

BATTERY CHAMBERLIN SEA COAST DISAPPEARING GUN

Upon inspecting the last six-inch “disappearing gun” of its type on the west coast, a project team of specialists led by ARG Conservation Services recoiled at the corrosion of the substrate metal, leading to treatment recommendations that specified a new coating system from Tnemec. “The treatment included removal of corrosion and cleaning to bare white metal to enable better adhesion for a new protective coating,” stated the Conservation Treatment Report prepared by ARG. “New coatings were applied that followed recommended coating specifications designed for the harsh marine environment.”

ARG Conservation Services is a licensed general contractor that specializes in conservation field projects. Prior to re-coating, samples of paint from the gun were tested and the presence of lead was confirmed. “The area surrounding the gun was cordoned off with temporary chain link construction fencing,” according to the ARG report. “The lead abatement firm constructed a containment structure using scaffolding and plastic sheeting around the gun and inside the secured construction fence.”

Surface preparation was in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning. Grease and oily residues were removed with methyl ethyl ketone. The applicator worked in stages to remove existing coatings and to apply a primer of Series 90-97 Tneme-Zinc, an advanced technology, aromatic zinc-rich urethane. Next, a tie-coat of Series 27WB Typoxy, a low-odor, high-solids water-based epoxy, was applied. The finish coat consisted of Series 740 UVX, a polyfunctional, aliphatic urethane that provides low volatile organic compounds with exceptional performance. Finish colors included Insulation Grey on the gun barrel and Tnemec Billfish on the gun base assembly.

“Of paramount importance was resistance to salt-laden air,” Tnemec coating consultant Glen Amos added. “Abrasion resistance and long-term color retention were also key design criteria. Amos and Associates has had an excellent relationship with ARG in San Francisco going back nearly 20 years. The highest compliment an architect can give to a manufacturer is to specify that manufacturer’s products. We take that trust very seriously.”

The disappearing gun located at Battery Chamberlin, Baker Beach in San Francisco is designed to retract into a protected bunker after firing. This provided concealment from the enemy while the gun was being reloaded, but disappearing guns became obsolete after the end of World War II. The 50-ton rifle and its disappearing carriage were donated by the Smithsonian Institute to the National Park Service in the late 1970s. Demonstrations of the gun are conducted on the first weekend of each month.

FEATURED PRODUCTS

Series 27WB Typoxy
Series 90-97 Tneme-Zinc
Series 740 UVX



PROJECT INFORMATION

Project Location

San Francisco, California

Project Completion Date

June 2009

Owner

Golden Gate National Recreation Area, San Francisco, California

Fabricator / Applicator

Cal Inc., Vacaville, California

A finish coat of Series 740 UVX was applied to the Battery Chamberlin Sea Coast Disappearing Gun in San Francisco, CA to protect it from the salt-laden air.

