Visit the Titanic in OceanGate's Carbon Fiber Sub: Only $105,129

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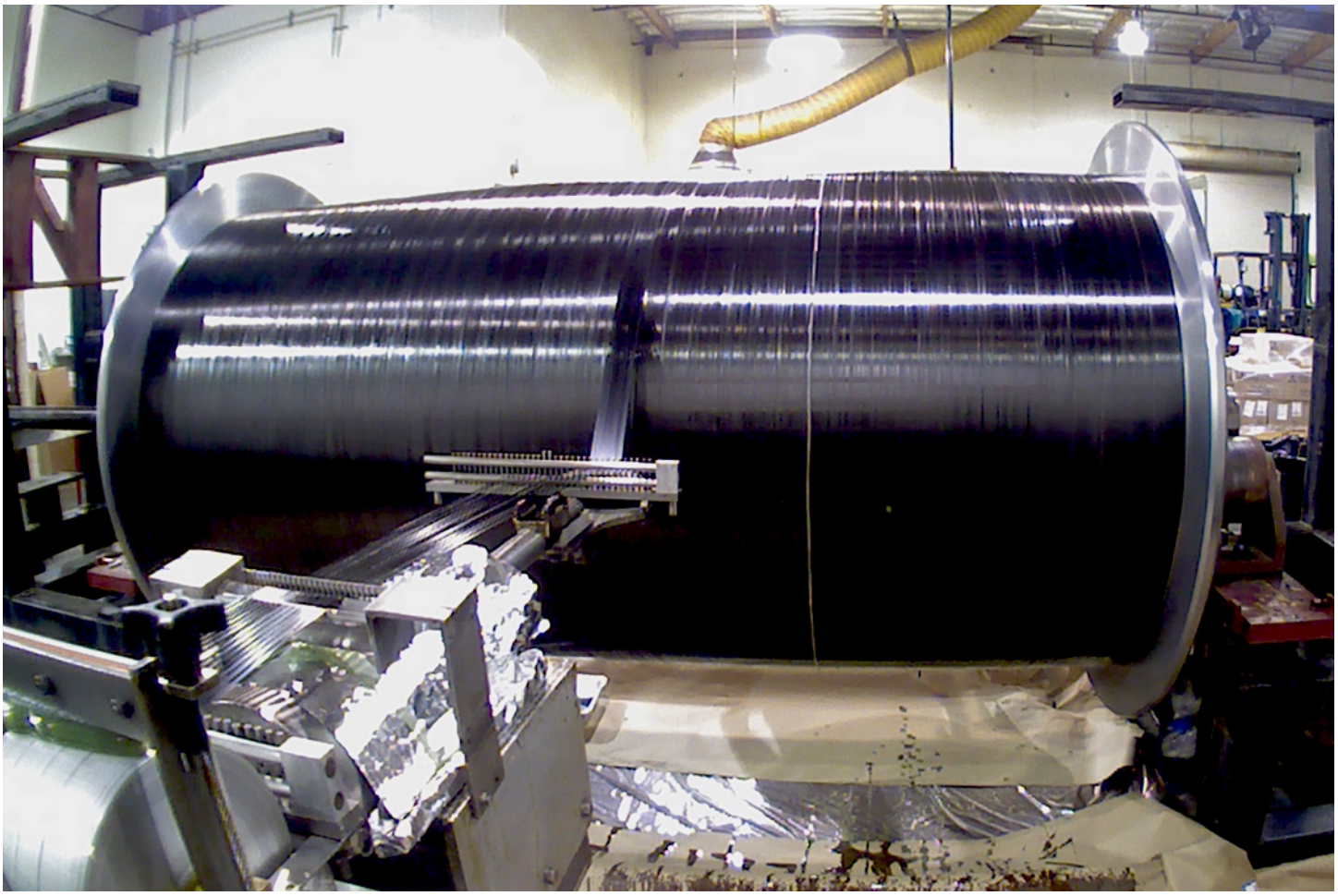
OceanGate's deep-diving carbon fiber submersible, now under construction, is designed to carry the company's intrepid, well-heeled clientele to a one-of-a-kind destination beginning next spring: the Titanic.

