

DEEPWATER

CORROSION SURVEY OF SURF RANCH FACILITY: LEMOORE, CALIFORNIA

Deepwater performed a corrosion assessment of metallic structures in and around a California artificial wave pool.

In January 2020, Deepwater Corrosion Services was contracted by Kelly Slater Wave Company (KSWC), one of the nation's newest and most advanced wave park operators, to conduct a corrosion survey of the Surf Ranch facility in Lemoore, California. Taking 2 days to complete, all metallic supports and assets were inspected to thoroughly gauge structural integrity. As a result of the corrosion survey, Deepwater engineers recommended a variety of CP systems to maintain corrosion protection in the facility.

The Surf Ranch is an artificial wave pool created in 2015 in Lemoore, California, to provide the perfect wave for surfing activities. The pool is about 2,000 ft long and 250 ft wide and chemical treatment is performed to maintain water cleanliness and a neutral pH. However, the treatment, using sulfuric acid 93% (10ppm dosage) polymer with aluminum chloro hydrate 40-50% and sodium hypochlorite or hypochlorite acid (0.5-1.2ppm of Cl-) creates an acidic environment resulting in corrosion of metallic structures immersed in the water. The resulting corrosion products have a direct impact on the water quality and the corrosion extent may affect the mechanical integrity of the metallic supports.

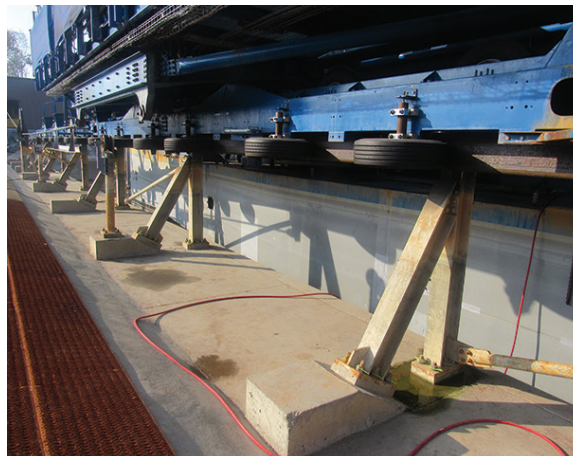
The scope of work of this site visit comprised performing a corrosion survey on the following structures: Net piles, vehicle supports, walkway gratings, piles, I-beams, gratings, platform piles, and foil tanks. The goal was to inspect and assess all submerged metallic supports. The aforementioned assets include the anchor bolts, nuts, and all the tension wires supporting the net posts.

Summary:

CVI/NDT Inspection done on 500,000 sq. ft. + facility

55+ assets inspected; ICCP retrofit recommended

More info at www.stoprust.com



MAKING WAVES
The pool utilizes a massive hydrofoil to generate surfable waves.



TREATED WATER NOT SUCH A TREAT
Chemicals that were used to keep the water clear may have hastened corrosion.



OCEANFRONT PROPERTY SURROUNDED BY FARMLAND
The pool is about 2,000 feet long and 250 feet wide.



CORROSION CHECK-UP
Technicians took pitting measurements and checked for electrical continuity.