Project Profile

Project
The Toro Company
Irrigation Business Headquarters
Riverside, California

Owner
The Toro Company

Roofing Contractor
Anning-Johnson, Inc.
City of Industry, California

Manufacturer Representative
Roof Resources, Inc.
Ontario, California

Roofing System
Mechanically-attached
EnergySmart Roof® using Sarnafil®
S327 membrane in white

Project Size
102,000 square feet

Completed
May 2010

Sika Sarnafil and Toro "Bullish" on Recycling

When your company name is Toro you probably know a thing or two about strong, reliable, and innovative products. So it is no surprise that when John Vierwinden, facilities manager of The Toro Company, was looking to replace the roof on Toro's Irrigation Business headquarters in Riverside, California in 1991, he wanted a roofing installation that was high performing and energy efficient.

Fortunately, he did not have to look far. The old roof on the facility was a Sika Sarnafil roofing system and he had been very impressed with its performance. "My opinion is that the Sika Sarnafil roof is one of the best solutions around," he stated. "We had a BUR on the building before that leaked all the time, but never had any problems with the Sika Sarnafil system."

From the time the Sika Sarnafil roof was installed in 1991, the Toro building has transformed from a manufacturing facility to a research and design center, and that transformation required different equipment on the roof. "During the remodel the roof sustained some damage," said Rob Males, project manager, roofing division at Anning-Johnson of City of Industry, California. "The damage to the membrane was easily repaired, but that was not the case with the substrate board and plywood roof deck. Toro decided that if it was going to spend money on repairs it made more sense to replace the roof and be worry-free."

There was no doubt in Vierwinden's mind as to what roofing system would replace the old roof. "I did not want to change anything; I was going to stay with the Sika Sarnafil system," he explained. "I know the product and the Sika Sarnafil people, which helped. The reflectivity of the light-colored roof also keeps the building cooler, lowering our air-conditioning costs. Plus, I like the way the mechanically-attached system is installed without fumes or odors — which meant there would be no disruption to the building's operation during the installation."

Largest Sarnafil Recycling Project in the West

When Vierwinden discussed the project with Sika Sarnafil and Mark Ouellette, an independent representative for Sika Sarnafil and president of Roof Resources, Inc. of Ontario, California, the topic of recycling the old Sika Sarnafil roof arose. "We were very interested in recycling the old roof, given our

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commitment to the environment," Vierwinden stated. "We realized we could keep the old membrane out of the landfill, and thought let's complete the recycling job and include other components of the roof as well."

"Toro's goal was zero impact to the landfill, and they accomplished that," Ouellette remarked. "Not only was the membrane recycled, but the old gypsum board, the obsolete equipment on the roof, the sheet metal, fasteners and plates — all were either reused or recycled." He added, "With 102,000 square feet of roof, it was the largest Sarnafil recycling project in the West."

Males explained that recycling wasn't any more expensive than a regular reroofing project. "Any additional costs were cancelled out by the savings on the fees that we would normally pay to haul materials to the landfill," he said. "Plus, it really wasn't much more labor-intensive to recycle the roofing membrane. We simply cut the material into strips, rolled them up and put them in the boxes provided. The other materials, such as sheet metal, fasteners, etc. were sorted into separate containers and shipped to the specific recycling center. We even found a facility that recycled used lumber. Overall, it was similar in cost and labor to a normal tear-off."

Males added that Sika Sarnafil was there to help with any questions about the recycling process. "They were great to work with and gave us very clear instructions," he stated.

A Chilly Installation

Although Males had been involved in the installation of the original Sika Sarnafil membrane on this building and thus was familiar with the roof, he and his crew still faced many challenges. "One problem was that we were doing the installation in the winter, so overnight tie-ins to the old roof were a concern," Males remarked. "However, since we were tying a new Sika Sarnafil membrane into an old Sika Sarnafil membrane we were able to weld the two membranes together for a 100 percent seal every night."

Another difficulty was working around the numerous, very large and heavy water lines on the roof. "This was a very, very busy roof," Ouellette explained. "There were multiple chilled water lines and valves that were very temperamental and expensive to repair. It is a real testament to the quality of Anning-Johnson's work that they were able to work around these items with little to no problems."

Males stated that one reason for that was due to the flexibility of the Sika Sarnafil membrane. "Because of this flexibility, we were able to handle one area of the roof at a time," Males said. "We used mechanical jacks to raise the pipe chase, then would remove the old material and replace it with new material. Being able to hot-air weld the membrane simplified the process and enabled us to complete those steps all at the same time."

Older vinyl roofing in Sika Sarnafil-supplied Gaylords for shipment to a recycling center.

Tricky detailing also posed some challenges. "In addition to the chiller lines, we were working with an older building which has some unique mechanical equipment layouts," Males stated. "We were able to ensure these were detailed well with the use of Sika Sarnafil's PVC clad metal.

"As this facility is an older tilt-up concrete structure, the panel joints were also a concern," Males added. "We were able to run the flashing membrane up and over the parapets and interior walls, taking these joints completely out of the equation."

A Roof that is "strong like….Toro"

Vierwinden is very happy with the installation and the new roof. "Anning-Johnson and Roof Resources both did a great job and the installation went very well," he remarked. "Today the roof is doing great, and there is no doubt that I would use the Sika Sarnafil system and their recycling program again."

Males is also pleased. "I have worked with Ouellette since 1997 and he always gives us top-class service," he said. "And the Sika Sarnafil products are amongst the best in the industry. They are a top-notch company. Their business philosophies and practices excel, from the design phase and through to the completion of the project."

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