

# **The Future of Design for the Passenger Vessel Market: A Q&A with John Waterhouse**

*By Karen Rainbolt, FOGHORN Managing Editor*

**F**OGHORN Magazine recently caught up with John Waterhouse, PE, and Chief Concept Engineer at Elliott Bay Design Group (EBDG). A founding partner of EBDG, he strives to improve the vessel design and engineering process while serving as a mentor to the firm's young engineers. His works are extensively published, including several articles in FOGHORN (and a recipient of the David Clark Excellence in Editorial Award). John Waterhouse is a licensed Professional Engineer in the states of Washington, New York, North Carolina and Louisiana.

EBDG, with offices in Seattle and

New Orleans, offers naval architecture, marine engineering and production support for the commercial marine industry supplying service to owners, operators, shipyards and government agencies.

**FOGHORN: What's in store for the passenger vessel industry regarding designing vessels?**

**John Waterhouse, PE:** The state of economy means that vessel owners will want to ensure that the capital they put into their assets are good



*John Waterhouse, P.E.,  
Elliott Bay Design  
Group, Seattle, WA.  
Photo source: EBDG.*

long-term investments. Vessels being designed today are expected to last 40 to 60 years.

**What materials are in demand now when designing a vessel expected to be in serve six decades from today?**

**JW:** Savvy operators will want to know that the structure of their

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vessel is a smart choice for many reasons, including stability and durability, but also for maintenance over the long haul. That's why I expect to see a lot more aluminum vessels in the passenger vessel market.

### What are some of the advantages of constructing a vessel from aluminum rather than steel?

There are many advantages. One of the most important being that aluminum does not corrode, which should be important to the vessel operator who expects to have his vessel in service for many decades.

Secondly, the use of paint is greatly minimized on an aluminum vessel. This isn't just a cost savings; it's also more environmentally responsible to reduce the amount of paint used on a vessel.

Finally, when one compares the cost of aluminum to steel, it becomes quite competitive and aluminum may be the better buy.

**You mentioned environmental responsibility. Do you see "green" boats as being important in the**

### coming years?

Definitely! Going green is just good business and we'll continue to move in that direction. It just makes sense. For example, the recycled content of building materials, such as aluminum, is a major component to being green.

Of course, fuel efficiency is also incredibly important. It's greener due to the reduction of fuel consumption, but it also makes perfect business sense because of the considerable cost savings involved for the operator.

I believe that we'll see light-emitting diode (LED) lighting becoming quite popular as they use less energy and last a long time.

And, I fully expect to see the use of liquefied natural gas (LNG) enter the U.S. passenger vessel market. LNG has been used successfully in other countries, Norway, for instance, and I believe that we'll soon start seeing it here as well.

**Are there other trends that you think will impact our industry?**

We will continue to see electron-

ics and technology play ever-increasing roles in the design throughout passenger vessels. For one thing, there'll be more distribution for "smart" things to talk to one another around the vessel mainly through cabling, which likely means fiber optics.

Expect to find "intelligent data bus" plug-and-play devices become standard. From the HVAC system to the bartender's point of sales data, the need for information to be collected and analyzed will become more important for running a vessel efficiently and cost effectively.


As for the wired/wireless debate, that remains to be seen and will depend on a number of factors. For now, fiber optics are more robust and offer the best choice for operators.


**So, the future of the passenger vessel industry, from your perspective, looks pretty good?**

It looks very good! I'm optimistic about so many of the niches that comprise the passenger vessel industry. The ferries that were built in the 1960s are just now beginning to need to be updated, renovated, or replaced. So there's good news for those of us in that side of the business.

But, that's not all. Although the dinner boat operators have taken a bit of a hit due the economy, I think that we'll soon see that segment regains its strong customer base.


The same goes for the excursion and eco-tour vessel operators. They still offer a tremendous service and people love being on the water. I'm confident that the passenger vessel industry will do well in the coming years. ■



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