

Work under wraps

Insulated Roofing Contractors reroofs Miami International Airport's main terminal

Miami International Airport is one of the world's busiest airports, ranking 29th among all airports in 2007 for total number of passengers, according to U.S. and Worldwide Airport Rankings 2007. With more than 80 airlines serving about 150 worldwide destinations, the airport's traffic is consistently heavy.

So when Miami International Airport's main terminal needed a new roof system because of its age and numerous leaks, the Miami-Dade Aviation Department requested that the work be completed without interfering with the airport's daily activities.

Insulated Roofing Contractors, Fort Lauderdale, Fla., learned about the project when it was put up for public bid and eventually was awarded the contract.

"We were asked to provide a complete reroofing package for the 455,567-square-foot main terminal," says Sean Stumler, Insulated Roofing Contractors' vice president of sales.

The process

Insulated Roofing Contractors began work on Miami International Airport's main terminal in October 2007.

"The existing roof system was a gravel-surfaced four-ply built-up roof system over a concrete deck with various types of 1- to 2-inch-thick insulation boards," Stumler says. "We performed 294,267 square feet

of total tear-off and about 161,300 square feet of re-cover."

First, RK Hydro-Vac Inc., Charlotte, N.C., removed all loose gravel from the existing roof system. Then, Insulated Roofing Contractors began tear-off.

"Tear-off was performed at night using lights," Stumler says. "It was easier on the crew because it was cooler and it did not impair our spray polyurethane foam (SPF) application. We were able to use daylight hours to install 1½- to 2-inch-thick Bay-Systems SPF without having to wait for tear-off to be completed."

Insulated Roofing Contractors used four crews of five to six people. One crew worked at night, and three worked during the day.

"After tear-off down to the concrete deck, we primed the deck and installed the SPF," Stumler says. "We then installed two coats of General Electric silicone coating—a dark gray base coating and a light gray top coat with embedded 3M™ ceramic-coated roofing granules."

Yellow Spaghetti® Roof Walkway Pads were installed where they were needed. Additionally, Insulated Roofing Contractors installed stainless-steel expansion joints and counterflashings around roof penetrations.

"We didn't have any issues with overspray because the roof areas we were working on were enclosed by adjacent walls and other taller surrounding buildings,"

Stumler says. "The workers didn't need any fall protection on the main roof for the same reason. We met all Occupational Safety and Health Administration requirements and Miami-Dade Aviation Department requirements."

Challenges

Insulated Roofing Contractors encountered some challenges during its work at Miami International Airport, primarily because of the airport's busy schedule.

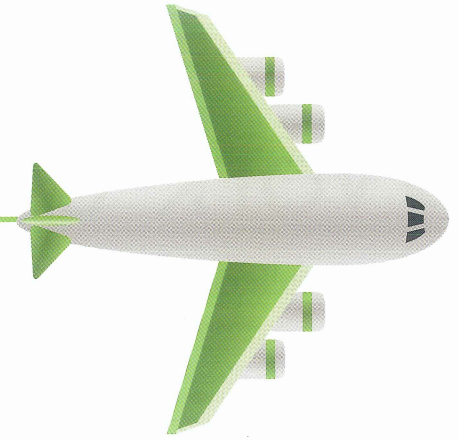
"We had to work within the airport's constraints and requirements so as not to interfere with the everyday business of people traveling and moving around the different terminals," Stumler says.

Material transfer also presented a dilemma.

"We were able to stagger deliveries, and the Miami-Dade Aviation Department provided storage areas in convenient locations close to our work area," Stumler says. "But we had no outside staging areas because most of the roofing areas were completely enclosed by other buildings. Therefore, we had to remove the torn-off roofing material and transport it long distances to an approved location that would not interfere with the airport's aviation departments and ongoing activities.

