

Lighthouse Log
December 27, 2021

What The Heck is Taking So Long!?

Everyone seems to ask the same questions, “How come the scaffolding is around the top of the lighthouse?” “It’s been up there for years now. What’s taking so long?”

The last time the lantern room at the top of the lighthouse underwent serious repair was in 1994 at which time the ten aluminum deck catwalk plates were installed and four of the cast iron wall plates were replaced with steel plates. But by 2009 preservationists noted serious problems with the structure, and in 2010 two volunteers (Ken Hinshaw and Lowell Northrop) set out to assess the problem and find solutions.

What they found was serious. The steel and iron wall plates were corroded beyond repair, and the aluminum deck plates were suffering from severe galvanic corrosion. Exhaustive attempts at fixing the deck plates in place were not successful, and in 2019 the “temporary” scaffolding was installed and efforts to remove and restore the deck plates began. When the deck plates were removed, additional problems with cracking and erosion of the underlying concrete were discovered. It was time to call in the experts! Ray Byrne contacted Mark Dietrich an Oakland architect specializing in building envelopes, and Jamie Rees, an expert in advanced coating materials. Together they came up with a plan.

Replacement wall plates were made from stainless steel coated with black epoxy paint and are awaiting installation. The ten 65-pound aluminum deck plates were sandblasted, heavily corroded areas were repaired and then they were coated with a very expensive (but donated by Jamie!) two-part epoxy black coating. Unfortunately the sandblasting appears to have caused the panels to bend, so Lowell needed to assemble a special hydraulic press to straighten the panels.

All of the corroded concrete surfaces were ground or cut away, new specialized mortar applied to cover the damaged areas, and then the entire surface was coated with a white two-part epoxy. This was then covered with another very special thick layer of black rubbery paint (Thanks again, Jamie and Mark!) to completely seal and protect the concrete from further corrosion.

Final adjustments were made that allowed the deck plates to be lifted into place at the end of November, and the team is now in the process of aligning each of the plates and fastening them to the structure. But even this, seemingly simple process is challenging. The stainless steel bolts need to be shrouded by specially milled plastic sleeves to separate them from the aluminum decking so that electrolytic corrosion doesn’t occur. Once the deck plates have been secured, then the stainless steel wall plates can be carried up, attached to the lighthouse frames, and all of the joints weatherproofed with caulking or gaskets.

Patience!.....or come buy to give us a hand on Tuesday mornings!

Bob Bourke



Epoxy coated concrete apron (L) with final coat of black rubberized paint (R)

Hydraulic press constructed to straighten deck panels.

