

# Tunnel and Drop Down Thruster Repair and Modification

Phoenix's Commercial Ship Repair and Maintenance Division performs a wide range of fast, reliable, and efficient solutions for tunnel, drop-down, and azimuth thruster repairs and modifications on a variety of different units. With diving packages pre-positioned across the globe, Phoenix's experienced and certified commercial divers are able to rapidly mobilize anywhere around the world to the client's port of choice with minimal lead-time.

We proudly offer thruster repairs and modifications to bow, stern, and tunnel thrusters in wet or dry hyperbaric environments.

#### **Thruster Repairs and Modifications**

- In-water thruster removals
- Entire unit overhauls
- Propeller blade or seal replacements
- Detailed thruster part repairs
- Extraction of thrusters for onshore repair
- Thruster re-installation
- Original Equipment Manufacturer (OEM) approved installation

# 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—Aiea, HI

619.207.0871—San Diego, CA | 228.731.7898—Stennis Space Center, MS





# **Tunnel Thruster Exchanges**

Complete tunnel thruster exchanges can be done in either a completely wet environment, or using hyperbaric cofferdams. Additionally, our team of experienced divers can quickly mobilize to the vessel owner's port of choice, thereby allowing the vessel to remain in service instead of going into costly and time losing dry dock.

### **Azimuth Thruster Repair**

Azimuth thrusters are purpose-designed for easy underwater access for mounting and disassembly. Since they are utilized 24/7 for dynamic positioning during drilling operations, leaving the site in order to repair or replace a unit would be a expensive proposition.

Phoenix's divers can repair or replace azimuth thrusters underwater, out in the open ocean, while drilling operations continue. With the assistance of a crane barge, a replacement thruster can easily be installed, thereby eliminating the need for costly dry docking and having to take the vessel off hire.

By utilizing this option, large vessels, heavy lift vessels, and semisubmersible oil drilling rigs can continue to operate normally without interruption.

## **Permanent Underwater Repairs**

Phoenix has an American Bureau of Shipping (ABS) approved, 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 perform permanent underwater weld repairs to classed vessels and structures.

### **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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