



# Supplier selection guide for ballast water treatment systems

An excerpt from “Making sense of ballast water management”





# The choice you make should mean peace of mind tomorrow

When selecting a major onboard system, the choice of supplier can be just as important as the choice of system itself. This is especially true in an application like ballast water treatment, where there are not only new technologies, but also a wide range of new suppliers to the marine industry. Considering that a ballast water treatment system should last the vessel's lifetime, there is no advantage in taking risks.

Recent clarification from the U.S. Coast Guard (USCG) puts this in the spotlight. In a blog post dated 22 September 2017, the USCG explains what happens if the manufacturer of a ballast water treatment system goes out of business. Simply put, the system cannot be operated, maintained or repaired with parts that

are not included in its type approval. So if no company purchases the technology and updates the type approval certificate within five years, the type approval will expire and no new parts will become available to keep existing systems in compliance.

In light of this, it becomes important to consider not only the capabilities of the ballast water treatment system, but also the capabilities and track record of its supplier. Global presence, marine history and repeat business are all worth evaluating as indicators of future reliability.

This document can be useful in such an evaluation. The text is an excerpt from "Making sense of ballast water management", a comprehensive guide to regulations and compliance alternatives. Chapter 5 and Appendix H, which are presented here in their entirety, offer concise background and a checklist for supplier discussions.



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[www.alfalaval.com/pureballast/knowledge/](http://www.alfalaval.com/pureballast/knowledge/)

# Supplier selection guide

As discussed throughout this book, there are numerous factors to consider when evaluating potential equipment suppliers for a ballast water treatment system. These factors relate not only to the operational strengths and limitations of the systems themselves, but also to the suppliers' own capabilities.

## Asking the right questions

The following is a summary of the most important questions to ask when considering a potential supplier in ballast water treatment. The questions highlight critical differences that will impact upfront system and installation costs, but more importantly the long-term costs over the system's lifetime.

A checklist for use in supplier discussions can be found in Appendix H.

### **1. Can the supplier ensure performance in widely diverse operating conditions?**

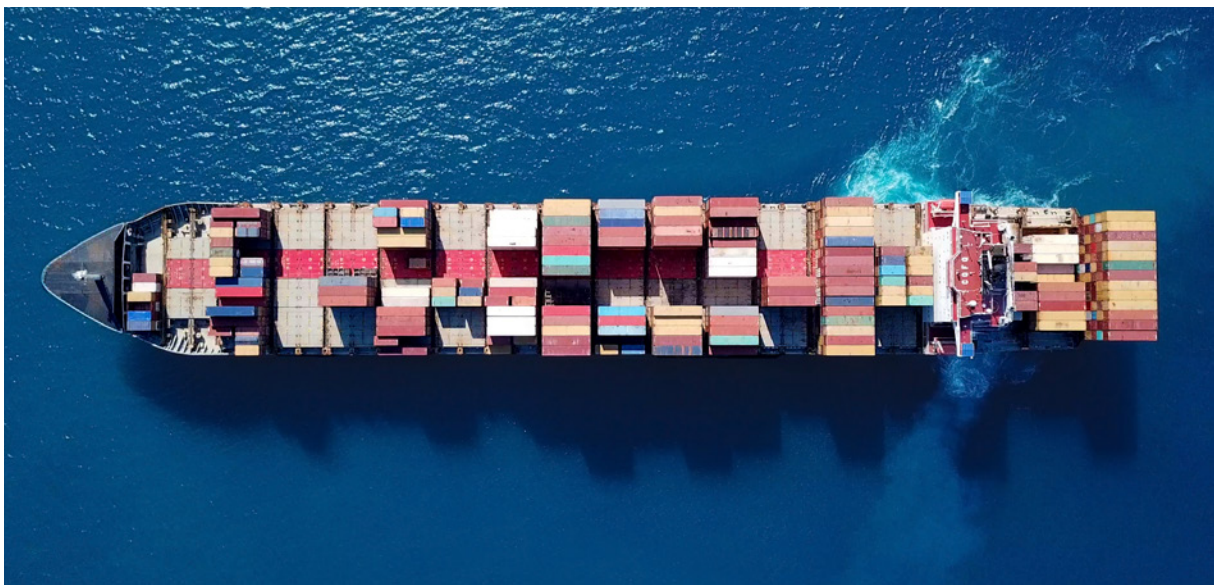
The supplier should provide a fully compliant ballast water treatment system without limiting the vessel's operations. The system should have both IMO and USCG type approval and offer a full range of options to avoid restricting the place or manner in which the vessel does business. It is important to make sure the system is capable of performing in fresh, brackish and marine water, as well as in all water temperatures. In the case of a UV treatment system, it should also perform in conditions where UV transmittance is low.

