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The BWT boom has arrived (really)

Preview

SMM 2018, Hamburg, Germany

Radically Rethinking Ballast Water

What if your ship could comply with the Ballast Water Management Convention without even fitting a treatment system? What if ports could essentially commoditise treatment by offering it shore-side? What if systems could use a technology that was failsafe – one that has been proven over almost 150 years? BAWAT CEO Kim Diederichsen welcomes you to a new world of ballast water possibilities.

The best ideas in life are usually the simple ones. You know when you have one. The muddled pieces of a mental puzzle suddenly fall into place, your eyes close in satisfaction, you raise your hands and, smiling broadly, mutter 'of course!'. Well, here's today's eureka moment for you.

There are 60,000 vessels in the worldwide fleet that are expected to install ballast water treatment (BWT) systems in the rush to comply with IMO's Ballast Water Management (BWM) Convention. The timeframe is short, the technology, for the most part, is relatively new and unproven, and the expense, for an industry that is balancing ever-tighter margins with uncertain demand, is considerable. It's a recipe for, if not disaster, then certainly a fair bit of pain and confusion.

But, what if these vessels didn't have to install systems at all? What if BWT solutions could be placed portside and ships could just plug into them, emptying their untreated ballast as a normal part of cargo operations?

No hassle, no punitive CAPEX, and no issues with either compliance or technology. That's right, eureka.

Photo: BAWAT

Ready to Roll

IMO has already paved the way for such a development in Regulation B-3.6 of the BWM Convention where it highlights the concept of Reception Facilities, or mobile BWT units. The guidelines offered, essentially that convention standards do not have to be met by individual vessels if they discharge ballast water into compliant reception facilities, were adopted by IMO in 2004 in its Guidelines G5. So the regulatory pathway has been cleared.

The technology is available too. BAWAT has developed a prime example of a simple, mobile solution. Fitting neatly into a single shipping container – either 30ft or 40ft dependent on the capacity needed – the system can be dropped off at, and moved between, any suitable locations. It works through the proven, everyday and wholly accepted technology of pasteurisation – whereby any potentially harmful organisms are eliminated by heating the ballast water during discharge. The process is effective at temperatures as low as 64 degrees centigrade. It's a one-pass solution with no need for any chemicals, UV, filtering or post treatment holding time.

It is as simple, effective and environmentally friendly as BWT is possible to be. It is also a business opportunity.

On hand to help

Several thousand vessels have now installed their own BWT systems and many more will follow. However, numerous industry reports, including one by classification society ABS last year, have highlighted a catalogue of problems with crew training, spare parts and technology, impacting upon successful operations. Imagine a future scenario with

your own vessel whereby issues with your on-board system means the crew can't treat the ballast water, and therefore can't discharge, and as a result can't undertake planned cargo operations at the destination. This could be a commercial disaster for your company.

But, if the destination port has a contingency solution – a shore-side treatment system – the vessel could, for an agreed fee, plug into it and continue cargo operations according to plan. This is a boon for shipowners and new source of income for the port, which will also be able to market itself positively on this new, added value service.

Reimagining BWT

However, we see the potential for a roll out of shore-side solutions that goes beyond contingency, moving towards standard practice and commoditized service.

There are around 7,000 ports in the world, with 835 of them processing more than 99% of world trade per annum. We see a future where every one of these major hubs has shore-side BWT systems that are either owned and operated by the port or, the more likely scenario, by established port service providers that already handle tasks such as potable water supply, bunkering, or dealing with vessel waste. These firms will have their own mobile solutions that can be moved around on flatbed trailers or barges to service clients as they arrive in port.

In this way BWT becomes a simple commodity service that is handled by dedicated providers, leaving the shipping companies to focus on their core operations.

A simple solution

Beyond ports, shipyards will also be able to make use of mobile BWT systems. There are around 18,000 dry-dockings per annum and each vessel undertaking taking its (at the most) once every five year stop will need to empty and clean its ballast water tanks for inspection. The yard will then have to dispose of the ballast water, which much be compliant with BWM Convention standards. It therefore makes sense for the yards to have systems in place to cope with the task and add another revenue stream/service to their dry dock menus. There are around 428 dry dock facilities worldwide, so the demand here is substantial.

The BWM Convention took well over a decade to be ratified due to the complexity of effectively managing and treating the world fleets' ballast water. However, remove the blinkers that force focus on the need for on-board systems and one realizes the solution to this pressing environmental problem maybe isn't that complex after all. Shore-side systems will save money for shipowners, reduce crew workloads and enhance efficiency, deliver complete peace of mind, and provide valuable new revenues and opportunities for ports, shipyards and forward thinking service providers.

Photo: BAWAT

BAWAT

BAWAT's unique pasteurization technology is IMO type approved by DNV GL and Bureau Veritas, with full USCG approval expected in the first half of 2019 (all land-based testing has now been successfully completed). The system is as suitable for on-board installation as it is for shore-side operation and can be delivered as a turnkey project, with 'in voyage' installation optional to maximize vessel earning potential. On-board systems use waste heat scavenged from the main engine to heat the water to its required temperature of between 64 and 72 degrees centigrade. Mobile, or contingency, solutions come with a boiler built into the unit, or with the possibility to plug into localised electricity supplies for heating. All systems are built with off the shelf components to ensure rapid delivery times. BAWAT is headquartered in Copenhagen, Denmark and was established in 2011.

www.bawat.com