

OCEANOGRAPHY

Aluminum Catamaran Planned for Ocean Study

► THE LARGEST ALUMINIUM-HULLED catamaran in the United States, a 106-foot-long, twin-hulled vessel is being constructed at the Baltimore yards of the Bethlehem Steel Corporation, for oceanographic research by the Johns Hopkins University.

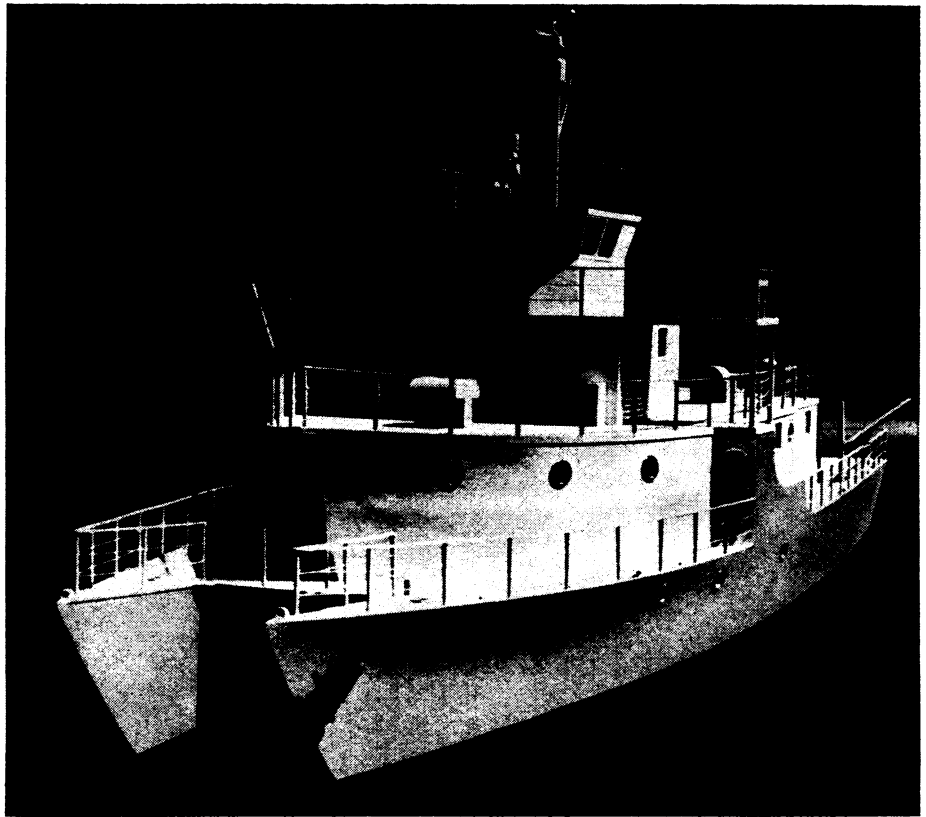
Aided by a National Science Foundation design-and-construction grant of more than \$1.5 million, the experimental craft will contain the most modern navigational and oceanographic equipment.

Dr. Donald Pritchard, professor of oceanography and director of the Johns Hopkins Chesapeake Bay Institute, said the craft's unconventional hull design permits high speed, shallow draft and stability.

"With this catamaran, hydrographic research can be extended further on the Atlantic continental shelf, and operations within the Chesapeake Bay will be less dependent on the weather."

The ship's streamlined, twin-hull design is expected to provide lateral stability and speed never before possible on oceanographic surveys. The 11-foot-wide well between the two hulls will provide a sheltered area for ocean-probing instruments suspended from the main deck.

• Science News, 90:15 July 2, 1966



Johns Hopkins

TWIN-HULLED CATAMARAN—Oceanographers from the Johns Hopkins University, Baltimore, will study the waters of the Atlantic with modern equipment housed on board this twin-hulled vessel. The ship, expected to be completed by January 1967, was designed by George E. Meese, Naval Architects and Marine Engineers, Annapolis, Md.

TECHNOLOGY

More Talk Underseas

► FISH between Florida and the Virgin Islands may soon be startled by an intruder: a 1,250-mile copper "snake" stretching all the way from Jacksonville to St. Thomas.

Inside the snake will be a constant flow of electrical impulses as up to 720 telephone calls—almost six times more than now—flash between the United States and the Caribbean.

Bell Telephone Laboratories devel-

oped the snake, part of what is called the SF system, and the American Telephone and Telegraph Corporation has asked the Federal Communications Commission for permission to lay it in place.

Within the snake's 1.5-inch-diameter copper skin is a 0.33-inch copper tube, separated from the outer one by a polyethylene core. Within the smaller tube are 41 strands of steel wire that are simply a spine, designed to strengthen the rest of the snake.

Telephone conversations will actually pass not through the copper, but through the plastic core, in the electric field between the two tubes.

After every 10 nautical miles of snake will be a device called a repeater, which boosts signals as they go by.

Unlike a lot of Space Age electronic

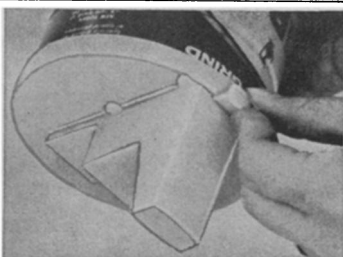
gear, which is advertised for the thousands of parts it contains, repeaters must be made as simply as possible, since they will be almost inaccessible on the ocean floor. The SF system model contains only 130 components, compared to the 200 in its predecessor.

The SF system gets its six-fold increase in voice capacity from an increase in bandwidth. This means that signals can be carried in a greater range of frequencies (2,224 kilocycles) than in the earlier SB system (144 kilocycles) or SD system (422 kilocycles). Signals going in one direction will not use the same frequencies as those going the other way.

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