

## Reducing Uncertainty in Ballast Water Management Markets

by

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The “invisible hand” that helps determine supply and demand and creates winners and losers in normal markets cannot work in regulation-driven markets without the “visible foot” of a regulator with the skills and political support to use it. The future of regulation-driven ballast water management system (BWMS) markets will depend critically on the footwork of both IMO and USA ballast water (BW) regulators. There is a lot of talk these days about BW regulators in the USA plodding along too slowly by applying BWMS testing and certification criteria that are so rigorous and conservative no BWMS has yet been certified. That is certainly limiting the development of BWMS markets.

Far fewer complaints seem to be heard about IMO racing ahead too quickly by allowing 14 separate IMO member nations to certify over 50 different BWMS technologies, thousands of which have now been purchased and installed on ships, even though there has been widespread skepticism about many of them having been tested adequately and their ability to meet IMO's BW discharge standards. A recent study commissioned by the IMO confirmed these suspicions and concluded in a December, 2015 final report that “differences exist in how BWMS testing is carried out and how type-approval is granted” and that “a lack of publicly available documentation...may impair confidence in the (IMO) testing and approval regime”. The report did not address how IMO responses to study results might impact BWMS markets and recommended only that the IMO “consider the findings of the study...and take action as deemed appropriate.”

So, which poses worse threats to the future of BWMS markets and is less protective of the ocean environment: the USA using strict and transparent testing criteria and not yet certifying any BWMS; or the IMO process of allowing member nations to use greatly varying and sometimes unproven or unknown BWMS testing protocols and certification criteria, which has resulted in the creation of a global market for certified BWMS within which there is significant and justifiable uncertainty about which ones will actually be able to reliably meet IMO BW discharge standards?

Market research that earned the 2001 Nobel Prize in economics for three economists (George Akerlof, A. Michael Spence, and Joseph Stiglitz) indicates that there are two criteria for answering this question: how much uncertainty are USA and IMO strategies introducing into fledgling global BWMS markets, and how difficult will it be to eliminate that uncertainty. That research demonstrated conclusively how “quality uncertainty” destroys markets, prevents them from ever developing, or results in bad quality

forcing good quality out. In the case of regulation-driven markets, like markets for BWMS, this is particularly important because buyers and sellers in regulation-driven markets are only as quality conscious as regulators require them to be. If BW regulators do not impose strict quality criteria in BWMS markets from the beginning, bad quality will force out good quality and BWMS markets will not develop in a way that will allow them to take on the critical roles they need to play for BW regulations to succeed. It is that simple.

From this perspective, decisions by USA BW regulators to be rigorous and conservative about testing and certification criteria and to use understandable performance measures, such as the “living or dead”, seem to have far less potential to damage global BWMS markets than decisions by IMO to allow other national administrations to certify BWMS based on different sets of testing protocols and certification criteria and then, in response to widespread skepticism and research results, need to reassess its approach and “take action as deemed appropriate”.

It is understandable that vendors of BWMS that have received Type Approval Certification under the IMO process, and owners of ships who have installed them, would like the USA to accept existing IMO certifications in order to promote the development of global BWMS markets. And, some shipping industry pundits are expressing concern that the perceived USA “go it alone” strategy and the USA’s failure to certify a BWMS or accept IMO-based certifications are obstructing IMO’s ability to implement global BW regulations by inhibiting the development of BWMS markets. In fact the opposite is true.

While the USA strategy has not yet resulted in a certified BWMS reaching market; it also has not contributed to the “quality uncertainty” that is preventing global markets for IMO certified BWMS from developing. The USA strategy has also established reliable and predictive methods for testing and verifying the effectiveness of BWMS that will, in time, reduce quality uncertainty in global BWMS markets and allow buyers and sellers to invest with confidence and make informed price/quality tradeoffs.

It will be far more difficult for IMO to take action to reduce quality uncertainty in global BWMS markets and achieve similar results. Based on the recent IMO review this will most certainly require reversing previous IMO decisions regarding how BWMS are tested and certified (Guidelines G8). However, it will also require IMO to intervene somehow in global markets for IMO-certified BWMS to prevent lower quality/lower price BWMS from gaining or maintaining a competitive advantage over higher-quality/higher price BWMS that exist or could exist in these markets.

The success of BW regulations depends on the development of BWMS that can reliably meet BW discharge standards and the development of global markets for these BWMS that are large enough and reliable enough to allow widespread compliance. This will be impossible unless the IMO responds quickly and aggressively to the problems identified in the recent review of IMO-member nation testing protocols and certification criteria. Meanwhile, calls for the USA to relax its certification standards or accept IMO certifications are clearly calls for a step in the wrong direction. Instead, there should be calls for IMO to back up and get more in step with the USA.