

DEEPWATER

ICCP, CONTINUITY BRACKETS AND RETROLINK™ ANODE STRINGS: HOUSTON SHIP CHANNEL TERMINAL

Retrofit hybrid CP systems installed on 5 docks.

Deepwater Corrosion Services was contracted to design and install a hybrid cathodic protection (CP) system for the Enterprise Houston Ship Channel (EHSC) facility located on the Houston ship channel. A total five (5) docks were selected for life extension designated: Dock B, Dock 1, Dock 4/5, Dock 6/7 and Dock 8/9 (Figure 1). The final design applied a hybrid approach of using impressed current cathodic protection (ICCP) systems for the large clusters of piles and sacrificial anodes (SACP) systems for the individual dolphins. In total, 45 RetroLinks™ and 15 ICCP anode sleds were sufficient to protect the entire facility. The subsea equipment was installed using divers from US Underwater Services (USUS) and the topside cabling was installed by Dorskocil.

Installation specifications:

Dock B: A total of 13 RetroLinks™ sacrificial anodes and 14 continuity grounding brackets were installed by USUS on B Dock in 2018. In January 2019, Enterprise had moved forward with demolition and removal of B Dock.

Dock 1: A total of 32 continuity brackets, 7 RetroLinks™, 3 ICCP anodes and 1 transformer rectifier were installed on Dock 1.

Dock 4/5: A total of 32 continuity brackets, 8 RetroLinks™, 6 ICCP anodes, and 2 transformer rectifiers were installed on Dock 4/5.

Dock 6/7: A total of 16 continuity brackets, 12 RetroLinks™, 4 ICCP anodes and 2 transformer rectifiers were installed on Dock 6/7.

Dock 6/7: Bulkheads: A total of 3 ICCP anode sleds and 1 transformer rectifier were installed on Dock 6/7 bulkhead and all the sheet piles were welded together to make them continuous.

Dock 8/9: A total of 37 continuity brackets, 7 RetroLinks™, 6 ICCP anodes and 2 transformer rectifiers were installed on Dock 8/9.

More info at www.stoprust.com



KEEPING CORROSION AT BAY IN GALVESTON BAY
A hybrid system was determined best for the dock facility..



SAVING THE DOLPHINS
RetroLink™ anode strings were used on the individual dolphins.



PROVIDING CONTINUITY
Over 100 continuity brackets were added and multiple sheet piles were welded together to provide electrical continuity.



TRANSFORMER/RECTIFIERS
One unit powers one ICCP sled; a total of 15 were installed.