



> **Left:** Glendyne Quarry operations. **Right:** Selecting and marking stone.



# SET IN STONE

## Observations on Natural Slate Roofing

By Rick Damato

One of the perks of being an observer of the roofing industry is the ability to occasionally take advantage of unique learning opportunities. One such opportunity presented itself recently when my good friend, Bob Pringle of Evans Roofing Company, Elmira, N.Y., invited me to join him at the fall conference of the

National Slate Association (NSA).

What made this particular invitation so intriguing was the location: the Fairmont Le Chateau Frontenac in Quebec City. It's been roughly 20 years since I last visited Quebec City, and I've wanted to return ever since. The hotel was nice enough then but has been completely renovated, and its place as

the centerpiece inside the walls of Old Quebec is just as predominant now as when it began construction in the late 19<sup>th</sup> century. Staying in this historic place was worth the trip to Canada, but there was much more to this brief journey.

The last time I attended an official event of the NSA was at a meeting it held in the very early days of the reformed



› An example of other slate building products by Glendyne Quarry.

NSA in 2002. The NSA was originally founded in 1922 and did some good work with its primary publication, *Slate Roofs*, but went inactive shortly after its founding due to, according to the NSA website, “a lack of cohesion in the industry.”

That lack of cohesion continues to this day as there are two slate associations including the NSA and the Slate Roofing Contractors Association (SRCA), which was formed shortly after the NSA was

reformed. But neither association is what you would consider inactive, and many firms in the business are members of both groups. Slate roofing contractors and suppliers with whom I’ve had the pleasure of working over the years have tended to be independent-minded types — maybe not set in stone, but very self-assured, especially in regard to their craft.

The three-day conference featured a day and a half of presentations, including some product demonstrations and a tutorial on the NSA’s new Web-based application. A day was set aside for a tour of a slate quarry.

I had an opportunity to test drive NSA’s Web-based Mobile Field Guide, which is based on the NSA publication, *Slate Roofs: Design and Installation Manual*. The app focuses on the critical detailing needed to successfully install, repair and replace natural slate roofs and includes easy-to-read drawings of key roofing and flashing details that can be exploded, or taken apart, and put back together by using a slide bar at the bottom of the page. In addition to a Web browser, users may easily address the application online from their smart phone or tablet device in real time on the slating job. Links to this and many

other resources may be found in the online version of this article at [www.RoofingContractor.com](http://www.RoofingContractor.com).

It just so happened that there was another trade group meeting at Le Chateau Frontenac around the same time as the NSA. The Association for Preservation Technology International (APT) is an organization dedicated to promoting the best technology of conserving historic structures and their settings. Its members include preservationists, architects, engineers, consultants, contractors, educators and a host of others directly involved in the applications of methods and materials to maintain, conserve and protect historic structures and sites for future use and appreciation. Members of the APT arriving early for their conference were invited along with the NSA members to tour the Glendyne Slate Quarry.

### A Tradition of Fine Craftsmanship

The Glendyne Slate Quarry is situated a three-hour bus ride northeast of Quebec City. A three-hour bus ride would not normally thrill me, but this one took us through some beautiful countryside all the way to the village of



› Roofing slate awaiting shipment.



› Glendyne Quarry operations.

Saint-Mark-Du-Loc-Long, situated just outside the quarry. Of course, with a bus full of NSA and APT members, we were able to take advantage of making all manners of new friends and learning a thing or two about slating and construction techniques on historical preservation projects.

On arrival in Saint-Mark, the tour buses stopped at the village church where Stephane Therrien, one of the principals of Glendyne Slate Quarry Inc., gave us a little background on the history of the quarry and his company. One of the most interesting facts we learned was that the slate that goes from being mountainside to roofing slate only accounts for roughly 3 percent of the total mass. At least that's what it was a few years ago; improvements in technology and finding new ways of using slate for other building products have now nearly doubled that output, and the company has its sights set on radically improving this over the coming decades.

So, if you've ever wondered why roofing slate is so expensive, you must imagine moving a lot of mountain just to get to the point where you can mine it into slabs (not in the winter, by the way — it can't freeze), grade it, cut it to size, then cleave it, trim it and punch it to make roofing slates.

The process begins with exploration. Glendyne presently works six claims and has dozens more. They estimate that there's another 75 years' worth of slate production in the region. Once found, the slate has to be quarried, graded and taken through the production process. The quarry is fairly large, and the process involves heavy machinery to drill, break, remove and then transport large slabs of slate to be taken to the production facility.

While the slate is marked for removal from the mountainside based on its physical properties, it's marked and graded at the production site. Different sections of the same piece of stone may contain portions most desirable for different markets due to color, style and other standards. One piece that was marked during the tour had markings for both the United States and the United Kingdom.

When ready to cut down to size for making roofing slate, the slabs of stone go onto a mechanized cutting system. The next stage is somewhat less mechanized, as workers who are experts at cleaving the slate to some fairly exacting standards do their work by hand. The tools are a mallet and chisel, and the craftsmen (and women) make it look easy, but we were able to give it a try to find out it's not.

Speaking of craftsmen, Therrien told us there are 41 different jobs in the quarry and manufacturing operations. We were able to witness the workers focused on quality control at every level of the quarrying and production processes. Their work was largely repetitive-motion type work, but they all maintained a focus on their job at hand. As with any production operation,



› NSA and APT members surveying finished roofing slate.



› Drilling rigs.

everyone has to do their part to keep the line moving, and a quality problem discovered too late in the process never ends well.

I'm not sure why it took being in the roofing industry 40 years to finally make it to a slate quarry, but here is one I can check off my bucket list. If you ever get the opportunity to visit a slate quarry, I highly recommend it. A trip to Quebec is nice, but there are slate quarries in the Northeast and Mid-Atlantic, as well as in countries all over the world.

Slate is a part of the roofing business that may only account for a small percentage of our work, but it's steeped in tradition, and arguably some of the longest-lasting and beautiful work we do. **RC**

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