



Innovative Tile and Stone
Installation Systems

Hanseong Baekje Museum, South Korea Project Spotlight: February 2011



PROJECT:
Hanseong Baekje Museum
Seoul, South Korea

GENERAL CONTRACTOR:
POSCO E&C
South Korea

LATICRETE DISTRIBUTOR:
OCTA International
South Korea

TILE CONTRACTOR:
Dolnara
South Korea

LATICRETE Goes Direct for Exterior Stone Veneer at Hanseong Baekje Museum in Seoul, South Korea

By Eric Carson

The original 2005 specification of LATICRETE® products had to be altered at the last minute to complete the natural thin-stone exterior veneer installation for the Hanseong Baekje Museum in the historical Songpa-gu district of Seoul, South Korea.

When the natural slate tiles showed up at the jobsite there was one thing about them that no one was expecting. The 250x800x30mm (10" x 30" x 1/8") slate tiles were scheduled to be spot-bonded with LATAPOXY® 310 Stone Adhesive. Yet to everyone's surprise the stones were delivered with a resin mesh-backing that would require a change in LATICRETE adhesive.

The original specification that included LATAPOXY 310 Stone Adhesive was to address the curved design of the wall substrates. The epoxy adhesive uses the spot-bonding method and allows for installers to adjust the tiles in or out up to 25mm (1 inch) to compensate for thickness variations in the stone or the vertical substrate. The mesh-backed tiles would not allow for this method with concerns of not getting the required bond between the stone and the concrete masonry substrates.

Glenn Prince, LATICRETE Project Director, went back to the drawing board and convinced the general contractor POSCO E&C and the tile contractor Dolnara, to simply go direct with LATICRETE® 254 Platinum thin-set adhesive. Multiple tests were conducted to determine if the tiles could be installed in the direct adhered method considering the curvilinear nature of the wall structures. In the end, persistence,

tolerance and testing eventually won the day, and now with LATICRETE 254 Platinum in the fold the exterior masonry veneer design was a go again for the uniquely shaped and angled museum.

The Hanseong Baekje Museum slate exterior veneer installation would require 1,600 bags of LATICRETE 254 Platinum. In an impressive showing, LATICRETE, OCTA and Dolnara worked together to complete the installation of 14,000m² (150,700 sq. ft.) of thin, natural slate tiles on curvilinear walls with the direct adhered method over concrete masonry to near perfection.

"The Hanseong Baekje Museum was a very challenging project," said Mr. Jong Hyun Cho, president of OCTA International. "The structure was leaned in at random spots throughout the entire design and it can be difficult to compensate for that with adhesives and tile. When we had to make the adhesive switch, the shape of these exterior walls brought some concerns to the project supervisor. We continued to suggest LATICRETE products and we did numerous tests on-site with POSCO E&C to convince them. We had confidence in the LATICRETE product, and after this successful installation it will be promoted even more in the Korean marketplace."

The Hanseong Baekje Museum gets its name from one of the Three Kingdoms of Korea that ruled the land during the 4th and 5th Centuries. Hanseong was what they called present-day Seoul, and the Baekje Dynasty dates back to 18 B.C. as the first and most influential of the three ancient kingdoms that battled for control.

The museum came to be after archaeologists



dug up thousands of incredibly rare and stunning ancient relics the Baekje Kingdom left behind in the Han River Basin. Beginning in the 1990s there's been a dramatic boom in salvage archaeology that's revealed the Baekje ran a state-level society with urban centers, capitals, monuments, production sites and burials.

In order to maintain and collect these vestiges in one place, the Seoul Metropolitan Government began to map out the site and building design for the Hanseong Baekje Museum. All totaled, they have 33,000 ancient artifacts and relics stored on the 19,298m² (207,721 sq. ft.) property. The museum features a semi-subterranean design with three floors below ground and two floors above displaying ancient relics, tools and machinery that prove the Baekje Kingdom was a sophisticated society.

Dolnara installed the epoxy-bonded sheets of stone tile that were designed to be set with butted joints for the exterior veneer using the direct adhered method and LATICRETE® 254 Platinum thin-set. In addition, the exterior landscape features beautiful curvilinear walls and bridges surfaced with the same stone from Fujian, China. These regal, stone-covered walls were installed with precision by Dolnara using LATICRETE 254 Platinum and the resulting presence of the exterior structures resonate throughout the entire property and greatly enhance the look and feel of the site.

The Hanseong Baekje Museum has leaned walls at 45, 90 and 107-degree angles, creating a futuristic exterior that pays homage to the Kingdoms use of curvilinear lines in architecture. Several tests proved the stone tiles could achieve full coverage of LATICRETE 254 Platinum thin-set and were sized just right to be pressed firmly into place as the exterior veneer surface.

As the ultimate one-step, polymer-fortified thin-set adhesive for interior or exterior projects with tile or stone like the Seoul museum, LATICRETE 254 Platinum can be used with ceramic tile, stone, quarry tile, pavers and brick over virtually any substrate to provide a tenacious bond. With a long open time and a smooth, easy to trowel formula, LATICRETE 254 Platinum provides workability for the tile contractor and permanent, problem-free installations of tile and stone for architects, developers and building owners.

"LATICRETE 254 Platinum is just a great product," said Prince. "It's very easy to work with and it has incredible bond strength. We're completely confident with using the project on any project where it's an option. There's a comfort level there with everyone involved. It's a high-performance adhesive that installs very easily."

The Baekje established Seoul as its capital over 2,000 years ago and to this day it remains the economic, political and cultural center of Korea. The Hanseong Baekje Museum opening is another important event for the world's third-largest city and a great way to celebrate its rich history. Not only is the building visually stunning and unique, the museum is filled with ancient finds that tell a story of how it all came to be.



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