and construction," said Charlie Kalata, project manager of Westra Construction. "Our team's performance history included similar projects with critical phasing of construction. Abbyland knew they were selecting a team with a strong working relationship."

A process to improve quality

The 26,000-square-foot expansion project includes the addition of a special chilled water system and blast freezer. The water system, which is installed in the smoke room, sprays down the sausages after the smoking process. The chilled water uses conventional city water that's refrigerated by a falling film chiller system on the site. The sausages are then moved into the blast cooler room, where they're quickly cooled to 34 degrees Fahrenheit. From there, the sausages are moved into the packing room, where they're packaged, labeled, and boxed for delivery.

"The chilled water and blast chill process offers a reduction in product shrinkage, allowing for increased capacity," said refrigeration specialist, Marshall Lambie, of Mead & Hunt. "The product is chilled very quickly, to minimize shrinkage. The result is an improvement in both quality and yield."

Design for the plant's refrigeration components included the conversion from a Freon refrigeration system to a centralized 300-ton-capacity ammonia refrigeration system.

Renovation improves efficiency

The project also included the addition of a multitruck shipping dock, dry storage areas, holding cooler and freezer areas, packaging area, spice mix room, quality control lab and office area, employee areas, and new production offices. To keep production going and to avoid lost profits, the project was guided on a fast-track schedule. The design-build process took just nine months to complete.

While still looking to further expand the plant to incorporate pork production lines, Langman said, "Since this expansion and renovation project was completed, we've added more than 50 new jobs for the city of Abbotsford."