

Quarterdeck Meeting 2/1/12

- Spring Banquet set for April 11
 - Need nominations for:
 - Honorary Commodore
 - Outstanding Member
 - Outstanding Faculty
 - Outstanding Service Award
 - Nominations to Diane diane_schroth@gmail.com
- Great Lakes/Great Rivers Meeting February 23-24
 - Quarterdeck pays for everything except registration fee
 - All LNG
 - Thursday and Friday before spring break
- Presenter Miles Spratto of Newport News Shipbuilding
 - Graduated from Michigan last year
- Main points
 - Company summary
 - Facilities Infrastructure
 - Products
 - The Shipyard Experience
 - Why Newport News Shipyard
- Newport News
 - The sole supplier of nuclear aircraft carriers
 - Half of Virginia class attack subs
 - Largest industrial employer in Virginia
 - A quarter of the workforce there is engineers
 - Largest nongovernment organization fleet maintenance
 - Largest dry-dock and crane in the western hemisphere
- Started in 1887, now 550 acres, advanced labs, mostly construction, repair, and overhaul.
- The first nuclear carrier ever was built in 1958 at NNS and they built every one since
 - NNS does repair and overhaul
 - New mast and reactor fuel for example
 - From design to construction to delivery, NNS handles it all
 - Whole process takes about 7 years
 - Concept design
 - Trade studies, such as moving things, research and development under NAVSEA
 - Future designs
 - Detailed design
 - Design for ease of production
 - Utilize production model
 - Finalize stability and weights
 - Overhaul and repair

- Track and analyze weight changes
 - Design new systems to be put in
- Submarine Design, Construction, and Repair
 - Designed Los Angeles Class, and built half of those
 - Designed Seawolf class
 - Helped design Virginia Class
 - Building along with Electric Boat
 - LSV 2 – NNS project from concept to experimental tests, which is very rare
 - Team with Electric Boat to build Virginia Class subs
 - NNS builds entire submarine inside
 - Concept design
 - Improve current design
 - Ohio Replacement Program
 - Research and development for novel designs
 - Overhaul and Repair
 - Keeping track of everything that goes in and out while repairing
 - Alterations and improvements
 - Production
 - Support production of Virginia Class subs
- Other Things
 - Expanding into parallel businesses
 - Nuclear and Offshore energy
 - Commercial repair and overhaul
 - US Navy research and development
- The Shipyard Experience
 - Get a unique perspective on the life cycle of ships
 - Research and development
 - Concept design
 - Detail design
 - Production and Launching
 - Overhaul and refuel
 - Stability, margin and stability management
 - Decommission and disposal
 - You find a subfield that you like
 - You can do a lot of different things
- Why Newport News?
 - Design and build the most complex ships in the world
 - An opportunity to see calculations take shape
 - First class facilities
 - Advanced computer simulations
 - State of the art waterfront construction

- Expand skills and knowledge
 - Shipyard willing to pay for graduate degree
 - Professional organizations very involved in the area (SNAME, ASNE, etc.)
 - Mentorship by Naval Architects with 15+ years experience
 - You can only learn sub stuff there because no one else knows about it.
- “We shall build good ships here, at a profit if we can, at a loss if we must, but always good ships.”
- Q: Feelings on a non-body revolution?
 - Not doing new designs, just improving on current design
- Q: Subsafe?
 - Run by NAVSEA
 - Thresher went down, now pressure hull and reactor penetrations must all be checked. SUPSHIP in charge of that.
- Q: What is a typical intern job?
 - Weight and stability calculations
 - Clearance levels
- Q: Has the red tape of working with the government changed your outlook?
 - It should be streamlined
 - Just something you deal with
 - Working now to get everything as efficient as possible
- Q: Decommissioning challenges?
 - Enterprise in is poor shape (51 years old)
 - No one has done it
 - The nuclear reactor complicates it
 - NNS prides itself on no reactor accidents
- Q: Is NNS involved in AUV
 - Do more researched and development, which depends on the Navy
 - Work mostly on concepts