

Zinc shows its mettle

Mary G. Pepitone, Miami Herald, 20 April 2013

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American Camp, a residential project on the Pacific Ocean, has a vaulted roof shell covered in battens made of zinc. Photo by Paul Warchol, courtesy of Suyama Peterson Deguchi

Zinc is a cool metal that heats up architectural details on homes.

Durable and rustproof, zinc weathers to an attractive matte gray color, which has a modern appeal, yet stands the test of time, according to Gary Davis, spokesman for A. Zahner Co., a 115-year-old U.S. metal fabricator for architectural buildings throughout the world.

“In Paris, the batten-seam roofs, constructed in the 1800s, were made of zinc,” he said. “The light reflects off these historic rooftops, and I’d like to think the use of zinc may also contribute to Paris being known as the ‘City of Light,’ especially at sunrise.”

Zinc can turn ordinary house shutters, roofs and guttering into extraordinary architectural details, while opulent outdoor options can also include cupolas, dormers and finials. The use of zinc can give a home character that will last for more than a half-century, yet it has an aesthetic that will never go out-of-style.

“People choose zinc for projects because it doesn’t require treating or painting and is relatively maintenance-free,” Davis said. “Zinc’s patina achieves a warm natural gray hue that has a noble, understated quality to it.”

Zinc is a naturally occurring element on the periodic table, but when used as a building material, it is fabricated as an alloy. Most commonly, the alloy is 99.995 percent pure zinc, with trace quantities of copper and titanium, which makes the metal easier to work with and gives it structure and strength.

Most commonly found on high-end houses in the form of zinc roofing, architectural details can also become adornments on any home, but expect to pay up to two times as much as you would for the same product made of stainless steel.

“Zinc is a beautifully neutral metal,” Davis said. “While aluminum needs to be painted, stainless steel remains shiny and copper can have issues with run-off, zinc doesn’t compete with the landscape.”

American Camp is one such residential project that was built facing the Pacific Ocean by Suyama Peterson Deguchi, an architectural firm in Seattle. This 1,300-square-foot San Juan Island, Wash., retreat home has a vaulted roof shell, which is covered in battens made of zinc.

“I use zinc on projects, primarily because of its organic nature; it becomes even more beautiful as it ages,” said founding partner George Suyama. “Zinc has a timeless appeal that is connected to place. It’s not about fashion, and is appropriate forever.”

When rolled zinc first comes from the mill, it is shiny like aluminum. As the material is exposed to air, humidity and pollution, it weathers and naturally creates a gray-colored patina that can take two to five years to develop. For homeowners who don’t want to wait for zinc to gather a honed patina naturally, manufacturers also offer pre-weathered zinc, which is achieved by uniformly exposing the zinc to an acidic bath in the factory.

“Zinc, by its nature, is very malleable and is easily pressed into molds, creating forms that can top a parapet or be used as a scupper for draining rainwater,” Davis said. “Zinc is also used to decoratively clad walls and in gutter systems, because rainwater run-off will not stain the surfaces below, as copper will.”

While the European market is zealous for zinc, more Americans are now using it in building projects because of its environmentally sustainable qualities. Zinc is mined using an extraction process that avoids strip mining and requires less energy to refine, because of a lower melting point, when compared to other metals, such as aluminum, copper and steel. It is also easily recycled.

Professional installation is key to ensure zinc details like guttering, roofs and flashing not only look good, but also function properly. Quality craftsmanship includes soldered seams over rivets, and takes into account the expansion and contraction of the metal during temperature changes.

David recommends getting an architectural fabricator to cut zinc to specifications, producing museum-quality edges, rather than installers rough-cutting on-site during an installation.

“A proper installation using zinc shouldn’t require caulks or sealant,” he said. “You want to create a waterproof seal by the way the zinc is detailed.”

Zinc is also best left to outdoor applications, and is not necessarily an ideal material to form a “counter-revolution.”

“I used to have two zinc countertops in my kitchen, but any acid – in the form of wine, vinegar or citrus – would leave a mark that I would have to rub out every night,” Davis said. “While zinc is a beautiful material, it’s a lot of work to maintain when used inside a home.”

Zinc is a memorable metal that is historic, yet has contemporary character.

“Zinc complements and doesn’t compete with other materials – such as limestone – and its natural surroundings,” Davis said. “There’s a friendliness to zinc: It makes a statement by being able to blend with the ocean, the mountains or the sky.”