Pressurized Rescue Module System (PRMS) U.S. Navy's Future Submarine Rescue Vehicle

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Abstract

The Submarine Rescue Diving Recompression System (SRDRS) is the U.S. Navy's next generation submarine rescue system. The SRDRS is a rapid assessment, global response system for the rescue and controlled decompression of personnel from a disabled submarine (DISSUB). The Pressurized Rescue Module System (PRMS) contains the elements of the SRDRS that constitute a remotely operated submarine rescue vehicle. The Pressurized Rescue Module (PRM), an element of the PRMS, is a tethered, manned Remotely Operated Rescue Vehicle (RORV) used to transfer personnel from the DISSUB to the surface Vessel of Opportunity (VOO). The PRM will have the capability to navigate, descend in the water column, maneuver in submarine currents up to 2.5 kts, and mate with a DISSUB as deep as 2000 ft and at a deck angle as much as 45 deg from horizontal while maintaining a normal horizontal vehicle orientation. It can then conduct a transfer of personnel to the surface while maintaining up to 6 ATA of elevated cabin pressure.

Other PRMS elements include:

· The Transfer Skirt
· Control Van
· Umbilical Winch
· PRMS Air Transport Interfaces
· PRMS Auxiliary Equipment

This paper describes the PRMS capabilities and discusses the evolution of a proven design concept and the challenges associated with the development of this new generation rescue vehicle.