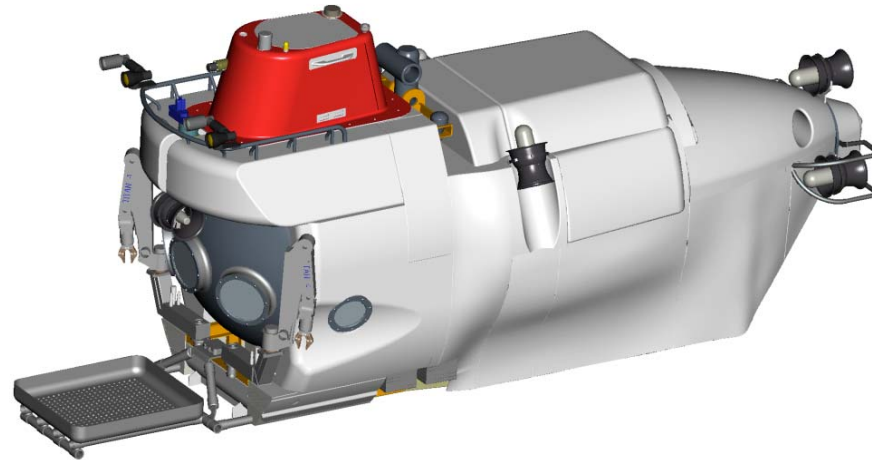


6500 HOV Project

- Design, Fabrication and Testing of the Personnel Sphere
Southwest Research Institute (SwRI) is prime contractor
- Design, Fabrication and Testing of the New Vehicle
Lockheed-Martin contract Canceled due to funding Shortfall
WHOI assuming the role of vehicle Primary Builder



Sphere Fabrication



**7-inch Viewport
Reinforcement**



Hatch & Reinforcement



**5-inch Viewport
Reinforcement**



Penetrator Plate



Hemi Forging



Advanced Imaging and Visualization Laboratory/Woods Hole Oceanographic Institution



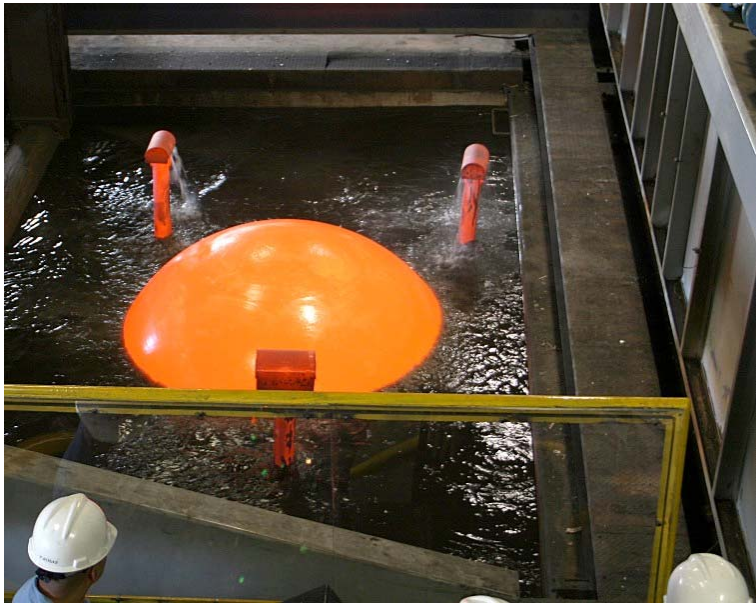
Final Processes at Ladish



Final Forged Shape Hemisphere
with ≈ 6 inch prolongation



Heat Treatment



Hemi Machining



Fixtured Hemisphere



Final Machining of Hemisphere



Sphere Milestones

- ✓ Forge 130" discs 09/28/07 - 05/16/08
- ✓ Forge discs into Hemispheres 06/24/08 - 06/25/08
- ✓ Heat treat Hemispheres 08/05/08 - 08/21/08
- ✓ Vacuum anneal Hemispheres 11/07/08 - 11/17/08
- ✓ Machine Hemispheres 11/18/08 - 03/17/09
- Girth weld sphere 04/20/09 - 04/24/09
- EB Weld Inserts 05/20/09 - 11/27/09
- Hydro Test sphere 06/24/10 - 06/16/10



Vehicle Design

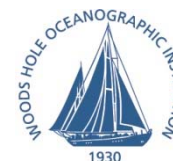
WHOI to design and build vehicle in a 2-Phased approach.

