Submarine Rescue

Rapid solutions backed by hands-on, global at-sea experience

Oceaneering understands the complexity of submarine rescue because of our long involvement in U.S. Navy submarine rescue initiatives. Our team of engineers, designers, operators, and divers with hyperbaric chamber experience use our technologies including remotely operated vehicles (ROVs), manned submersibles, and launch and recovery systems to ensure successful submarine rescue.
### Rescue Preparation

**Plans and CONOPS Development for Major Subsea Systems**
- Rescue system interface definition
  - STANAG 1297
  - ATP 57

**Innovative ROV fleet maintenance program**

**Developed portable escape training equipment**

**Development and training support on the portable rescue vehicle simulator**

**Pre-planning**
- Operational planning
- Adequate training
- Regular exercises

Oceaneering's extensive field operations knowledge is used to develop necessary pre-plans.

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### Subsunk Event

**Equipment packaging for rapid mobilization**
- JATEU
- MIL-HDBK-1791
- ISO

**Established VOO database**

**Designer and provider of the SRS Ship Interface Structure (SITS)**

**Average 100+ vessel mobilizations per year**

**Operation of international DSV fleet**

**Rapid mobilization saves lives.**
- Worldwide multi-mode transport
- VOO capability/availability/operations
- Rapid vessel installation

An understanding of the criticality of providing assistance in a timely manner.

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### Mobilization

**Global deep ocean search capability**

**Operator of world’s largest ROV fleet (>300)**

**Complete design and analysis of ELSS pods**

**Developer of specialty subsea tooling to support sub rescue**

**Developer of the SRS Ship Interface Structure (SITS)**

**Operation of international DSV fleet**

**Rapid mobilization to locate, stabilize, and prepare the DISSUB for rescue.**
- Localization and survey
- DISSUB stabilization
- Debris clearance

Providing world-class subsea intervention and tooling services.

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### Intervention

**SEIE suit ship alteration installation**

**RESCEUEX participant**
- (Black Carillon, Sorbet Royal, Bold Monarch)

**USN’s primary Submarine Rescue Systems engineering and integration agent**

**Design and supply of the USN’s SRS LARS load spreading bases**

**Designed the current USN SRS air transport plans, air transport pallet loading configurations, and ground shipping plans**

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### Escape / Rescue

**Rescue of the DISSUB crew.**
- Escape support systems
- Rescue vehicle deployment and operation
- Critical interface definition
- End-to-end operation approach

Oceaneering has been involved in the escape and rescue of DISSUB crews for over 20 years.

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### Transfer Under Pressure

**Developed of deck reception chambers**

**Designed and built both fly-away gas rack assemblies for the USN SRS**

**Developer of Hyperbaric TUP Systems for USN and commercial customers**

**Designed the USN’s SRS Pressurized Flexible Manways (PFMs) to meet portable TUP requirements**

**World-wide diving support including chamber operators/medtechs**

**Member of the Accelerated Decompression Tables Working Group**

**Transfer under pressure solutions provide decompression of the DISSUB crew using advanced dive tables.**
- Hyperbaric chambers
- Life support systems
- Decompression treatment techniques

Oceaneering’s experience spans the range of hyperbaric technologies.

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### Demob

**Oceaneering provides continuing ILS management for the USN’s SRS.**
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Our experience designing, building, operating, and maintaining commercial subsea vehicles and diving systems was a critical consideration for the U.S. Navy when they selected Oceaneering to develop their Submarine Rescue System (SRS) in 1992. As the U.S. Navy’s Submarine Rescue Diving and Recompression System (SRDRS) requirements evolved, Oceaneering responded by transitioning from a fly-away saturation diving rescue system to a remotely-operated rescue vehicle and deck decompression chambers integrated with innovative transfer under pressure (TUP) technologies.

Understanding Submarine Rescue

Oceaneering’s experience and support of U.S. Navy programs resulted in our team’s unparalleled understanding of the full spectrum of submarine rescue requirements. This includes:

» Vessel of opportunity operations, analyses, and selection criteria
» SRS mobilization improvements, system integration and verification testing, and ongoing Integrated Logistics Support (ILS) management
» Search, tracking, and navigation/positioning systems
» Vessel mooring and dynamic positioning systems
» Intervention solutions including ROVs and Atmospheric Diving System (ADS)
» Participation in operational exercises

Experience

» U.S. Navy Submarine Rescue System – TUP Systems Engineer and Integrator
» Surface ship modifications to support submarine rescue
» U. S. Navy SEIE Suit Ship Alteration Installation Contractor
» World-wide Search and ROV Network
» U.S. Navy SUBSAFE Certification (One of only three U.S. companies)

Oceaneering’s experience in Submarine Rescue provides rapid solutions backed by hands-on, global at-sea experience.

For more information visit us at oceaneering.com/OTECH

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