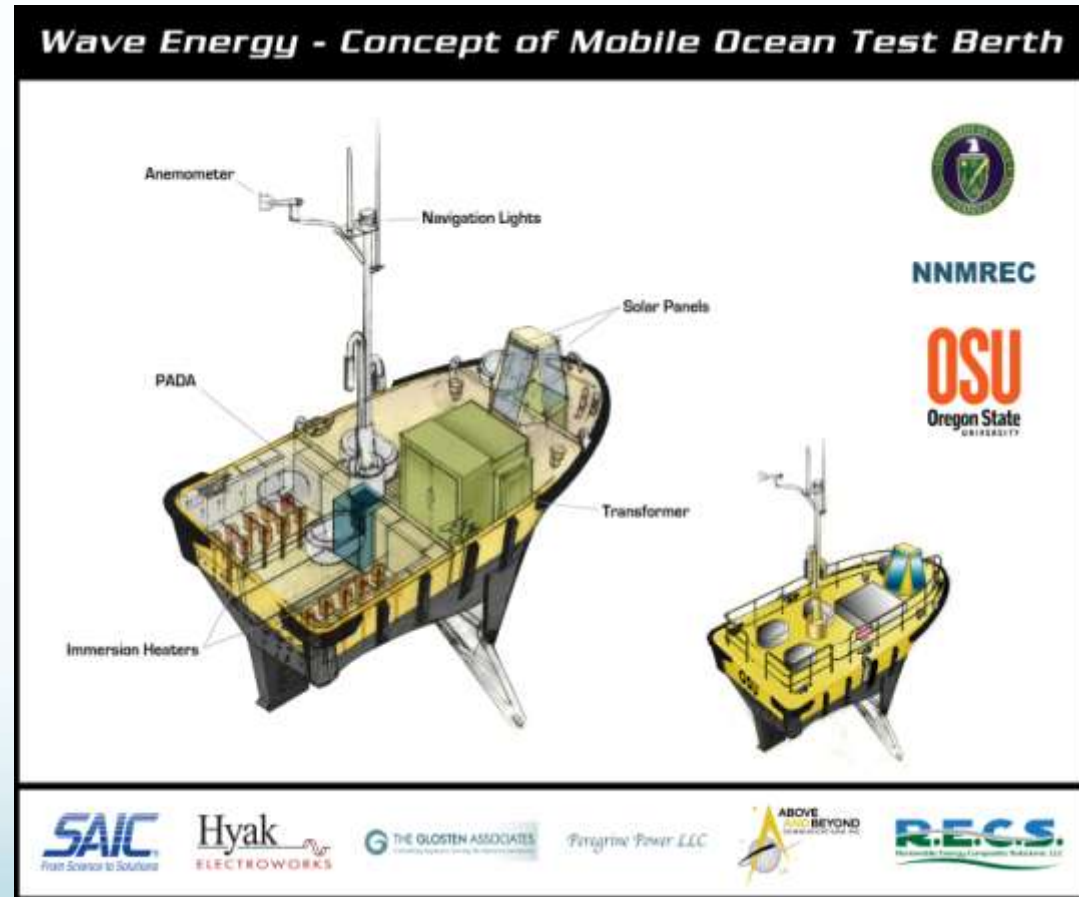


Global Marine Renewable Energy Conference, 2010

- Lessons from Other Industries
- Brad Given – Director of Operations
- Renewable Energy Composite Solutions
4400 SE Columbia Way
Vancouver, Washington 98661
Phone: (360) 759-2345
www.recompositesolutions.com



1 Megawatt – Mobile Ocean Test Berth

Shipbuilding Background



- Christensen Shipyards, Ltd.
 - 26 year history designing and building yachts.
 - 35 yachts delivered.
 - Lengths up to 164 feet.
 - Displacements up to 400 metric tonnes.
- A 164 foot Christensen takes 28 months to build and retails for roughly \$37 million.
- All yachts certified by the American Bureau of Shipping (ABS).
- Continuous improvements and upgrades.
- Yacht market saw a downturn in 2008.
- RECS is formed in January of 2009 with a focus on;
 - Hydrokinetic Energy
 - Wind Energy



Motor Yacht Lady Joy



Lessons Learned thru Experience

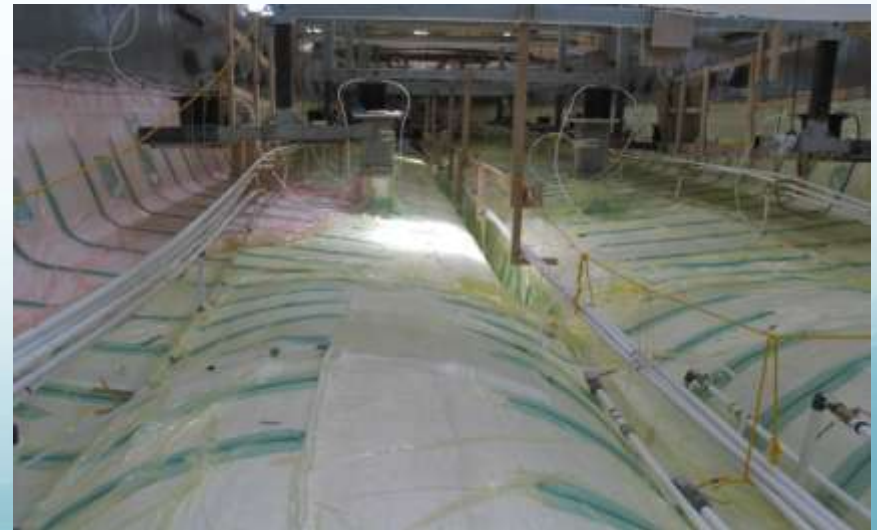


- Structures
 - Infused Composites
- Mechanical Systems
 - Propulsion Machinery
 - Hydraulics & Pneumatics
 - Piping
 - Ventilation
 - Fire Protection
- Electrical Systems
 - Power conversion
 - Remote Monitoring thru SatCom
- System Integration
 - Dynamic Positioning: integrates propulsion, steering, stabilizers, thrusters into one control.



Composites

- Fabrics
 - E-Glass, S-Glass, Kevlar & Carbon
- Fiber Architecture
 - Chopped Strand Mat, Woven Roving, Continuous Strand (stitched), Unidirectional, Triaxial
- Resins
 - Polyester, Vinylester, Epoxy & Thermoplastics
- Cores
 - Urethane, Cross Linked PVC, Linear & PET.
- Manufacturing Processes
 - Hand Layup
 - Vacuum Infusion
 - Resin Transfer Molding
 - Thermosetting or Melt Forming
 - Pre-pregs
 - Thermo-molding (stamping)



Thank You

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