## Our Mission

With increasingly powerful radar and electronics systems, operation of engine systems in high-temperature climates, and advanced directed energy systems, thermal management is one of the most significant restrictive forces on the warfighter to accomplish mission success. The capacity for reliable cooling infrastructure is critical; however, environmental factors such as biological fouling greatly throttle current cooling capabilities. Interphase Materials proprietary surface treatment technology is designed to prevent biological fouling and enhance the overall efficiency of these mission-essential cooling systems resulting in a competitive advantage in resiliency, efficiency, and readiness of legacy and new assets.

## Awarded Contracts

**HTE System for Improved Efficiency of Power Plant Condensers**

Contract No. DE-FOA-0001686

**Guided Missile Submarine SSGN Seawater System Antifouling**

Contract No. N00178-18-C-8001

**High Performance Nano-Coating for Diesel Engines**

Contract No. W911NF-18-C-0054

INTERPHASE MATERIALS

**DUNS No. 079997344**

**CAGE No. 7HJ36**

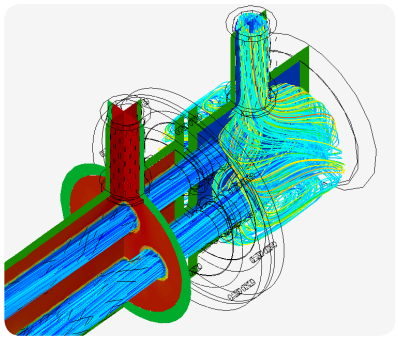
**info@interphasematerials.com**
**(412) 387-9000**

# Technology Benefits

## Long Term Fouling Reduction


Prevents build-up of micro and macro biological fouling, scale deposits, and corrosion

## Improved Heat Transfer



Increases heat transfer efficiency, improving cooling capacity of heat exchangers by 5-10% per component

## Ease of Application

Application set-up easily integrates with each system component

# Department of Defense Capabilities

## SEA

- Engine Cooling
- Directed Cooling
- HVAC Systems

## AIR

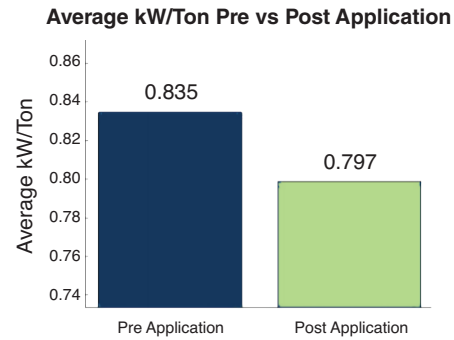
- Engine Cooling
- Avionics
- Directed Energy

## LAND

- HVAC Systems
- Directed Energy

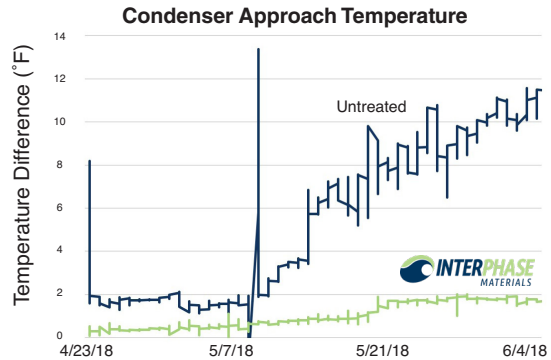
# Case Studies

## Electricity Draw Reduction




Interphase Materials applied its proprietary surface treatment to a 1,600-ton operating chiller system at a university in Pittsburgh, Pennsylvania. After application, a reduction in electricity (kW) draw was observed on the treated chillers, indicating a 4.55% increase in efficiency.

## Approach Temperature Reduction




Interphase Materials engineers applied its proprietary surface treatment to an operating 2,000-ton chiller at a district cooling plant in Chicago, Illinois. Immediately after application, a lower approach temperature on the condenser was recorded for the treated system, compared to the untreated system. For the duration of the season, the surface treatment continued to prevent fouling build-up resulting in reduction benefits as great as 15%.