

# DEEPWATER

## RETROLINKS™ USED TO RETROFIT AMUSEMENT PARK OVER WATER: GALVESTON ISLAND PLEASURE PIER, GULF OF MEXICO

### RetroLinks™ and RetroClamps™ provide CP for 47 pilings.

Deepwater supplied the RetroLink™ system accompanied by RetroClamp™ subsea clamps to provide CP to the forty-seven (47) steel columns supporting the pier, which features a roller coaster, rides, carnival games and shops. Depending on the water depth and current demand, some RetroLinks™ were installed with anodes suspended in the water column while others were installed along the seabed and jetted under the mudline.

Each day during the project, subsea clamps were loaded onto a small boat that was utilized for this project along with divers. The vessel then departed the Galveston Yacht Basin each morning to the project site where the RetroLinks™ were stored below the pier for ease of deployment. Prior to any installation, the divers had to clean an 8-inch wide band of marine growth on the members where the subsea clamp would hang, which at times had become 6 inches thick. Once this was complete, the diver would utilize Deepwater's Polatrak® CP Gun™ probe to take CP readings of the existing members. The divers would then deploy the subsea clamp into location using appropriate rigging. Once the clamp was in place, the diver installed the U-bolt and tightened in place to ensure the clamp is secure against the member. Then the contact screw was tightened until there was a separation in the floating plate of approximately 1/4 inch. The RetroLink™ was then towed out from the beach below the pier to the installation location. Once in position, the RetroLink™ was connected to the subsea clamp and laid on bottom. The CP Gun was then utilized again to ensure continuity was made between the clamp and the member. Continuity means the CP between the subsea clamp and the steel pile could not be more than a 10mV difference. Once this criterion was met, the CP measurement was then recorded as the post-installation reading.

All forty-seven (47) steel piles were successfully retrofit.

More info at [www.stoprust.com](http://www.stoprust.com)



**CP IN TOW**  
Once attached, the RetroLinks™ were towed away from the pier and positioned.



**RAPID INSTALLATION**  
RetroLinks™ had been stored beneath the pier to expedite deployment.



**THE GALVESTON ISLAND HISTORIC PLEASURE PIER**  
The pier features a roller coaster, rides, carnival games and shops that extend over the water.



**BOATLOAD OF ANODES**  
These were the anodes used to protect all 47 steel columns of the pier.