Q & A WITH

RICHARD MUELLER

CEO and President, NETSCo Inc.

By Heather Ervin, Editor in Chief

WITH THE International Maritime Organization's (IMO) deadline for compliance on the sulfur content of marine fuels and the installation of ballast water management systems (BWMS) looming, shipping companies have been scrambling to upgrade and retrofit their vessels in an adequate, efficient and cost-effective manner. In doing so, shipowners have been relying on experienced marine engineering firms to help them meet compliance.

Recently, *Marine Log* sat down with Richard Mueller, CEO and president of naval architecture and marine engineering firm NETSCo Inc., to discuss what his company is doing to develop future business in the commercial shipping industry and how its helping the industry stay compliant with IMO regulations.

Marine Log (ML): Could you tell our readers about your hybrid technology engineering services and what types of companies are showing the most interest in these services?

Richard Mueller (RM): We have always strived to be on the forefront of the technologies that we believe to have a real place in the market. Hybrid technology is one of those fields, as it can be beneficial in a variety of applications revolving around vessel emissions and requirements for peak shaving as well as energy efficiency. We've had inquiries from clients with dedicated tugs and offshore shipping vessels (OSVs), which is a perfect application for hybrid conversions.

ML: What interest are you seeing in the use of LNG as a marine fuel?

RM: We have seen a few requests at NETSCo for engineering or feasibility studies on using LNG as a marine fuel, but as with hybrid technology, the interest is limited to specific markets. Applications where LNG can be or already is a part of local infrastructure are seeing more volume in providing solutions for LNG owners. Our Florida office has more clients in this market compared to our Ohio office due to the fact that LNG is more readily available in the Southeast than in other parts of the country.

ML: The big issue right now is the IMO global sulfur cap. What are the basic things to consider when deciding between installing a scrubber or opting to burn compliant fuel? And what headaches do switching to compliant fuel produce for existing ships with existing engines?

RM: Unlike other environmental compliance issues, such as ballast water that offer no intrinsic financial value for the vessel owner, the decision to install a scrubber or switch to compliant fuel becomes an economic decision. Prior to a scrubber installation, a detailed analysis needs to be done that allows us to examine lifecycle operating and capital costs compared to the use of compliant fuel. This is all relative to the usefulness in regard to the remaining service life of the vessel and can sound like an easy comparison, but there are often many complicating factors. These factors include the age of the vessel, the trade routes involved and the other assets that will come under review in the owner's fleet. As for headaches, many of these main engines were designed for the heavier, higher sulfur fuels and switching to the new compliant fuels creates some operating issues for shipowners.

ML: What kind of help with compliance are owners asking you for?

RM: On the fuel side, they are asking for help with evaluating the economic feasibility of scrubbers versus switching to compliant fuels. Ballast water compliance is also a

huge topic right now. Our clients are looking for help with compliance date extensions, evaluating the proper technologies for their fleets and help with integration engineering, project management and training in addition to Vessel General Permit guidance for the EPA.

ML: You're the CEO of two companies, NETSCo Inc. and Choice Ballast Solutions. Which of these two companies is taking up more of your time right now?

RM: Right now, it's about an even split between the two businesses. Both companies are facing real growth challenges from increased workloads, international market expansion and the inherent difficulties with finding talented, experienced individuals for our increased staffing needs.

ML: At the end of March, you reported that you were involved with 30 BWMS retrofit projects. How many ships does that involve?

RM: For that report, it was 30 ships that NETSCo is performing system integration engineering on. However, those 30 vessels represent the possibility of at least another 30 to 40 ships in affiliated fleets and sister vessels that Choice Ballast Solutions and NETSCo are currently in progress soliciting. We have compliance-related work, feasibility studies and project management, in addition to the system integration engineering efforts. With the need for BWMS integration engineers increasing and the limited number of marine architecture and marine engineering firms experienced in doing these complicated retrofits, the teams at NETSCo and Choice Ballast Solutions are working hard to develop future business in this market segment.

ML: In very broad terms, what's a ballpark figure for the cost of BWMS retrofit on a vessel?

RM: That's a difficult question to answer, as there are many variables that can impact pricing. A fair estimation of a BWMS retrofit cost, including equipment purchasing, engineering and installation, can start at around $1 million for the smaller-flow UV systems and upwards of $3 million or more for the more complex, higher-flow and higher-volume electrochlorination or other active substance systems.

ML: Have you ever told a shipowner that early scrapping would make more sense than a BWMS retrofit?

RM: As a consultant to the shipowner, there are many factors that go in to considering scrapping a vessel. Our scope of work looks at the estimated costs for a particular vessel or class of vessels and validates what our clients may have already come to understand about their ship—that it is very difficult to invest millions into a vessel where there is no payback and only a limited remaining service life.

ML: In your opinion, what's the biggest mistake a shipowner can make when ordering a BWMS retrofit?

RM: Our experience has often been that the owners often wait until the last minute to place their orders and are often behind in their deadlines when they begin the necessary engineering work. The entire process takes longer than many owners think and they often simply wait too long to pull the trigger. Many owners believe the entire process is measured in six to nine months, when in fact they need to allow, at a minimum, 15 to 18 months, starting with the BWMS decision-making and including the regulatory approval process. Another big mistake NETSCo has seen owners make is in the selection of a treatment technology. Shipowners often start their research with the manufacturer using two criteria, Coast Guard approval and cost. The maker doesn't typically have the bandwidth on the other BWMS available to give non-biased advice on the bigger picture with regard to the specifics of the vessel or fleet of ships. Their decision on a BWMS will impact the operation of the ship (e.g. electrical capacity power) to support the system.

ML: Do any shipowners, anywhere, ever opt for a system that is not Coast Guard approved?

RM: Yes, of course! There certainly are some shipowners who, based on their particular trading routes, will not bring their vessels into the United States' territorial waters, and so for them, IMO-type approval is all they need for BWMS compliance.

Mueller consults with his team on a BWMS-retrofit project for a shipowner.