

Carderock Division

*“Charting
the
Course”*

The Carderock Division of the Naval Surface Warfare Center (NSWCCD) is the Navy's center of excellence for ships and ship systems. With unique laboratories and test facilities, large-scale land-based engineering and test sites, and at-sea measurement facilities throughout the United States, Carderock has been at the forefront of technologies vital to the success of the Navy and the maritime industry for more than a century.

The key element in the technological success of the Division is its breadth and depth. As a major component of the Naval Sea Systems Command it provides cradle-to-grave support for its technical products over an enormous range of scientific areas related to surface and undersea platforms. The Division addresses the full spectrum of applied maritime science and technology, from the theoretical and conceptual beginnings, through design and acquisition, to implementation and follow-on engineering. This includes all technical aspects of improving the performance of ships, submarines, military water craft, and unmanned vehicles, as well as research for military logistics systems. In addition, the Division is uniquely chartered by Congress to support America's maritime industry.

In its technical leadership role, Carderock links technology to applications for the Navy and the maritime industry in:

- Ship systems and logistics R&D
- Hydrodynamics
- Ship survivability, structures and materials
- Ship signatures
- Ship machinery research and development
- Ship machinery engineering



West Bethesda Headquarters Site



Philadelphia Site

Sites and Facilities

| | |
|--|---------------------|
| Combatant Craft Department | Suffolk, VA |
| Large Cavitation Channel | Memphis, TN |
| South Florida Testing Facility | Fort Lauderdale, FL |
| Acoustic Trials Detachment | Port Canaveral, FL |
| Southeast Alaska Acoustic Measurement Facility | Ketchikan, AK |
| Acoustic Research Detachment | Bayview, ID |
| Puget Sound Detachment | Bremerton, WA |

The scope of Division products encompasses individual components, subsystems, systems, the ship/submarine as a whole, and the Fleet. Core technical capabilities fall into three areas:

MARINE TECHNOLOGY

- Propulsion machinery
- Auxiliary machinery
- Electrical machinery
- Hull and deck machinery
- Habitability and hull outfitting
- Ship materials and processing technology
- Surface and undersea vehicle structures
- Analytical and experimental aerodynamics
- Environmental quality science and systems
- Logistics

DESIGN AND INTEGRATION

- Vehicle designs and integrated systems
- Combatant craft, manned and unmanned
- Marine Corps vehicle systems and components
- Shipbuilding and manufacturing technology
- Cost-benefit analysis, simulation and modeling

NAVAL SYSTEMS

- Vehicle vulnerability and survivability systems
- Active and passive acoustic signatures and silencing systems
- Non-acoustic signatures
- Undersea sail and deployed systems
- Weapons materials including electro-chemical power sources R&D

Today, the Carderock Division consists of 3,800 scientists, engineers and support personnel working in more than 40 disciplines ranging from fundamental science to applied/in-service engineering. Headquartered in West Bethesda, Maryland, the Division houses world-class facilities and laboratories. A major operating site in Philadelphia is recognized as the center for naval machinery. The Division also conducts research and development at several remote sites across the country.

The Division's envisioned future is to become the Navy's and the nation's Maritime Technology Center by developing and applying naval and maritime science and technology. Although the Navy is the primary customer, the Division has strategic partnerships nationwide and around the world with industry, shipyards, academia, government agencies and foreign navies.



Surface Warfare Center Division

Approved for Public Release.
March 2000.

For more information:

Public Affairs Office
301.227.1142

Web Site: www.dt.navy.mil