



# PLASTICS·PIPE·INSTITUTE®

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## BUILDING COMMUNITY



## PEX PIPE TURNS COLD SPACE INTO HAUTE DESTINATION

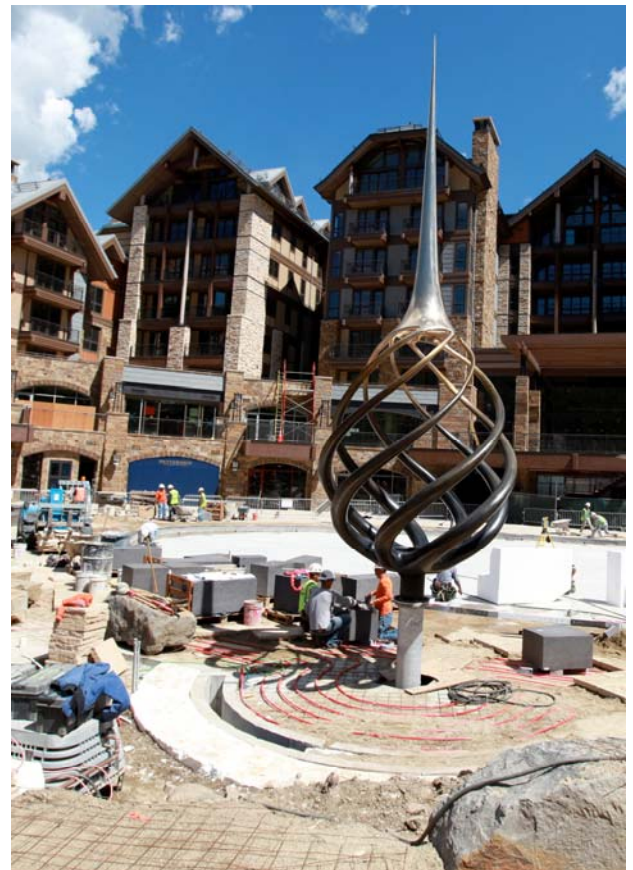
### **PEX Pipe Used For Ice Melting & Radiant Heating Wins Industry Award**

VAIL, CO - One very upscale project with two different and very large PEX pipe systems was acknowledged as the Plastics Pipe Institute's (PPI's) Building and Construction Division 2011 "Project of the Year". The award was given in recognition of the application of some 75 miles of durable PEX (cross-linked polyethylene) pipe installed at the exclusive Solaris town center in Vail, Colorado where it's being used for both indoor radiant heating and outdoor ice and snow melting systems. The award was presented to the pipe system's equipment manufacturer, REHAU, Inc. (Leesburg, Va.), during PPI's annual meeting in May 2011. The PPI is the major trade association representing all segments of the plastic pipe industry, and its annual awards program cites projects for exemplary installations of distinguishing character. The Solaris project was selected due to its scope, performance capabilities and sustainability features.

"This project demonstrates two excellent applications of PEX pipe - radiant floor heating (RFH), and snow and ice melting (SIM). Both are technologies found in many LEED-certified facilities, and recognized throughout the design community for supplying comfort, service-longevity and energy efficiency - these are extremely important factors in environmentally-conscious places like Colorado," stated Tony Radoszewski, executive director of the PPI. "In short, this state-of-the-art town center used a proven, technologically advanced pipe to

provide comfort, safety, reliability, and cost-efficiency for the long-term."

Vail's new Solaris town center has 79 condominiums that range in price from \$1.4 million for a studio to more than \$19 million for a six-bedroom penthouse. Amenities include a public plaza, ice rink, a three-screen movie theatre, casual and fine dining restaurants, 10-lane bowling alley, private swimming pool and hot tub, spa, fitness facility, heated underground garage and 75,000 square feet of commercial space with high-end retail shopping. These interior areas are heated with a PEX pipe radiant heating system.





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Outside, due to the area's typical snowfall of 200 inches per year, the energy-efficient snow and ice melting (SIM) system was a critical feature for residents and visitors.

Used in walkways, the central plaza, rooftop platforms, exterior private and public areas, plus the patios of the condo units and public sidewalks, the PEX-based SIM system provides a reliable way to reduce the amount of snow and ice over the 60,000 square foot area, primarily for public safety, but also for operational costs savings and reduced maintenance. The PEX pipe is connected to 44 snow melting distribution manifolds which enhance system security and control, mitigating the need for costly repair shutdowns.

More than 400,000 feet of REHAU's RAUPEX® PEX pipe was used throughout the complex. The other components were also provided by REHAU including manifolds, fittings, fasteners and controls along with design assistance. Pre-insulated PEX pipes as large as 125 mm were used for transporting heated fluids underground to multiple zones.

"We chose radiant because of its exceptional comfort at relatively low operating temperatures," said Thomas Ogg, project manager at Solaris. "Radiant heating distribution can deliver high output with low fluid temperatures, helping to increase operating efficiency of heat sources such as condensing boilers or ground source heat pumps. Radiant heating also requires less energy to distribute heat through the facility than would a forced air systems, since circulator pumps draw less power than air fans."



REHAU's training manager Lance MacNevin, described the system. "Zoning with radiant heating is relatively simple and inexpensive. The heating system is supplied by 120 brass distribution manifolds. Each condo unit has room thermostats controlling the flow of heated fluid through each circuit of pipe independently. This gives occupants excellent control over space temperature.

"The snow and ice melting system provides the ultimate in convenience, by eliminating time-consuming snow removal plus the need for salt or calcium chloride. SIM systems can





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also increase the safety of surfaces where people walk and drive," he continued. "A well-designed SIM system is often less expensive to operate than using manual labor, snow blowers and plows. By replacing mechanized snow removal and deicing chemicals with a high-efficiency hydronic SIM system, you can actually reduce your environmental impact and extend the life of sidewalks and driveways."

Design Mechanical (Louisville, Colo.) was responsible for the design and installation of the REHAU systems. The flexibility of PEX helped to overcome some obstacles during installation. "The exterior stairs have see-through risers, which required some really creative strategies from Design Mechanical," noted Mike East, REHAU account manager. "The PEX pipe was looped on each stair and threaded through a hole in the riser."

"Project designers, architects and heating system engineers have several technology options for both heating and snow and ice melting systems," summed up PPI's Radoszewski. "Traditional forced-air heating and electric snow melting systems are comparatively inefficient. By specifying hydronic PEX piping systems for both applications, Solaris project engineers selected sustainable systems with lower environmental cost, higher efficiency and proven longevity without the possibility of corrosion. We've been told that Solaris has revitalized the businesses of Vail and is the hub of activity for the community," he said. "Our industry is very proud to be part of this extraordinary project that rightly deserves to be named the Project of the Year."

For more information about PPI's programs and technical library, go to:

[www.plasticpipe.org](http://www.plasticpipe.org)



## **About PPI**

The Plastics Pipe Institute Inc. (PPI) is the major trade association representing all segments of the plastic pipe industry and is dedicated to promoting plastics as the material of choice for pipe applications. PPI is the premier technical, engineering and industry knowledge resource publishing data for use in development and design of plastic pipe systems. Additionally, PPI collaborates with industry organizations that set standards for manufacturing practices and installation methods.

Site photos courtesy of Rick Thomas/KenKo Co., Inc.