

## OceanGate hits big milestone in effort to build a submersible for trips to the Titanic

BY [ALAN BOYLE](#) on August 23, 2017 at 5:11 pm



Workers survey the scene after a titanium ring is placed on the carbon fiber wound cylinder for Cyclops 2's pressure vessel. (OceanGate Photo)

[OceanGate](#) says it's completed assembly of the core pressure vessel for its Cyclops 2 submersible vehicle, which is due to take on the first crewed scientific expedition to the Titanic shipwreck in years.

The privately held company, based in Everett, Wash., said in a [news release](#) that it's finished bonding two titanium rings to the ends of a 56-inch-wide, 100-inch-long carbon-fiber cylinder, thus forming the core of the pressure vessel.

Tony Nissen, OceanGate's director of engineering, said bonding the rings to the cylinder marked a "major milestone" in the construction of Cyclops 2.

"The precision we achieved guarantees that we have a solid foundation to work with as we continue assembly of the sub," he said.

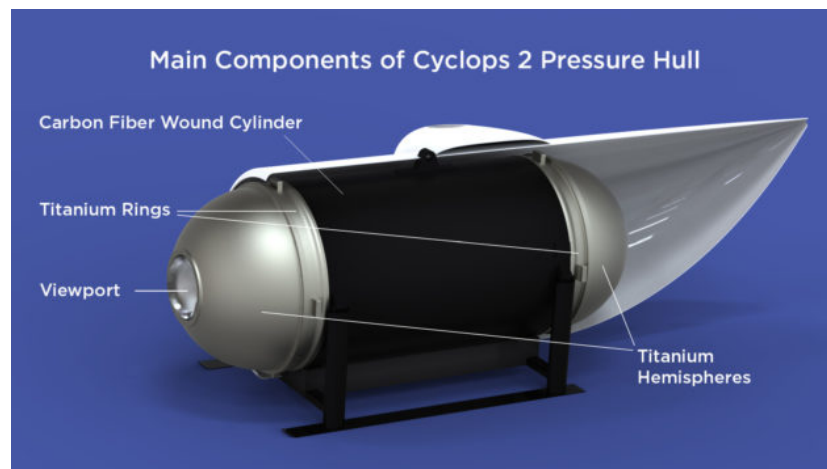
Youtube Video: [Bonding the Titanium Ring and the Carbon Fiber Hull](#)

There's lots more work yet to do: Workers at OceanGate's Everett facility have to outfit the submersible with electronics, navigation and life support systems.

Most of those systems are already in use on Cyclops 1, an OceanGate submersible that can dive as deep as 500 meters (1,640 feet).

Cyclops 2 is designed to go far deeper than Cyclops 1, to depths of 4,000 meters (13,000 feet). That's deep enough for a return to the RMS Titanic shipwreck, hundreds of miles off the coast of Newfoundland.

"Construction of Cyclops 2 is a significant step in advancing human exploration of the ocean. When completed, it will be the only privately owned submersible in the world that can take five people to depths of 4,000 meters," OceanGate CEO Stockton Rush said in today's news release.



A cutaway view of Cyclops 2 shows the main components of the Cyclops 2 pressure vessel and external fairing. (OceanGate Graphic)

The sub is slated to carry researchers down for a [series of annual surveys](#), following up on the last crewed scientific expedition in 2005 as well as robotic expeditions conducted as recently as 2010. A Russian submersible [took tourists down to the site](#) in 2012 to mark the 100th anniversary of the Titanic's loss, but there haven't been any visits since then.

If all goes according to schedule, Cyclops 2 will be put through its first in-water validation test dives this fall. Deep-water test dives would follow in early 2018, with the first Titanic Survey Expedition set for next June.

The scientific and engineering side of the effort is being handled in cooperation with the Woods Hole Oceanographic Institution's [Advanced Imaging and Visualization Laboratory](#) and the University of Washington's [Applied Physics Lab](#). But there's a tourist angle as well.

Some of the seats on the submersible [are being sold](#) for more than \$100,000 each. The tourist slots for the first round of dives have reportedly already been filled.