

**WHO**

**SYSCOM:** NAVSEA

**Sponsoring Program:** NAVSEA, PEO SHIPS

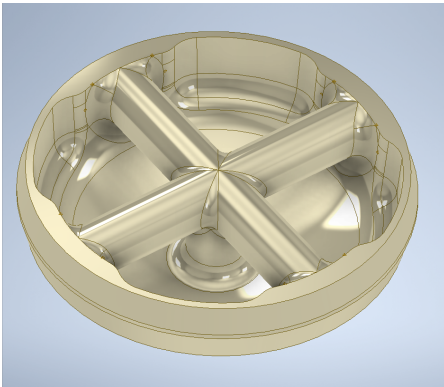
**Transition Target:** DDG-51 Arleigh Burke Destroyer flight deck tiedowns

**TPOC:** [Kyle.E.McGrath.civ@us.navy.mil](mailto:Kyle.E.McGrath.civ@us.navy.mil)

**Other Transition Opportunities:** Other Navy aviation capable ships with flight decks as well as any other DoD opportunities.

Civilian opportunities such as private/commercial ship helicopter pads or deep-sea oil platforms.

**Notes:** New innovative Inconel 718 single piece tie down that is impervious to seawater corrosion and eliminates a projected 95% of maintenance costs.



Inconel718\_Tiedown\_LightweightVersion

**WHAT**

**Operational Need and Improvement:** A corrosion resistant tie down that meets all Navy requirements with lower costs, lighter weight and overall superior performance by all metrics. These tie downs can eliminate an anticipated 95% of maintenance costs over the projected 40-year service life of an Arleigh Burke destroyer and can be installed on any other aviation capable ship.

**Specifications Required:** This significantly upgraded Inconel 718 tiedown meets or exceeds all Navy specifications and saves 660 pounds per shipset.

**Technology Developed:** A single piece Inconel 718 tie down that is impervious to seawater corrosion, 40% lighter and 10% cheaper to procure. It is a simple turnkey drop-in replacement requiring no changes to the existing flight deck design or installation procedure.

This new innovative tiedown is superior by all metrics compared to the current steel tiedowns including outstanding weldability, galvanically compatible to all flight deck steels and enhanced high temperature strength, toughness and improved fatigue life as well as superior wear resistance.

**Warfighter Value:** This is a very significant upgrade to the current steel tiedowns now in use, reducing procurement costs and eliminating an anticipated 95% of maintenance costs over the projected 40-year service life of an Arleigh Burke destroyer. It will improve ship readiness and lower manpower burdens associated with maintaining current corrosion-prone steel tie downs.

**WHEN**

**Contract Number:** N68335-23-C-0219

**Ending on:** Apr 09, 2025

| Milestone                 | Risk Level | Measure of Success   | Ending TRL | Date         |
|---------------------------|------------|--|------------|--------------|
| Phase 1 Results           | Low        | Passed all Computer Analysis Metrics & Passed Corrosion/Welding Test           | 4          | 3rd QTR FY21 |
| Phase 1 Option Results    | Low        | Preparation for Prototype Construction/Testing                                 | 5          | 4th QTR FY22 |
| Phase 2 Base Results      | Low        | Constructed and Qualification Tested AM Prototype. Passed all Tests            | 7          | 2nd QTR FY24 |
| Phase 2 Option 1 Results  | Low        | Optimized AM & Casting Prototype Passes all Qualification Tests                | 8          | 3rd QTR FY25 |
| Phase 2 Option 2 Results  | Low        | Lightweight, Improved, Low Cost Prototype Passed Extensive Qualification Tests | 9          | 3rd QTR FY26 |
| Phase 3 Commercialization | Low        | Commercialization, Mass Production and Sales to Navy and General Public        | 9          | 4th QTR FY26 |

**HOW**

**Projected Business Model:** Prime contractor/supplier to the Navy or subcontractor to a Prime ship building contractor.

**Company Objectives:** To mass produce these Inconel 718 tiedowns in-house at the lowest possible cost.

**Potential Commercial Applications:** Private (Yachts) and commercial ships as a maintenance-free, durable significant upgrade for aircraft/helicopter tiedowns on all vessels with flight decks. There are also numerous civilian applications for this durable Inconel 718 tiedown such as on deep sea oil drilling helicopter pads. Additionally, any foreign/allied Naval vessels and their shipbuilders could incorporate these flight deck tie downs into their fleet.