Stockton Rush, CEO of Everett, WA-based **OceanGate**, announced the expedition Tuesday, and said the 2018 dives—which would be the first manned expedition to the Titanic since 2005—have already sold out. The sub is on track for its first in-water tests later this year.

The ticket price? Take the 1912 price of a first-class ticket on the Titanic and adjust for inflation, Rush said. That's $105,129 per person, for a week-long expedition, including an opportunity to dive to the world's most famous shipwreck, resting about 12,800 feet below the waves of the North Atlantic.

Last week, **Spencer Composites Corp.** started winding carbon fiber to form the 56-inch-diameter, 100-inch-long cylindrical pressure hull of Cyclops 2, the vessel that will carry OceanGate's clients to the dark depths. **Titanium Fabrication Corp.** is machining two titanium hemispheres that will form the ends of the submersible.



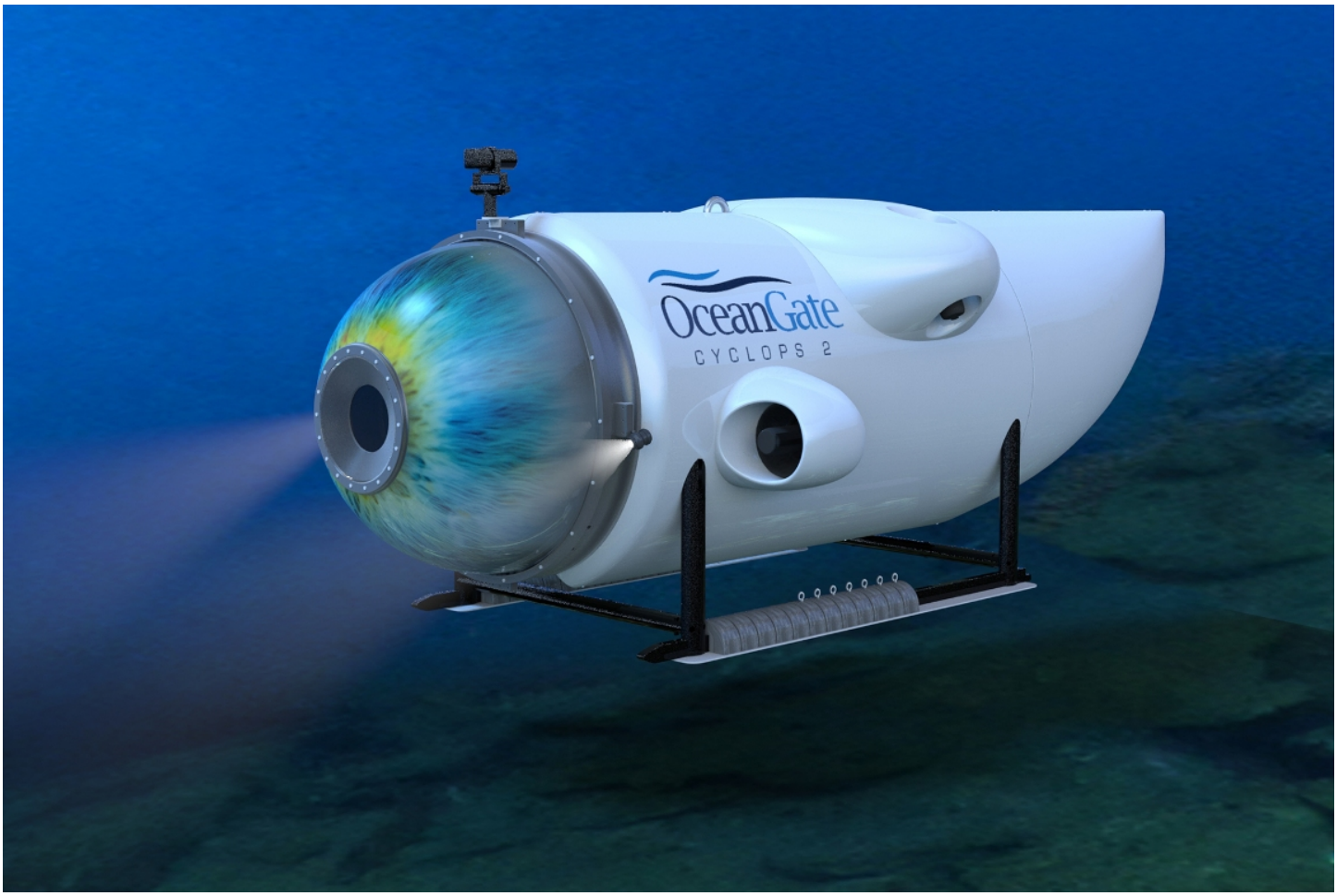
Carbon fiber windings to create the Cyclops 2 hull. Courtesy of OceanGate

