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Decompression Pump for Dry Submersibles

Award Information

Agency:

Department of Defense

Branch:

Special Operations Command

Contract:

H92405219P002

Agency Tracking Number:

S2-0626

Amount:

\$1,258,471.00

Phase:

Phase II

Program:

SBIR

Solicitation Topic Code:

SOCOM192-002

Solicitation Number:

19.2

Timeline

Solicitation Year:

2019

Award Year:

2021

Award Start Date (Proposal Award Date):

2020-12-11

Award End Date (Contract End Date):

2022-07-05

Small Business Information

Air Squared, Inc. (/sbc/air-squared-inc)

510 Burbank St.
Broomfield, CO 80020-1111
United States

DUNS:

824841027

HUBZone Owned:

No

Woman Owned:

No

Socially and Economically Disadvantaged:

No

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Research Institution

N/A

Abstract

USSOCOM is investigating the achievable possibilities to depressurize crewed DCS hyperbaric spaces. Regulating decompression on ascent following underwater diving activity significantly decreases the risk of oxygen toxicity, nitrogen narcosis, and decompression sickness. Existing crewed decompression is achieved via surface decompression or staged decompression obligations. However, surface decompression requires supplemental shipboard facilities while staged decompression exposes divers to unpredictable underwater conditions and adds significant time to diving operations. In both cases, considerable time is needed between the completion of dive tasks before crewmembers may undertake further duties, obstructing mission schedules. Introducing a positive displacement scroll decompression pump on a DCS would remove the staged decompression obligation and allow the vessel to reach atmospheric pressure while at depth. The benefit would extend to support covert missions requiring deployment at sea, transport at depth, and then rapid ascent without fear of contracting decompression symptoms.

* Information listed above is at the time of submission. *

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