Charting a Course for Improvement
A Solution for Inadequate Ballast Water Management Systems

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Imagine your ship's ballast water management system (BWMS) has become the one piece of equipment that generates the most tension and operations issues every time your ship enters port.

Once a mere afterthought, the system now poses a multitude of challenges, from complex operating requirements that leaves the crew struggling, to non-existent service support causing vessel downtime and potential loss of revenues. And, what about those BWMSs that still require very expensive United States Coast Guard (USCG) Type Approval updates? Or, the systems that were not designed with energy efficiency in mind and now have a costly impact on overhead costs when using ship-to-shore power and which may even impact the vessels' efficiency rating?

The harsh truth is that many existing BWMS, though compliant when installed, are now unable to meet the strict standards set out in the IMO BWM Convention and the USCG protocols. For shipowners, these issues are not petty annoyances, rather they involve monetary losses, compliance liabilities, and operational inefficiencies – a trifecta of problems threatening to drag down both profit and efforts towards sustainability.

Amidst these various challenges, one question stands out: Rather than continue to try to patch up the old one, is it in fact time to consider a new ballast water management system?

If choosing replacement over expensive modifications, a window of opportunity presents itself to the shipowner — a chance to correct previous choices, a chance to do better.

It would be illogical for shipowners to replace a deficient BWMS technology with an identical one and then to expect different results, such a decision could be considered madness! Learning from the past and anticipating future regulations are essential steps in selecting a long-term viable solution for ballast water management. Today's choices must account for system effectiveness and flexibility as well as operational simplicity for the crew. In addition, Carbon Intensity Indicator (CII) conformity, and the impending goals of MARPOL Annex VI, necessitate that power efficiency be a top priority.

For those seeking answers, take comfort in knowing there is a reliable, tried-and-tested solution to this problem.

Case Study: EcoOne® Filterless BWMS

The EcoOne® filterless BWMS from Ecochlor, with its hybrid options, offers a combination of efficiency, reliability, and simplicity in ballast water treatment and stands out for its exceptional energy-saving abilities. It was engineered to have limited impact on shipping operations, and operates on remarkably low energy—just 10 kW for processing 3,500 cubic meters of water per hour (m^3/hr.). This performance marks a significant difference in many competitor systems, which can consume upwards of 500 kW under suboptimal conditions. The adjustment in power consumption isn't just marginal; it's a radical shift that reduces operational expenses and efficiency to a new level.

The Ecochlor Advantage:

The EcoOne® BWMS offers several compelling advantages:

- **Simplicity and Reliability**: It's remarkably easy for the crew to operate without the need for frequent adjustments whilst remaining highly effective in all water types.
- **Energy Efficiency**: There are significant reductions in power requirements, with no need to treat or neutralize when de-ballasting. The system also offers gravity ballasting options which present even more opportunities to minimize energy usage.
- **Regulatory Assurance**: The system meets the all the IMO and USCG regulatory standards for approved treatment flow rates up to 16,200 m^3/hr.
- **Unrivaled Support**: There is a dedicated global service team that is ready to provide support in three time zones to maximize vessel uptime along with reducing any maintenance headaches. By integrating the EcoOne® Filterless system, a vessel ensures compliance not only with the current BWM regulations but also supports with the

ship's further-reaching objectives of reducing fuel consumption and carbon emissions for MARPOL VI goals.

Financial Considerations and Long-Term Viability

Everyone recognizes that the costs associated with upgrading or replacing BWMS can be considerable and include not only the system's capital costs but also installation, maintenance, and operational overheads. Despite these costs, the long-term benefits justify the investment. Lower maintenance expenses, reduced risks of non-compliance penalties, and the wider operational flexibilities that comes from a more versatile technology solution are just a few of the financial incentives.

Additionally, non-compliance can be a costly gamble to shipowners. Consider the recent crackdown by the U.S. EPA – large financial settlements, expected to increase in the future, serve to remind everyone that non-compliance is nothing short of playing roulette with the company's operations and industry standing. Compliance is not just about regulatory obedience but about adopting systems, like the EcoOne® filterless BWMS, to avoid these problems in the first place!

Conclusion

With the clock ticking, compliance with Ballast Water Management Systems (BWMS) isn't just recommended, it's a critical necessity. The countdown to meeting D2 standards by September 2024 is on, followed by the end of the BWMS "Experience Building Phase." At this point, inaction, or delay in retrofitting an improved solution for BWM treatment for your ship is a recipe for failure. And, choosing to replace BWMSs with a subpar system, isn't a viable option; the risks are too great and the losses are too significant. ■

Fitting generator

Deckhouse installation