The approval processes

Technologies developed for ballast water treatment are subject to approval through specific IMO processes and testing guidelines designed to ensure that such technologies meet the relevant IMO standards (Table 1), are sufficiently robust, have minimal adverse environmental impact and are suitable for use in the specific shipboard environment.

A company offering a treatment process must have the process approved by a Flag Administration. In general the manufacturer will use the country in which it is based to achieve this approval, although this is not a specific requirement and some companies may choose to use the Flag State where the testing facility is based or the Flag State of a partner company. In general the Flag State will probably choose to use a recognised organisation - such as a classification society - to verify and quality assure the tests and resulting data.

The testing procedure is outlined in the IMO's Guidelines for Approval of Ballast Water Management Systems (frequently referred to as the ‘G8 guidelines’). The approval consists of both shore based testing of a production model to confirm that the D2 discharge standards are met and ship board testing to confirm that the system works in service. These stages of the approval are likely to take between six weeks and six months for the shore based testing and six months for the ship based testing.

![Fig 1. Summary of approval pathway for ballast water treatment systems](image)

* Includes chemical disinfectants, e.g. chlorine, ClO₂, ozone
† Includes techniques not employing chemicals, e.g. deoxygenation, ultrasound

Further requirements apply if the process uses an ‘active substance’ (AS). An AS is defined by the IMO as ‘a substance or organism, including a virus or a fungus that has a general or specific action on or against harmful aquatic organisms and pathogens’. For processes employing an AS, basic approval from the GESAMP Ballast Water Working Group (BWWG), a working committee operating under the auspices of IMO, is required before shipboard testing proceeds. This is to safeguard the environment by ensuring that the use of the AS poses no harm to the environment. It also prevents companies investing heavily in developing systems which use an active substance which is subsequently found to be harmful to the environment and is not approved.

The GESAMP BWWG assessment is based largely on data provided by the vendor in accordance with the IMO approved Procedure for Approval of Ballast Water Management Systems that make use of Active Substances (frequently referred to as the ‘G9 Guidelines’).

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1 Guidelines for approval of ballast water management systems (G8) IMO resolution MEPC125(53)
2 Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection. An advisory body established in 1969 which advises the UN system on the scientific aspects of marine environmental protection.
3 Procedure for approval of ballast water management systems that make use of active substances (G9) IMO resolution MEPC126(53).