SFGate.com

Jewish Museum Blanketed in Blue

Jesse Hamlin

Sunday, May 6, 2007


Paul Martin stood on a scaffold atop the new Contemporary Jewish Museum on Mission Street across from Yerba Buena Gardens recently in a hard hat and orange vest. He watched as a colleague stripped back the protective film covering one of the diamond-shaped blue steel panels that will cover the forms thrusting out the side and top of the museum's century-old red-brick shell. The brushed stainless steel appeared midnight blue in the bright morning sun.

"It's gorgeous," said Martin, a design engineer at A. Zahner Co., the Kansas City, Mo., firm that fabricated and is installing the 3,000 panels. They will form a glowing blue skin on the dynamic shapes designed by architect Daniel Libeskind to suggest the Hebrew letters in the phrase "l'chaim" (to life). Those forms -- an 85-foot-tall cube that juts onto the pedestrian walkway connecting Market and Mission streets and slices into a rectangle rising diagonally through the top of the brick box -- extend the former Pacific Gas and Electric Co. substation, designed by Willis Polk, that will house the Contemporary Jewish Museum. The $46 million, 63,000-square-foot cultural center is set to open next spring.

The steel was oxidized blue and custom-brushed in a crosshatch pattern by English manufacturer Rimex. The color will shift depending on the angle of the sun, the way the light reflects off various surfaces and the vantage point of the viewer.

"You'll see different shades of that blue. It will be like a quilted effect, almost," said Martin, who's here from Kansas City, along with foreman Jesse Spencer, to oversee the installation of the steel skin over the next several months. It's being done by hand, one panel at a time, by union workers from the San Leandro firm Van Mulder Sheet Metal Inc., which also worked with Zahner on the copper skin of the new M.H. de Young Memorial Museum.

"I've never seen blue panels like that. Nobody has ever seen them before," said Dennis Rawls, a Van Mulder man who was installing part of the substructure, an intricate aluminum armature into which the thin steel panels are popped to form a flush surface. Diamond-shaped skylights, specified by the architects, have been fully integrated into the diagonal pattern.

Rimex soaked the Japanese-milled steel in a chemical bath that thickens the chromium oxide that occurs naturally on the surface and brings out the color. The finish is called an interference coating because it interferes with the natural reflection of light, soaking up some wavelengths and reflecting the colors you want. The firm has manufactured blue panels for other buildings, but this is the first time it has brushed the steel in two directions, creating a surface that softens and diffuses reflected light. Rimex was developing the technique when Zahner came calling about the San Francisco project.

"It's a unique process that they haven't offered before," said Martin, whose firm's projects include the Frank Gehry-designed Experience Music Project building in Seattle, which is covered in gold and reddish-purple steel. "It worked so well with the diamond shape, and Libeskind's office was really receptive to it. It just fit this project."

Contemporary Jewish Museum Director Connie Wolf, architect Michael Vanreusel from Studio Daniel Libeskind and others involved in the project went to Rimex outside London to choose the blue. Because the coloring process is organic, there are variations in tone, and only so much fine-tuning can be done.

"When you specify the color with this process, it's a certain range," Martin said. "And you can try to tweak that range."

Wolf and company chose the blue they wanted. Martin's challenge was to create a 3-D computer model of how the steel could be cut and joined to form a seamless skin over Libeskind's angular forms. The panels are parallelograms, 37 1/2 by 34 1/2 inches (partial panels were cut to fit the edges).

"This is extremely difficult because they're all butted together, and the diamond shape itself is really unforgiving," Martin said. "Being dimensionally accurate is paramount. The slightest error is going to throw the rest of it off. There's just no forgiveness. It has to fit."

The panels were cut, two at a time, from 10-foot sheets on CNC -- computer numerically controlled -- punches to ensure accuracy and consistency. The architects asked that an offset, a slightly raised plane that adds to the play of light and shadow, be rolled along two edges of each panel.

"The offset is between only 1/16 and 1/18 of an inch, but it has a dramatic effect in the light," Martin said.

His firm built a series of life-size mockups in Kansas City to test how the panels held up to wind and rain, and to see how they actually caught and reflected light from various angles.

About a third of the panels have been trucked to San Francisco -- they come 60 to a crate, and the whole crate is hoisted onto the building's roof -- and the rest will arrive as the job continues. The Zahner crew expects to complete the steel skin by fall, but the work

depends to a large extent on the progress of the general construction. A number of panels have already been installed but will remain covered with protective white film until a big section is complete and ready for the architect's inspection.

"These guys are grinding brick, and there's other debris blowing around, so the film helps keep some of that off while the construction process is going on," said Spencer, who has been training the local sheet-metal crew to work with Zahner's patented installation system.

Because of the physical properties of the interference coloring, which uses no pigments, the blue steel "doesn't degrade at all," Martin said. "It's a lifetime finish."

He thinks it "kind of captures the spirit of the building." Originally, Zahner produced a painted sample for the museum but "it was dead. It was all uniform." By contrast, the oxidized blue steel "really plays into what the building is all about, to life. It's dynamic. You're seeing variations, depending on the time and type of day. Depending on the sun, and where you are, you can walk 10 feet over and it's a different color." •

E-mail Jesse Hamlin at jhamlin@sfchronicle.com.

http://sfgate.com/cgi-bin/article.cgi?f=/c/a/2007/05/06/PKG3DPFC6A1.DTL

This article appeared on page **PK - 40** of the San Francisco Chronicle

« PREVIOUS NEXT »

Jewish Museum Blanketed in Blue

Jesse Spencer installs blue panels on the new Contemporary Jewish Museum. Chronicle photo by Mike Kane

Chronicle / Mike Kane

« PREVIOUS NEXT »

« PREVIOUS NEXT »

Jewish Museum Blanketed in Blue

A model of the Jewish Museum project by Daniel Libeskind.

« PREVIOUS NEXT »