Title: Ballast Water Management - An overview of technical solutions

ABSTRACT:

An effective ballast water management (BWM) has been a hot topic of discussion among the global shipping industry and scientific community over the years. As technology advances and industry insight matures, the search for the best BWM solutions continues. A variety of technologies are now available on the market for treating ballast water on ships.

However, no single system is suitable for all vessel types, sizes and operating conditions. It is therefore important to understand the strengths and weaknesses of each technology, so as to choose a system whose capabilities match the vessel and its sailing profile. One main factor for the selection of a ballast water treatment system (BWTS) is the economic aspect since the system can have a large impact on a vessel’s operating costs. Depending on the size of the vessel, its ballast water capacity and type of treatment, estimates show that the cost of implementation of the treatment systems can range from $500,000 to $5m per vessel. This is in addition to other maintenance and operational costs. Moreover, shipowners will also need to invest in training crew members to handle new equipment, ensuring that appropriate safety protocols are well established.

These compliance costs and other ancillary costs have been of significant concern to shipowners hence different alternative methods of BWM have been studied by scientific communities and discussed at various conferences and in various publications. Cetena would like to give an overview of the different BWTS technologies, the factors that should be taken into account when choosing the right BWTSs, the problems arising from retrofit installations and the most promising new concepts in ship design and alternative modifications to be exempted from BWM convention.