New Product Release:

November, 2012

ARROW, Tsunami Detection System (patent pending)

Mooring Systems, Inc. and Down East Instrumentation, LLC announce the release of a jointly developed Tsunami Detection System following nearly 2 years of development work.

The ARROW (Autonomous Real-time Reporting of Waves) system was conceived based on the need to address specific concerns with existing buoy based technologies now used for tsunami detection.

“Our goal was to design an alternative product that would add to the existing global tsunami detection network and provide a solution to the environmental, deployment, and budgetary challenges that these systems now face”.

The ARROW system differs from conventional systems as it is fully submerged 100 meters below the ocean surface while in its “ready” state and throughout its 2 year deployment cycle. If a Tsunami threat is detected, a hydrodynamic shaped pop-up buoy outfitted with an Iridium transmitter is released to the surface at a high speed ascent rate. Once at the surface, the tsunami threat data is transmitted via satellite to the warning centers.

The advantage of remaining fully submerged is the elimination of exposure to harsh environmental conditions on the ocean surface. Buoy and mooring damage caused by repetitive wave action and extreme weather is eliminated along with vandalism which has proven to be a serious problem in many regions around the world.

The ARROW system employs a proven technique of hydrostatically measuring the height of the water column using a high resolution pressure sensor and processing the data to determine if a tsunami wave passes above the sensor. The ARROW system uniquely sends the pressure data from the seabed located sensor to the processing electronics in the sub-surface buoy using a hardwired link. This link is also the sub-surface buoy’s mooring cable configured using jacketed wire rope. The signal is carried inductively through the wire rope providing a robust and direct connection to the processing electronics located 100 meters below the ocean surface. The fast ascent rate of the expendable pop-up buoy allows a quick response time between tsunami detection and satellite transmission.

Another unique aspect of this system is how the message is delivered from the satellite ground station. It is transmitted in e-mail form allowing the immediate alert message to be forwarded to all warning centers and any addresses designated by the government owning the system.

“The combined benefits of this system will allow easier to install and maintain tsunami detectors resulting in a larger network of coverage and warning capability”.

Interested governments and scientists can contact Mooring Systems, Inc. at sales@mooringsystems.com

Mooring Systems, Inc. 1227 Rte 28A Cataumet, Massachusetts, 02534 USA (www.mooringsystems.com)