

INTERNATIONAL SUBMARINE RACES™

NEWS:

For Immediate Release

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NAVY DIVERS PROVIDE SAFETY, SUPPORT AT HUMAN-POWERED SUBMARINE RACES

CARDEROCK, MD June 27, 2003 – U. S. Navy divers from Mobile Diving & Salvage Unit 2, Little Creek, VA., provided safety and support for the successful running of the 7th International Submarine Races, the biennial human-powered design competition at the world's largest indoor tank, the Naval Surface Warfare Center's Carderock Division David Taylor Model Basin June 23-27.

Thirteen divers from MDSU2 maintained shifts of up to 10 hours daily maintaining control of the submarine dive teams here to compete in the event. In all, 22 Navy divers helped during the five days of races by positioning the subs, attempting to protect them from damage and restraining them at the end of their 100-meter underwater sprints. They also provided continuous surface safety support to student dive teams underwater to work on their individual submarines.

Competitors in the ISR, future engineers and design entrepreneurs, produced a range of submarines from the sublime to the surreal. During the competition, both one and two-person submarines were powered and successfully navigated down a 100-meter underwater course in order to qualify. Competitors come from colleges, universities, technical high schools and independent teams from throughout the U.S., Canada and Mexico. Submarines in the event are wet, meaning that they are filled with water as they submerge, and the operators must breathe via scuba gear.

More than 150 volunteers provided the resources required to conduct the races, including teams of Navy safety divers and experts from the Carderock Division staff. In addition to MDSU2, divers participated from the Naval Reserve Mobile Diving & Salvage Detachment 507 from the Washington, DC area under the command of LCDR Chip Chase and Executive Officer LCDR Richard Balzano.

“The key to the safety and success of the International Submarine Race operations was teamwork,” said LCDR Chase. “Teamwork between the active duty and reserve divers, teamwork with the David Taylor facility and teamwork with the organizations sending teams to compete.”

Crashing into walls due to navigation mishaps was not uncommon and occurred to the sleek sub named Invid from the University of California at San Diego. On one of its runs it veered sharply into the wall and broke its nosecone. But in the spirit of the race, Navy divers and other teams offered help, and the sub was back and running again within hours. Subs frequently drifted off course, sometimes taking out underwater lighting and television stands.

At the ISR, propellers break, shearpins snap, hatches blow off, guidance fins don't work and control mechanisms jam or break. After their underwater mishaps, teams grab their tools to fix what went wrong. The problems are learning experiences that teach the contestants how to take their inventions from laboratory and workbench into the unforgiving underwater environment of the test tank and eventually the open ocean.

During the week, the 19 teams went through safety and engineering examinations, including formal presentations to an expert panel of judges on all aspects of the preparation of their submarines. Most boats made successful runs over the entire course, but a few couldn't and were forced to withdraw. The team holding the world's record for speed, just over 8 mph, Omer 5 from Montreal, Quebec, was unable to make its first run until Thursday, due to computer problems, but then achieved a blistering speed of 6.814 knots. Omer 5 is outfitted with sophisticated, computer-driven speed and directional aids for the one-person propulsor-navigator who provided the human power.

“We've seen some excellent designs from the student teams,” said chief judge Claude Brancart, a retired expert in underwater vehicles from Draper Laboratories. “We anticipated lively competition and that's exactly what we got.” Mr. Brancart and the other judges remarked on the significant progress being made in engineering and design capability by participants from technical high schools.

One of the most innovative entries was a team from Virginia Polytechnic Institute, Specter 1, that featured a composite nosecone wrapped around a one-person propulsor who provided thrust with a dolphin-like fin attached to the legs. It was the first half-human, half-fish entry seen in the 15-year history of the ISR. It achieved a speed of 3.52 knots Thursday and claimed a new world's speed record for human-powered alternative propulsion submarines.

This was the fourth time that the event was staged in the 3200-foot-long David Taylor test tank at NSWC. The ISR was created in 1988 with an open invitation to inventors and entrepreneurs of all stripes, and the first race was held in Florida the following year. It left the open ocean in 1995 and moved to Carderock, growing to include the participation of universities, colleges, corporations, research centers, high schools and privately sponsored teams from the United States, Canada, Mexico and Europe. Typical teams consist of student athlete/engineers, wearing scuba gear, who provide propulsion and navigation as their subs run against the clock along a fixed underwater course. The principal objective of the competition is education: encouraging innovation in the use of materials, hydrodynamic design, buoyancy, propulsion and underwater life support. Many team participants have gone on to professional engineering careers in the Navy and other ocean technology organizations.

“We are extremely pleased with the outstanding service provided to the ISR by the Navy divers,” said Nancy Hussey, chairman of the Foundation for Underwater Research and Education, of Williamsburg, VA, parent organization of the ISR. “Racing submarines is a very difficult challenge. Competitors must take an idea from concept to construction and then apply what they have learned in the classroom to the real world of the water. This demands the very best minds and ultimately, good teamwork and experience. We look forward to our next competition in 2005 and are delighted at the success of our partnership with the Navy divers and the Naval Surface Warfare Center’s Carderock Division.”

Participating Little Creed Navy MDSU2 divers: MMCM(MDV/SW) Mallet, master diver; DCC(DSW) Smith, leading chief petty officer; HMC(DV) Cockrill, DC2(DV) M. Kenefic, EM1(SW/DV/PJ) Doolittle, BM2(DV) Fortner, DC1(DV) Leete, HM1(SW/DV/FMF) Murray, MM2(DV) Workman, DC2(DSW) McMillion, BM1(DSW/SW) Parley, BMC(DSW/SW/PJ) Willoughby, and DC2(DSW) Jones. From USNR MDSU2 Det. 507, LCDR Chase (OIC), LCDR Balzano (EO), BM1(DV) Beaver and GM2 Salmon. From NAVSEA Supervisor of Salvage (OOC), Tom McCue; from NAVSEA Det. 1006, LCDER Walter Rickert; from Naval Facilities Engineering Service Center East Coast, Alex Viana; from Naval Reserve Voluntary Training Unit Atlanta, CDR Bernie Flank; from Naval Reserve Voluntary Training Unit, LCDR Stephen Phillips.

“The Naval Surface Warfare Center has been proud to host the 2003 International Submarine Races at its David Taylor Model Basin,” said Captain Steven Petri, USN, Division Commander. “We are pleased to be able to continue our support of such an outstanding educational and engineering endeavor.”

Participating teams:

Texas A&M University (Hullabaloo)	University of Washington (Sirius)
Virginia Tech University (Specter 1)	Virginia Tech University (Phantom 4)
University of Michigan (Mercury)	University of Quebec, Canada (Archimede 2)
University of Maryland (RSR Fourier)	University of Maryland (Terpedo)
Merchant Marine Academy (Jonah)	University of Veracruzana, Mexico (Archangelo III)
Millersville University, PA (Redemption)	Springstead High Schools, FL (Sublime)
Lafayette College, PA (Triakis)	Sussex County Tech High School, NJ (Umptysquatch-1)
Florida Institute of Technology (Miss FIT)	University of California at San Diego (Inviscid)
Ecole Polytechnique de Montreal, Canada (Omer 5)	Wheaton Submarine Works, Md. (Scuba Doo)
Bruce Plazyk, Wheaton, IL (Faux Fish)	

The building of human-powered submarines dates back more than 200 years. Contemporary ISR submarines represent many months, if not years, of effort in labs, workshops and garages by engineering students or individual entrepreneurs. The goal is to design an underwater vehicle that can be powered successfully through the course without malfunctioning, crashing into the bottom, popping to the surface or simply failing to move through the water