"Logistically, there were only two or three locations available, and staging was the most important issue for time

by Ashley St. John



Project name: Miami International Airport's main terminal
Project location: Miami
Project duration: October 2007-May 2008
Roof system type: Spray polyurethane foam
Roofing contractor: Insulated Roofing Contractors, Fort Lauderdale, Fla.
Roofing manufacturer: BaySystems NorthAmerica LLC, Spring, Texas

management and movement of materials long distances to the desired roofing locations," Stumler continues.

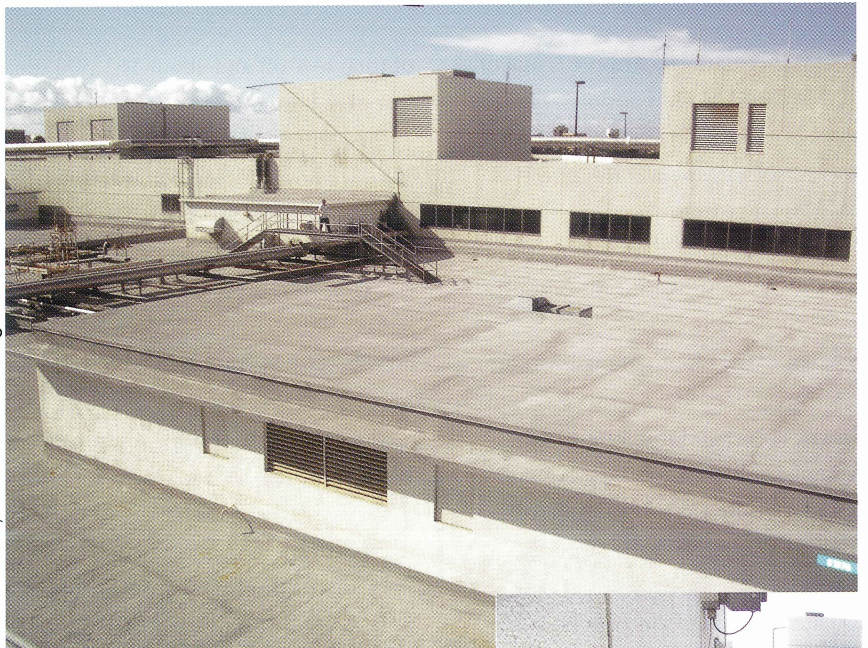
A completed project

Insulated Roofing Contractors completed its work on Miami International Airport's main terminal in May 2008. And Melvin Stumler, the company's president, is pleased with the project's end result.

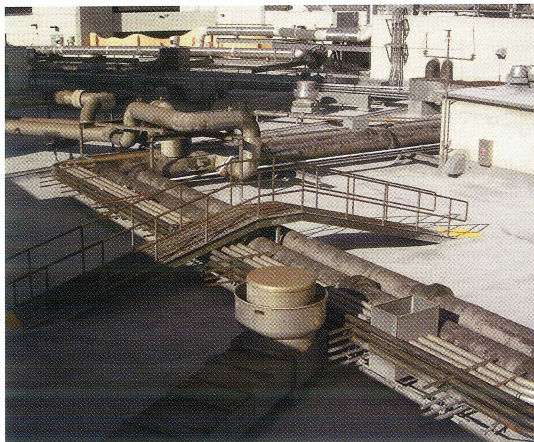
"Our ability to work with the project consultant and Miami-Dade Aviation Department proved rewarding," he says. "Miami-Dade Aviation Department's main goal was to keep the airport operating as though there were no construction going on and make sure all travelers and employees were able to do what they had to do. We kept the airport's daily activities as uninterrupted as possible." 🌀 🌐 ❄️

Ashley St. John is *Professional Roofing's* associate editor.

Photos courtesy of Insulated Roofing Contractors, Fort Lauderdale, Fla.



One of the many roof areas on Miami International Airport's main terminal



The roof areas are enclosed by adjacent walls, which prevented overspray during spray polyurethane foam application.



An Insulated Roofing Contractors crew replaces the roof system's existing expansion joints.



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