# National Shipbuilding Research Program Advanced Shipbuilding Enterprise

**Reducing Naval Ship Construction and Repair Costs** 



The National Shipbuilding Research Program was created by U.S. shippards at NAVSEA request to reduce the cost of building and maintaining U.S. Navy warships. NSRP is structured as a collaboration of 11 major U.S. shippards focused on industry-wide implementation of solutions to common cost drivers.

www.nsrp.org

## NSRP: Product Design and Material Technologies Panel (www.nsrp.org/panels/pdmt\_panel.html)

From "Past Events for the Product Design & Material Technologies Panel"

The U.S. Navy is leading in the United States in funding marine composite industry development projects and vessel prototype construction projects.

Most of the activity involves high speed inshore warfare craft.















#### "Overcoming Impediments to Using Composite Materials on Passenger-Auto Ferry Boats"

#### From the Conclusion:

"In order to speed acceptance, cost, performance, and long-term durability characteristics of composite materials in their finished form need to be better understood and regulatory approval must be established."

### Critical Requirements to Overcome Impediments:

- Development, testing and approval of composite structures for fire safety, and structural integrity in fires, to meet USCG regulatory approval for use in large passenger vessels.
- Uniform, non-proprietary standards for use by designers, shipyards and regulators to apply to large passenger vessels.
- Prove maintainability and durability in the marine environment over long service life, for example, up to 60 years in the case of Washington State Ferries.

## Possible Applications:

• Funnels, masts, deck gratings, handrails, piping system components may all be possible application where composite materials might be used to gain experience and acceptance.

