

## Anode Installation or Replacement

Corrosion is an unavoidable side effect in the life of a ship due to the abundant use of iron, the most corrosion-prone material, and its continual contact with water and atmospheric moisture. In order to offset this undesirable impact on the hull's surface, pieces of metal made of more reactive material are attached to the ship's hull to corrode in place of the ship's body and systems, thereby allowing the ship to stay protected.

Phoenix's highly qualified and technically trained diving personnel routinely carry out both underwater fitting and installation or replacement of Impressed Current Cathodic Protection (ICCP) and sacrificial anodes on parts of the ship located below the waterline, including the rudder, propeller, and hull. By performing these services, the need for costly dry-docking fees and down time are reduced significantly.

In addition to hulls of ships, other areas Phoenix teams can work on sacrificial anodes include:

- Ballast
- Dock Gates
- Grey and Potable Water Tanks
- Jetties and Pontoons
- Monopiles
- Pipelines
- Platforms
- Subsea Structures
- Wind Turbine Foundations

## Contact us to learn more

www.phnx-international.com 985.399.0606—Bayou Vista, LA | 954.523.4038—Ft. Lauderdale, FL 281.815.8050—Houston, TX | 301.341.7800—Largo, MD 757.855.7516—Chesapeake, VA | 808.486.6595—Aia, HI 619.207.0871—San Diego, CA | 228.731.7898—Stennis Space Center, MS











## Class Certified Topside, Dry Hyperbaric, and Wet Welding

Phoenix has more than 40 certified welding procedures that greatly reduce client costs by enabling the use of pre-qualified procedures that match your materials and design. If one of our qualified procedures matches your project needs, our personnel will aid in presenting it to the governing authority for approval. However, if a new procedure is required, our engineers and AWS Certified Welding Inspectors (CWIs) will work with the classifying societies and client governing body to develop new welding procedures to meet client specific needs.

Phoenix also holds American Bureau of Shipping (ABS) approval of a Class A wet underwater fillet Welding Procedure Specification for ASTM A 131 and Group II steels of the American Welding Society D1.1 structural welding code. With this procedure, Phoenix can now perform **permanent** underwater weld repairs to Classed vessels and structures.

In fact, Phoenix now has AWS D3.6, AWS D1.1, AWS D1.6, NAVSEA and class approved procedures for the safe underwater cutting/burning of:

- Carbon steel (regular, high strength & high yield)
- Aluminum
- Copper Nickel/Nickel Copper
- Monel
- Stainless Steel

## **Partner Network & Support Facilities**

Phoenix diving teams have rapid response capabilities to any port across the globe. Additionally, we have partner network and support facilities in the following locations:

Cape Town, South Africa | Cartagena, Columbia | Curacao | Manama, Kingdom of Bahrain | Rotterdam, The Netherlands | Valparaiso, Chile



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