Phase I

- Install 6500 meter sphere
- Provide as many enhancements of the RHOV as possible

Phase II

- Replace 4500 meter components with 6500 meter



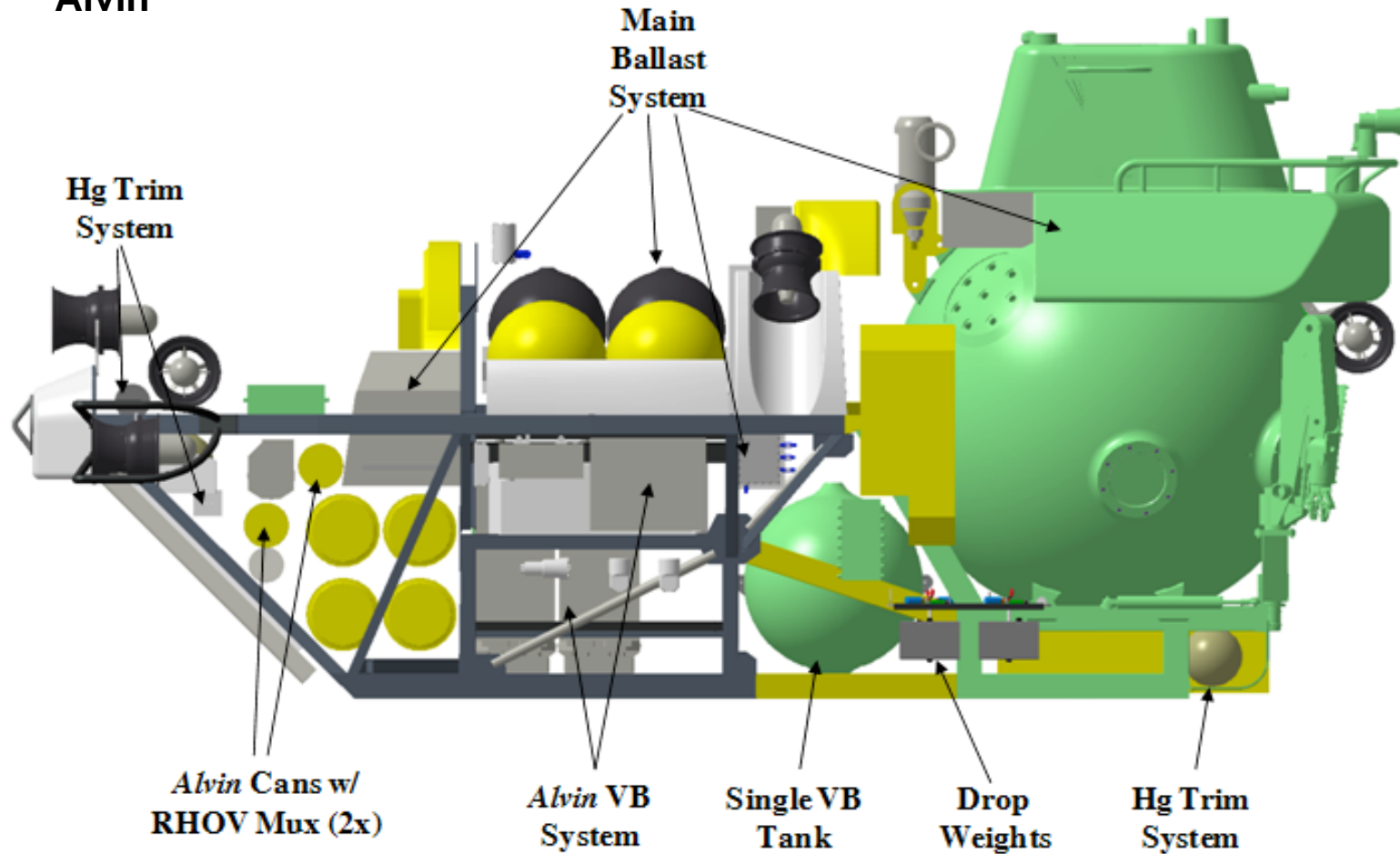
Vehicle Concept

Color codes:

Green RHOV

Yellow New

Other Alvin



New 6500 Meter Components

- Sphere
- Penetrators
- Forward section of frame
- Syntactic foam
- Pressure vessels



Alvin Recycled Components

- Syntactic foam
- Aft section of frame
- Implodable volumes
- VB pump
- Drop weights
- Mercury trim system
- Fairings



Vehicle Milestones

- Internal Design Review 03/27/09
- Preliminary Design Review 07/15/09 – 07/17/09
- Final Design Review 02/10 (estimated)

