# WHY SLATE ROOFS DON'T NEED ICE AND WATER MEMBRANE

by Joseph Jenkins

raditional roofing techniques have almost become extinct in the United States, fading away with the passing generations of roofing craftsmen over the decades. The generation gap between the traditional roofers of the past and the "modern" roofers of today has created a knowledge gap that at times seems almost unbridgeable. This is starkly evident when the issue of "ice and water membrane" is raised.

At the International Preservation Trades Workshops near Washington DC a couple of years ago, during one of my "Slate Roof Restoration" presentations, a roofing contractor in the audience raised his hand to ask a question. "When do you use ice and water shield on a slate roof?" he asked.

"Read my lips," I replied. "N-E-V-E-R."

The contractor stood staring at me in silence, jaw agape, dumfounded.

Weeks later I received a call from a roof restoration professional and consultant in New England. She want-

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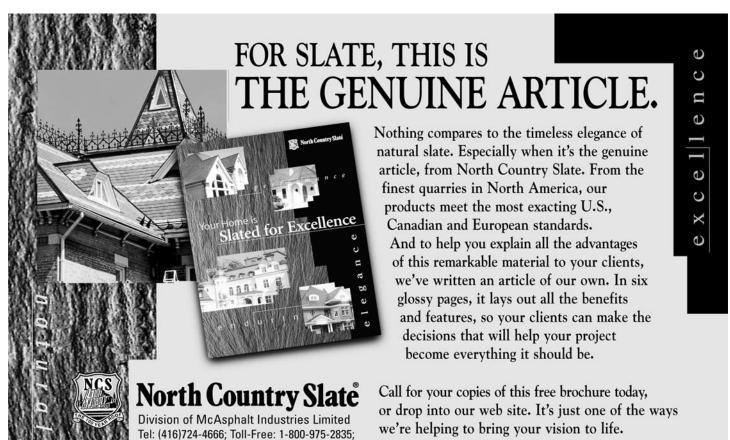
ed to know why I had included no ice and water membrane in the specs on a 52 square re-roof with slate on a residential job in Connecticut. During the process of answering her question, she became so flabbergasted that she hung up on me. She did not like hearing what I had to say. So hang on to your seat — if you're an ice and water membrane junkie, as so many modern roofers and architects today are, you're in for a surprise.

There is a photo of a 150-year-old roof in this newsletter. This is a roof still in good functioning condition. Does it have ice and water membrane on it? No. There are millions of very old roofs in the United States and around the world, roofs 100 years old and some much older, still in good working order. Did they need or ever use ice and water membrane? No. These are traditional roofs constructed with traditional roofing methods. They do not, nor did they ever need ice and water membrane.

Furthermore, these roofs can be duplicated today in the same style and perform with the same longevity without a square inch of ice and water membrane. So why do modern roofers and architects now think that ice and water membrane should be an essential part of every roof, as many seem to believe?

Well, aside from the roofing industry's heavy ice and water membrane advertising pressure, we need to look

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#### ICE AND WATER MEMBRANE

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at the evolution of roof design to get to the bottom of this. A generation or two ago, homeowners, architects and roofers looking for cheaper, faster roofing methods began to use *plywood* for roof decks covered with *asphalt* shingles. About 15 years into this modern development, roofers were shocked to discover that the plywood decking was delaminating along the bottom three feet of the roof, near the eaves. This was due to several reasons: low-slope roofs with slow water and snow runoff enabled ice and moisture to collect along the eaves; the plywood was susceptible to glue failure under hot, damp and freeze-thaw conditions; and the roofs were afflicted with poor roof ventilation or a lack of "breathing" due to the plywood/asphalt combination smothering the roof and preventing airflow.

And what came to save the day? You guessed it — ice and water membrane became employed to prevent delamination of the plywood roof decks — a band-aid

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solution to an inferior roof design. Inferior, that is, to traditional roofs.

Today's modern roofers have become so steeped in the plywood/asphalt roofing systems that they have also become addicted to ice and water membrane, afraid to even *think* about installing a roof without it. However, *traditional* roofers who use *traditional* roofing methods avoid the use of laminated roof decking materials, and instead use natural wood boards or lath. They also avoid non-breathing roof coverings and instead use natural slate or tile.

Natural slate or ceramic tile combined with a natural wood board deck is a breathable roof. It is also a roof that does not need any ice and water membrane nor does it benefit from it. This may not be the sort of information that ice and water membrane manufacturers want you to hear, but it's information that many roofers and architects need to know and understand. If you want to air your opinion on this matter, visit the message board at slateroofcentral.com and let's hear what you have to say.

Got a friend or friends who would like to receive *TR*? Send us the address(es) and we'll add them to our mailing list!