

**AMSC AND NORTHROP GRUMMAN ANNOUNCE  
SUCCESSFUL LOAD TESTING OF 36.5 MEGAWATT  
SUPERCONDUCTOR SHIP PROPULSION MOTOR**

- *Most Powerful Motor Ever Tested by U.S. Navy*
- *Motor Size and Weight Reduced by More Than 50%, Acoustic Signature Reduced, Efficiency Increased*
- *Superconductor Motors Ready for Deployment*

**WASHINGTON, D.C., January 13, 2009** – American Superconductor Corporation (NASDAQ: AMSC), a leading energy technologies company, and Northrop Grumman Corporation (NYSE: NOC) announced today at the Surface Navy Association’s 21st National Symposium the successful completion of full-power testing of the world’s first 36.5 megawatt (49,000 horsepower) high temperature superconductor (HTS) ship propulsion motor at the U.S. Navy’s Integrated Power System Land-Based Test Site in Philadelphia. This is the first successful full-power test of an electric propulsion motor sized for a large Navy combatant and, at 36.5 megawatts, doubled the Navy’s power rating test record.

This system was designed and built under a contract from the Office of Naval Research to demonstrate the efficacy of HTS motors as the primary propulsion technology for future Navy all-electric ships and submarines. Naval Sea Systems Command (NAVSEA) funded and led the successful testing of the motor.

Incorporating coils of HTS wire that are able to carry 150 times the power of similar-sized copper wire, the motor is less than half the size of conventional motors used on the first two DDG-1000 hulls and will reduce ship weight by nearly 200 metric tons. It will help make new ships more fuel-efficient and free up space for additional warfighting capability.

“The successful load test of our HTS motor marks the beginning of a new era in ship propulsion technology,” said Dan McGahn, senior vice president and general manager of AMSC Superconductors. “This motor provides the U.S. Navy with a truly transformational capability relative to size, stealth, endurance and survivability, providing our Navy with a clear performance advantage for years to come. We are grateful for the steadfast support from the Office of Naval Research, Naval Sea Systems Command and the Naval Surface Warfare Center.”

AMSC and Northrop Grumman shared the work under a formal business agreement, with AMSC serving as the prime contractor for the research and development phase.

“HTS technology offers the Navy a power-dense propulsion solution, and it will save money,” said Donna Potter, director of the Development & Integration business at Northrop Grumman’s Sunnyvale, Calif.-based Marine Systems business unit. “Whether the Navy uses the size and

weight savings to make ships lighter and more fuel-efficient, or to pack more capabilities onto fewer ships, the end result is the same: more capability for the warfighter at less cost to the taxpayer.”

Earlier in 2008, the Navy successfully installed another HTS system – an HTS degaussing coil – onboard the USS HIGGINS (DDG 76). Powered by AMSC’s HTS wire and magnet cable technology, the coil system will undergo sea trials over the next two years onboard the HIGGINS. Similar to the motor, degaussing coils utilizing HTS wire will significantly reduce system weight for DDG 1000-class ships, landing platform dock (LPD) ships, and for the Littoral Combat Ships (LCS).

The Navy has invested more than \$100 million in the development of HTS technology, paving the way not only for use in Navy ships but also in commercial vessels, such as cruise liners and liquefied natural gas (LNG) tankers, which can also take advantage of the space and efficiency benefits of HTS motors. To learn more about the advantages of HTS motors, please visit AMSC in Booth #205 at the Surface Navy Association’s 21st National Symposium, taking place through January 15, 2009 at the Hyatt Regency Hotel in Crystal City, Virginia. More information can also be found at <http://www.amsc.com/products/motorsgenerators/shipPropulsion.html>.

HTS rotating machine technology is also being applied to the renewable energy industry. Wind generator systems utilizing HTS wire instead of copper wire are expected to be much smaller, lighter and more efficient than current systems. This will lower the cost of wind-generated electricity – particularly for offshore wind farms.

### **[About Northrop Grumman](#)**

Northrop Grumman Corporation is a global defense and technology company whose 120,000 employees provide innovative systems, products, and solutions in information and services, electronics, aerospace and shipbuilding to government and commercial customers worldwide.

### **[About American Superconductor \(NASDAQ: AMSC\)](#)**

AMSC is a leading energy technologies company offering an array of solutions based on two proprietary technologies: programmable power electronic converters and high temperature superconductor (HTS) wires. The company's products, services and system-level solutions enable cleaner, more efficient and more reliable generation, delivery and use of electric power. AMSC is a leader in alternative energy, offering licensed wind turbine designs and electrical systems. As the world's principal supplier of HTS wire, the company is enabling a new generation of compact, high-power electrical products, including power cables, grid-level surge protectors, Secure Super Grids™ technology, motors, generators, and advanced transportation and defense systems. AMSC also provides utility and industrial customers worldwide with voltage regulation systems that dramatically enhance power grid capacity, reliability and security, as well as industrial productivity. The company's technologies are protected by a broad and deep intellectual property portfolio consisting of hundreds of patents and licenses worldwide. More information is available at [www.amsc.com](http://www.amsc.com).

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