

## Safety concerns from LED navigation lights Workboat Magazine, February 2019

studies that show South Carolina and neighboring states would benefit from billions of dollars in new tax revenue if East Coast reserves were discovered.

"Energy independence requires longterm planning, and taking advantage of the resources at hand," said Explore Offshore co-chair Jim Webb, the former Navy secretary and Democratic senator from Virginia. "It's basic common sense for us to be able to use American technology and know-how in order to explore the areas along America's Outer Continental Shelf to see what's out there and to have a discussion about where some of these areas might be opened up for oil production."

- K. Moore

# Safety concerns from LED navigation lights

In August 2018 the Coast Guard issued a marine safety alert on light emitting diode (LED) systems, warning that radio frequency interference from LED lamps creates potential safety hazards for mariners.

RF interference has been an issue since LED lamps came into use, and the Coast Guard is addressing it now after many reports of problems with VHF marine radio reception, digital selective calling on the radios and poor reception of automatic identification system (AIS) vessel tracking.

Interference noise is inconsistent and difficult to track down, often involving the routing of wiring, antenna locations and interference from interior LED lights. The Coast Guard recommends testing on board, including turning off LED systems on the vessel to see if interference stops.

For VHF radios, another suggestion is to try adjusting the squelch just where it cuts the audio on a vacant channel. If the noise comes back when the lights are on, LEDs are a likely culprit.

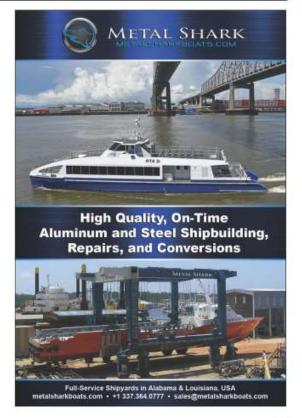


SignalMate manufactures LED navigation lights that are monitored for intensity.

LED lifespan in navigation lights is another issue. If you ask anybody who has an LED light how long it's going to last, chances are they will say 50,000 hours. But no one is sure where that number came from.

"You need good thermal management to give them long life," said David Horst, CEO of SignalMate, Baltimore, which manufactures navigation lights that meet Underwriters





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Laboratories (UL) standard 1104 and IMO requirements.

"The real problem with UL-1104 lights and inspected vessels are the codes set in the alarm panels," said Horst. Once the light burns, the filaments in incandescent lights open and set alarms. This forces the captain to go over to the panel and throw the switch from primary to secondary.

Over time, LED lights degrade in intensity, but the current to the panel doesn't change. SignalMate's UL-1104 goes one step further, Horst said.

"We're still counting the hours and letting you know the life of the light. It's more important for us to look at that intensity," he said. "Know the COLREGS (navigation rules). And if it's not COLREGS, I'm going to simulate an open filament. The processor then recognizes the LED is not 12 candelas. Nor is it (visible to) three nautical miles and shuts the light down.

#### **NEWS BITTS**

#### **AWO OUTLINES PRECAUTIONS FOR CYBERTHREATS**

The American Waterways Operators has released guidelines to help the U.S. tugboat, towboat and barge industry in identifying and managing cyberrisks and detecting and responding to cyberattacks or accidents.

The document, "Cyber Risk Management: Best Practices for the Towing Industry, Version 1.0," is available on the group's website at www.americanwaterways.com. It is the product of a year-long initiative by the Cyber Risk Management Quality Action Team, a working group of the Coast Guard-AWO Safety Partnership.

Recognizing that the companies that make up the towing industry are diverse in size and complexity and that one size won't fit all, the Quality Action Team encourages companies to take a tailored approach to cyberrisk management that incorporates a cyberrisk management policy and related procedures into a company's existing safety management system.

"As our industry continues to integrate cybersystems into all aspects of its operations in order to meet the demand for efficient maritime cargo transport, we recognize the importance of providing our companies with resources to mitigate against the growing range of cyberthreats," AWO president and CEO Tom Allegretti said in a statement.

- Ken Hocke

An alarm then goes off. The captain must throw the switch to the backup. Now they need to figure out what happened to that primary because they're required to have redundancy. We now have a modular design to take that lens off easily, throw another module in." The American Boat & Yacht Council (ABYC) took over control and management of the UL-1104 standard from UL and are currently rewriting it. The IMO has recognized this problem since 2007.

- Robin G. Coles

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