Over the last seven years, OceanGate has refined thrusters, controls, sonar, guidance, and communications systems and deployed them on other submersibles, including the steel-hulled Cyclops 1. (See this **2015 story on a dive in Elliott Bay**,

and this one from 2016 about **a mission to the wreck of the Andrea Doria**.) Most of those systems can be directly transferred to Cyclops 2, Rush said.

“We’re very far down the development and operational curve,” he said. “We’re quite confident we will have Cyclops 2 in the water by November of this year.”

Rush, with assistance from a range of partners including the **University of Washington’s Applied Physics Laboratory**, **set out to make undersea exploration more comfortable for passengers, and more flexible for a range of applications** from adventure tourism to media production to scientific research. The carbon-fiber hulled Cyclops 2 is designed to extend that comfort and accessibility to depths that until now were the realm of government research vessels.



A rendering of the Cyclops 2, now under construction. Courtesy of OceanGate

The hull will have to withstand pressures of nearly 6,000 pounds per square inch. “It has to be extremely strong,” Rush said. “That’s the biggest challenge—compensating for that pressure, being able to handle it.”

OceanGate Expeditions conducts the missions, which should not be confused with a luxury cruise, or even with adventure tourism.

“We see it as exploration,” Rush said. “The difference between an adventurer and an explorer is an explorer collects data, whether that’s photographic data or notes. … We want our clients to come with a purpose.”

“This is a working mission,” he added.

OceanGate is collaborating with the **Advanced Imaging and Visualization Laboratory** at **Woods Hole Oceanographic Institution** to capture photographic images for use in creating a 3D model of the wreck. Technology partner **3D at Depth** is providing subsea LiDAR to collect laser scanning images of the Titanic, Rush said. Another technology partner, **iXblue**, is supplying OceanGate with an inertial navigation system that uses fiber optic gyros to detect the sub’s movements.

“Fundamentally what it allows us to do is to have guidance without GPS signals,” Rush said. “It’s very important as we transit the three miles down to the Titanic, that we know where we are when we get to the bottom.”

In addition to underwriting the cost of the expedition, the clients will have the opportunity to be “mission specialists,” and receive training to carry out tasks such as sonar operation, data collection and analysis, and underwater photography.

OceanGate co-founder and CEO Stockton Rush exits Cyclops 1. Photo by Benjamin Romano / Xconomy

OceanGate is tapping into the same ultra-wealthy market that companies such as Blue Origin, SpaceX, and Virgin Galactic hope will pay big bucks for journeys to space.

“The first nine clients to be approved and sign up and give us deposits are all Virgin Galactic future astronauts,” Rush said. “It tends to be a pretty good overlap between the individuals that want to go to space and the ones that would like to go to see the wonders of the ocean.”

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