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Insulation Panels Keep Race Track Facility Cool in Hobbs, New Mexico

by Deanna Fryer, a freelance writer for the construction industry

Over the years, horse racing and casino aficionados have flocked to venues known for their excitement, relaxation, and sheer energy. A popular pastime, many enthusiastic fans enjoy these activities throughout the United States.

Zia Park Race Track, Hobbs, New Mexico, incorporates both pastimes under one roof. This “racino” combination is one of the few newly constructed venues to have all casino and racetrack facilities together in one splendid arena. Owned and operated by Zia Partners, the facility boasts 683 casino machines, restaurants, administration offices, and a state-of-the-art racing simulcast area.

Keeping the 75,000 sq. ft. venue cool for its tenants and customers called for unique design configurations. Located in an arid climate, the facility manager and project architect knew the importance of using rigid polyisocyanurate insulation panels to insulate the facility and keep air conditioning costs down. “We needed a roof insulation panel that permitted the maximum airflow possible,” stated project architect Steve Sclarow of the Irvine, Calif.-based architectural firm, Ewing Cole.

Though the roof was originally specified as a shingle roof, it was later changed to a standing seam metal roof due to revisions in design configurations. The change, however, did not affect the use of Hunter Panels’ Cool-Vent ventilated nail base insulation panel. “We changed roofing materials a few times,” said Sclarow, who specified the insulation for the three-phase project. “Fortunately, the vented insulation panel is compatible with a variety of roof systems.”

Not only did the insulation need to be versatile with the different roof systems that were considered, but efficiency and ventilation capabilities of the panel were other major concerns. The drastic difference in indoor-outdoor air temperatures required an insulation panel that would be designed to prevent condensation. “We were concerned with both air conditioning and insulating the building space,” stated Sclarow.

To create optimum airflow in the roof, the project involved installing a metal roof deck and mechanically attaching Cool-Vent over the top. Once that was installed throughout, a self-adhering ice and water shield was installed, followed by a green standing seam metal roof. “The insulation was critical for the roofing system’s ventilation needs,” said Orlando Guzman, co-owner of El Paso, Texas-based HRT Roofing.

The building’s 12:3 pitched roof allows smoke to ventilate away from the casino machines, while keeping the air conditioning and heating inside the building. “The air conditioning runs about eight months out of the year and the heating runs about four months out of the year,” stated Ed Zimmerscheid, facility manager of Zia Place Race Track. “One day the air is set at 68°F and the next day the heat may be set at 68°F. We need to keep the facility comfortable; the insulation plays an integral part in that effort.”

Another aspect of the product that was equally critical was its custom
design. "The insulation panels are prefabricated to provide optimal energy conservation and accommodate the ventilation needs of each roofing assembly," stated Alma Garnett, president of Portland, Maine-based Hunter Panels, LLC. "The Cool-Vent insulation panel features a polyiso bottom and a substrate of solid wood on the top."

The factory-fabricated panel is comprised of a four foot by eight-foot panel of NexGen Chemistry polyiso, a middle layer of solid wood spacers and a top layer of APA/TECO-rated OSB or plywood. "The manufacturing process of this panel allows architects to decide which type of wood will perform best with the roof design," stated Garnett. "We feel it is important for both architects and building owners to have options in the design of the roof. The goal is to create an insulation panel that achieves mechanical performance and is highly efficient."

For the adjoining Zia Park Race Track, APA fire-treated plywood was the substrate of choice. Because it was specified with Hunter Panels in advance, there was no lead-time in procuring the special lumber requirement. This attribute was important for the fast-paced, three-phase project that was completed in nine months.

Despite the time crunch, the project did not compromise quality. The Cool-Vent panels achieve over 92% open space for free air movement and cross ventilation and provide 75% lateral air movement, significantly improving air movement in the roof system. Because of Cool-Vent's unique design, these panels can be installed either vertically or horizontally and perform equally as well. Garnett confirmed that, "the venting space between the insulation and the plywood creates a chimney effect moving the air from eave to ridge."

Not only did this panel permit sufficient airflow in the roof system, but it was also a viable part of the building's sustainability. "Polyiso has one of the highest long-term thermal resistance available," stated Jared Blum, president of the Alexandria, Virginia-based Polyisocyanurate Insulation Manufacturers Association (PIMA). "Like all PIMA members, Hunter's thermal performance is certified by FM Global, who oversees the PIMA quality mark R value certification program." Polyiso contains no ozone depleting or global warming gases. With its long-term R-value advantage and its environmental benefits, polyiso is increasingly used in green or sustainable construction.

As for the Zia Park Race Track, it has reaped the benefits of using energy-efficient polyiso roof insulation panels. The project was finished over a year ago, but the energy savings will pay dividends for years to come. This winning combination is worthy of anyone's bet.