WASHINGTON -- The U.S. Navy Dive Manual’s largest change in 52 years was released April 14. The sixth revision to diving procedures serves as the internationally recognized standard for allowable exposure while breathing compressed air at varying depths.

The following breakthroughs by the Navy led to these sweeping changes:

- Invention of a deterministic algorithm that is suitable for computers;
- Creation of a method to provide high concentrations of oxygen to the diver during in-water decompression greatly increasing safety;
- Development of tactics that eliminates the need to select the mode of decompression in advance greatly increasing flexibility for the operator.

“The advent of in-water oxygen using the newly certified Oxygen Regulator Control Assembly (ORCA) has significantly increased the safety of decompression diving while still maintaining a light footprint that is highly mobile,” said Capt. John G. Gray, Supervisor of Salvage and Diving, Naval Sea Systems Command.

While the dive manual changes are widespread, the most sweeping changes were made in the fields of air decompression; surface-supplied mixed gas diving procedures; MK16 Mod 0 closed circuit mixed-gas UBA diving; MK16 Mod 1 closed circuit mixed-gas UBA diving; diagnosis and treatment of decompression sickness and arterial gas embolism; and recompression chamber cooperation.

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