



## FACILITIES & MAINTENANCE

By Rick Thomas

### Fluid-Applied Roofing for Repair and Renovation

Leaking roofs are one thing which every private university facility management office has to contend with. Regardless of the building use (housing, academic, recreation or food service) roof leaks can cause interruptions, inconveniences and safety issues which cannot be tolerated and quickly become a top priority.

The options for roof repair and re-roofing are numerous. From single-ply membranes to asphalt based materials to metal sheeting, the choices are extensive. The selection process can be overwhelming and confusing. Should the same roof system that is now failing be used again, can long-term repairs be made or is a full roof tear-off and replacement the better route?

One option to consider for many roof problems is the installation of a fluid-applied roof. Fluid-applied roofs have systems for a variety of roof types including asphalt, single-ply membranes and even metal roofs.

Although fluid-applied roof systems have been very successfully applied to roofs for well over thirty years, they are still not as well-known as conventional roof systems such as asphalt or rubber membrane. One of the biggest advantages of fluid-applied systems is that they are installed directly to the existing roof surface in multiple layers to renew the waterproofing properties of the substrate. This means substantially reducing the costs associated with extensive roof tear-off and mitigating the growing environmental impact of landfills. Additionally, fluid-applied systems add minimal weight to the roof structure, and many building codes have permitted them when the “legal limit” of two conventional roofs has already been installed. Since minimal tear-off is required, down time in facilities selecting these systems is also minimal or in many cases non-existent. Many fluid-applied manufacturers are using low VOC (volatile organic compound), water-based materials, which virtually eliminates any of the offensive odors

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associated with some types of conventional roofing.

Some of the quality fluid-applied roof systems are installed only by factory-trained and authorized contractors and carry 10-20 year warranties backed by the manufacturer. A number of manufacturers offer the longer term warranties with specifications for a fully reinforced roof system application. This first requires a thorough cleaning of the roof and remedial roof repairs to be made. Following that, multiple layers of a waterproof base coat, reinforced with polyester cloth (for tensile

strength) are applied to the now-prepared roof surface. Once the waterproofing process is complete, multiple layers of a solar reflective finish coat are applied. The end result is a seamless, fully adhered, often highly reflective “cool roof” that has long term renewable sustainability at a substantial savings over conventional roofing systems.

The energy saving benefit associated with a “cool roof” installation is very significant. The highly solar reflective finish material have been proven to lower surface temperatures by up to 65°F, resulting in

Persistent Leaks   Loose Fasteners   Seam Separation   Wind Lift   Salt Corrosion  
Rust   Thermal Shock Damage   Heat Gain   UV Deterioration

# ROOF PROBLEMS?

# ROOF SOLUTIONS!

Seamless   Durable   Pliable   High Tensile Strength   High Corrosion Resistance   Renewable   Sustainable  
High Reflectance   High Emissivity   Cool Roof Compliant   Green Building Qualified



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air-conditioning energy savings as high as 40% when installed over dark surfaces. This also has the added benefit of reducing air-conditioning equipment maintenance and extending the life of the equipment as well. The A/C units simply do not have to work as hard to maintain comfortable temperatures inside the building.

The fully reinforced specification is also perfect for low-sloped roofs. Some of today's fluid-applied systems use advanced polymer technology incorporated in the multiple layers allowing the roof to stand-up to ponding water situations.

Looking into the future, some fluid-applied systems offer the unique the option

of having the warranty renewed at the end of the warranty period. After inspection and possible minor repairs, the roof substrate can be thoroughly cleaned and another 20-30 mils of the reflective finish material installed. The reduced labor and material costs for this renewable process is also what reduces the life-cycle cost of fluid-applied roofing systems.

Another reason the renewable system has long term sustainability is the high reflectivity of the roof. Damaging UV rays, which can shorten the effective lifespan of other conventional roofs, are reflected away by the finish coat, protecting the waterproofing base coat. Since the

waterproofing properties aren't lost over time, a reapplication of finish materials renews the properties of the roof to day-one performance. The renewed warranty for both materials and labor speaks to the manufacturer's confidence in the long term sustainability of their fluid-applied roofs.

For those private universities who include being "green" into their mission statement, fluid-applied roofs can offer numerous benefits. Because extensive roof tear-off is not required, the negative environmental impact of using land fill space is avoided. Many fluid-applied 'cool roof' systems qualify for multiple U.S. Green Building Council LEED (Leadership in Energy & Environmental Design) points helping buildings qualify for LEED certification.

It is important to note that not all roofs qualify for fluid-applied roof systems. For those heavily water saturated or highly neglected roofs, it is likely they won't make the cut. But for roofs that do qualify, fluid applied is a smart choice and helps provide huge savings, performance and energy efficiency.

## Save your roof. Save money. Help save the planet.

### How does ASTEC guarantee your satisfaction?

ASTEC makes its own products in the USA under strict ISO 9001-2008 Registered MANUFACTURING standards.

All ASTEC® fluid-applied roofing systems are applied to strict ASTEC® RENEWABLE™ WARRANTY Specifications.

All qualifying roof inspections, estimates, restorations, and fluid-applied applications must be done by independent ASTEC® AUTHORIZED CONTRACTORS.



The ASTEC 10- or 15-Year RENEWABLE™ Warranty helps define long term sustainability.

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Yes, there are ASTEC® Re-Ply™ Roofing Systems for asphalt, single-ply and other failing substrates.

**FREE ROOF SURVEY!**

**Why pay to replace any roof, if you can Re-Ply™ it?**



The energy saving benefit associated with a “cool roof” installation is very significant. The highly solar reflective finish material have been proven to lower surface temperatures by up to 65°F, resulting in air-conditioning energy savings as high as 40% when installed over dark surfaces.



**ABOUT THE AUTHOR:** Rick Thomas is Regional Sales Director for ASTEC Re-Ply Roof Systems, manufacturer of fluid-applied roof systems. Rick has been with ASTEC for close to 30 years and has seen the fluid-applied industry become a proven option in roofing with the advances in polymer technology and refined application techniques.

# Failing Roof?

## Why replace, if you can Re-Ply™



This food processing facility roof, with multiple penetrations, had savings of over 1 million dollars over roof replacement. The fluid-applied ASTEC® Re-Ply™ System eliminated the high cost of tear-off, disposal and downtime.



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# Failing Roof?

## Why pay to replace it?



For 30 years, with hundreds of millions of square feet applied, ASTEC® Re-Ply™ Roofing Systems have saved schools, governments, and private industry the high costs of roof replacement. As an industry leader, with multiple certifications and ISO 9001-2008 manufacturing, ASTEC is the smart choice for sustainable roofing.



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