DSV Alvin Specifications 2021

Crew:
1 Pilot, 2 Scientific Observers

Depth:
6,500 meters (4.1 miles)

Time submerged:
9 to 12 hours
Stage I Upgrade (4500 meter ops) - completed in 2013

- New personnel sphere (rated to 6500 meters)
- New electrical/optical penetrators
- New syntactic foam
- New command and control system
- Upgraded frame to support new sphere
- Upgraded life support system
- Minor modifications to remaining SOG systems
6500 Meter Conversion 2021
Routine system maintenance

6500m systems integration

- Aft bay foam blocks
- Ballast spheres
- P & S motor control housings
- Salt water pump
- Hydraulic plant
Stage II Upgrade - Underway

• Complete 6,500 meter syntactic foam integration
• New MB & VB H.P. Air Spheres
• New VB system
• New VB seawater pump
• New thrusters & motor controllers from 5 HP to 10 HP
• New hydraulic plant
• Install second schilling Titan manipulator
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Alvin Update

ALVIN ASSEMBLY UNDERWAY

personnel-sphere installation

syntactic foam fit-up

new system installation
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Alvin Systems Review

Imaging system upgrades

- New DSPL Optim 4K cameras on new P/T
- Wide angle DSPL Flex-link cameras
- Improved positioning of cameras
- Improved lighting positioning/separation
- Improved still cameras imaging
- Proxy videos created real-time in-hull
- Improved observer monitors
- Improved camera controllers

Data system upgrades

- Upgrade to Navigation (NAV-G 3.0)
- Replace 'Frame Grabber' with 'SEALOG' event logger
- Improved lighting positioning/separation
- Improved meta data display (tablets)
- Acoustic data transfer to surface (metadata, images)

- Apr 20 – May 20 Disassembly
- Jun 20 – Jun 21 Maintenance and modifications
- Feb 21 – Jun 21 Reassembly
- Jun 21 – Aug 21 Dockside Testing

- Sep 21 – Oct 21 Sea Trials, 6500m certification
- Oct 21 – Nov 21 Science Verification Expedition
Thank you!