

Press Release

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Yacht Sinking Averted Multiple Times with Machine Learning Technology

Charlotte, North Carolina – Market Spectrum, Inc. a leader of marine autonomous control, surveillance, safety and communication, under the brand name Nautic Alert, reported today the prevention of a yacht sinking at the dock on April 11, 2019 through the use of real-time Machine Learning able to detect patterns and events right onboard a yacht using IoT and edge computing, which proved as effective as detecting a pin-size leak.

On April 10th, the US-based Nautic Alert data analytic team contacted the owner of a Passport 55 Sailboat, to make him aware of what was suspected to be a developing leak on board, based on long-term collected data from the machine learning Nautic Alert Nevata HD bilge pump switch and controller. Upon physical inspection on April 11, 2019, the owner found a pin-size hole in a fresh-water line running to his icemaker, which had been installed a few weeks prior. This was actually the second occurrence for the owner and Nautic Alert's exceptional water detection abilities. The first time Nautic Alert warned of trouble was on the boat's maiden voyage, a week after taking delivery, when the on board washer machine unexpectedly started siphoning raw water from the drain outlet while heading down the East Coast and underway.

In fact, there have been other successful prevention stories from customers adopting Nautic Alert's exceptional technology. In August 2018, the owner of a new 55' power catamaran was about to make a crossing from the Bahamas to Bermuda. On a routine day of cruising around the Bahamas, the Nautic Alert team was notified of increased pump activity in the aft port engine compartment, but isolated to only while the boat was underway. The team immediately notified the owner over the Nautic Alert integrated satellite-based message terminal to ensure he was already aware of this issue, and he was able to quickly locate a raw water hose starting to work its way loose. During a later discussion, the owner attributed mitigating a potentially life-threatening situation to the Nautic Alert team, who picked up on this developing situation within hours of the problem forming, and prior to the crossing where he would have likely discovered the issue in an entirely different scenario.

Nautic Alert's Nevata HD bilge controller, a winner of Boating Industry's 2019 Best Product Award, provides a highly reliable bilge pump switch and controller that can detect virtually any bilge issue, and also intelligently auto-swap pumps. Traditional technologies are limited in the data they can produce and analyze, such as traditional float switches and high-water alarms. With Nautic Alert technology, customers and builders are presented with adequate meaningful data to empower proactive decision making. While many boaters may assume an issue is likely to develop on an older boat, the cases documented by Nautic Alert occurred on new boats under warranty. In other cases, the root cause of the problems originated from the engine and accessories, rather than a seacock or through-hull issue as one might have expected, thus preventing sizeable claims.

“Many other systems advertise they can detect pump irregularity issues, but to what extent should be questioned”, said Nick Velado, VP of Engineering at Nautic Alert. “We routinely check our customer’s data logs, proactively. When a customer orders Nautic Alert, the relationship begins at that point. When we pick up on an issue, many times, we have to look at weeks or months of previously reported data, which not only includes when the pump is being run, but for what duration, under what conditions, and many other factors and data sets that are proprietary and are helping form the future of AI (artificial-intelligence) in our cloud solution, that will one day soon be able to detect and notify these advanced events automatically. Monitoring, in general, has a very poor reputation with boaters, likely due to low cost technology and resulting false alerts. Marine is a very demanding and difficult environment for electronics, and we take a very different approach at Nautic Alert, and cater to a different type of boater and OEM that appreciates the engineering of our products”, said Nick Velado.

At the root of Nevata HD’s design is its ability to learn how the bilge pumps operate and see the water line, which enables it to intelligently detect a multitude of developing issues and provide pump redundancy. Unlike other solutions that are based on pump load feedback or high-water detection, Nevata HD combines disparate systems and uses measured and verifiable data in its decision making. In addition to this, complex data is gathered and sent to Nautic Alert’s Cloud for additional cloud-based analysis, which includes predictive failures and much more under development.

For more information, visit www.nauticalert.com

Press Contact

Leslie Velado
Market Spectrum, Inc.
leslie.velado@nauticalert.com
(800) 385-1674