### **2. Has an authorized third party conducted type approval tests of the supplier's equipment?**

Type approval testing by an authorized third party is important to secure transparency, validity and ultimately system compliance. Third-party testing bodies can ensure a controlled testing environment and realistic test conditions, which will prevent system deficiencies from being overlooked. Much is known today about the control mechanisms needed to ensure compliance – serious suppliers seek third-party transparency and perform their tests with water that contains naturally occurring organisms to ensure compliance in all possible conditions.

### **3. Does the supplier have a long track record of working in the marine industry?**

Selecting a true marine supplier with extensive industry experience helps guarantee that a system has been designed with an understanding of the specific demands facing different types of vessels operating in a range of water conditions. For example, many UV treatment systems actually have their roots in drinking water treatment. Because they are adaptations of land-based technologies for water purification, they are less suited to common marine circumstances such as low UV transmittance. Choosing a system specifically developed for marine use avoids these problems.



#### **4. Is the supplier's system easy to install and operate?**

If the supplier has considered simplicity of installation, the system should offer a small footprint and flexibility of placement – which are particularly important for retrofits. A system that incorporates major components into the ballast water piping and requires no additional tanks or ventilation systems will generally be easier to install. Operation should be fully automatic with an intuitive control system interface, and there should be never be a need for manual intervention from the crew.

#### **5. Has the supplier received repeat orders from customers?**

Nothing says more about a ballast water treatment system or its supplier than the trust placed in them by customers. An extensive reference list is valuable, but the most important references are those where the same customer has purchased a system multiple times. The decision to purchase again, based on successful operation at sea, is the best seal of approval available.

#### **6. Has the supplier successfully installed a large number of ballast water treatment systems?**

The supplier's reference list should be examined critically for the number of systems installed and still in operation aboard both newbuilds and existing vessels. Retrofit projects in particular demand considerable coordination of numerous partners. The more extensive the supplier's experience in this area, the more likely the supplier's ability to facilitate a smooth installation, which is important for ensuring the proper performance of the system in the long term.

#### **7. Does the supplier have a track record of meeting delivery times?**

A spotless delivery track record is vital. If a supplier is unable to get equipment to the shipyard during the scheduled time slot, there can be a great deal of additional expense as well as lost income opportunities. This has become a critical issue with the entry of the BWM Convention into force, as the increased number of vessels installing treatment systems impacts the availability of equipment and shipyard slots.

#### **8. Can the supplier minimize time out of service for installation and commissioning?**

While the installation of a ballast water treatment system is a major undertaking, the supplier should be able to minimize the time during which the vessel is out of service. With smart supply solutions and good planning, it should be possible to limit downtime at a capable shipyard to two weeks. Some suppliers may also have the capability to perform much of the installation while sailing, without interrupting the vessel's normal course of operation.

#### **9. Does the supplier have global support capabilities?**

The ballast water treatment system is a solution that will be with the vessel for many years. This makes it important to choose a stable supplier with a strong global network, who can provide parts and long-term support wherever the vessel sails. In the unlikely event of a system failure, it is important to have 24/7 access to the supplier's services, no matter where the vessel is.

#### **10. Does the supplier have an extensive and flexible service offering?**

A ballast water treatment system is a major investment that requires expert maintenance to secure lasting, compliant performance. Periodic inspection and service from the original supplier can safeguard that investment by verifying full system functionality according to the system's type approval. A tailor-made performance agreement with the supplier is a flexible solution that offers the ideal service for the vessel's specific needs at a fixed, budgeted cost.



## Appendix H: Ballast water treatment system supplier checklist

The following checklist can be used when evaluating suppliers according to the key factors presented in this book. Rate each supplier on a scale from 1 to 5,

where 5 indicates the strongest performance in relation to the question. The higher the overall marks, the stronger the supplier.

Key criteria	Supplier A	Supplier B	Supplier C	Supplier D
Can the supplier ensure performance in widely diverse operating conditions?				
Has an authorized third party conducted type approval tests of the supplier's equipment?				
Does the supplier have a long track record of working in the marine industry?				
Is the supplier's system easy to install and operate?				
Has the supplier received repeat orders from customers?				
Has the supplier successfully installed a large number of ballast water treatment systems?				
Does the supplier have a track record of meeting delivery times?				
Can the supplier minimize time out of service for installation and commissioning?				
Does the supplier have global support capabilities?				
Does the supplier have an extensive and flexible service offering?				

