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## Navy says sets record for futuristic gun

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By Jim Wolf

WASHINGTON (Reuters) - The U.S. Navy said it generated on Thursday the strongest-ever force of its kind used to fire a futuristic weapon designed to boost naval gunfire range more than 10 times by 2020.

The Office of Naval Research said it had demonstrated a "revolutionary" technology that could turn U.S. warships into super-long-range machine guns capable of firing relatively inexpensive rounds with near pinpoint accuracy.

Development of the so-called electromagnetic railgun began in earnest in 2006 under contracts awarded to BAE Systems and closely held General Atomics, which produces the Predator family of remotely piloted aircraft.

The system, when fully developed, would send an electric current along parallel rails to shoot a shell more than 200 nautical miles, or 230 miles, at seven times the speed of sound and within five meters of the target. Conventional guns, by contrast, rely on chemical powders to launch projectiles.

"Railguns are a big deal in science fiction," Tom Boucher, the test director, said by telephone from a naval laboratory in Dahlgren, Virginia, where the event took place.

"We have the largest (such gun) in the world firing the highest energy levels ever," he said in a telephone interview.

The energy used in the event equaled 10.6 megajoules, up from a previous record of nine in a Texas test in 1992, Boucher said.

A megajoule, or MJ, is a measure of energy sufficient to power a 100-watt light bulb for about three hours.

The test on Thursday fired a 3.2-kilogram projectile less than 100 feet at the Naval Warfare Center-Dahlgren Division in Virginia but achieved the speed needed to propel it 200 miles, Boucher said.

This was done by accelerating it to 2,500 meters per second, or 5,600 miles per hour, the Office of Naval Research said in a background paper.

Late 2007, BAE delivered to the Navy an experimental 32-megajoule electromagnetic railgun, a step on the road to a 64-MJ system to be deployed on U.S. warships starting in 2020.

Future U.S. Navy ships are to feature electric drive propulsion systems, which would power the advanced gun while keeping them further from harm's way.

This would slash storage requirements, boost shipboard safety and increase magazine capacity ten-fold, the Navy says.

"We've pushed the physics envelop today," said Cathy Partusch, a spokeswoman for the Office of Naval Research. "Now we aim to take the underlying science and technology to the next stages."

The Navy aims to mount a long-range demonstration of the system in 2016.

(Reporting by Jim Wolf, editing by Richard Chang)

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