

Anti-fouling systems

The International Convention on the Control of Harmful Anti-fouling Systems on Ships, which was adopted on 5 October 2001, will prohibit the use of harmful organotins in anti-fouling paints used on ships and will establish a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems.. The convention entered into force on 17 September 2008.

Under the terms of the Convention, Parties to the Convention are required to prohibit and/or restrict the use of harmful anti-fouling systems on ships flying their flag, as well as ships not entitled to fly their flag but which operate under their authority and all ships that enter a port, shipyard or offshore terminal of a Party.

Annex I attached to the Convention states that by an effective date of 1 January 2003, all ships shall not apply or re-apply organotins compounds which act as biocides in anti-fouling systems, and by 1 January 2008 (effective date), ships either:

- (a) shall not bear such compounds on their hulls or external parts or surfaces; or
- (b) shall bear a coating that forms a barrier to such compounds leaching from the underlying non-compliant anti-fouling systems.

This applies to all ships (except fixed and floating platforms, floating storage units (FSUs), and floating production storage and off-loading units (FPSOs) that have been constructed prior to 1 January 2003 and that have not been in dry-dock on or after 1 January 2003.

Ships of above 400 gross tonnage and above engaged in international voyages (excluding fixed or floating platforms, FSUs and FPSOs) will be required to undergo an initial survey before the ship is put into service or before the International Anti-fouling System Certificate is issued for the first time; and a survey when the anti-fouling systems are changed or replaced.

Ships of 24 metres or more in length but less than 400 gross tonnage engaged in international voyages (excluding fixed or floating platforms, FSUs and FPSOs) will have to carry a Declaration on Anti-fouling Systems signed by the owner or authorized agent. The Declaration will have to be accompanied by appropriate documentation such as a paint receipt or contractor invoice.

Anti-fouling systems to be prohibited or controlled will be listed in an annex (Annex 1) to the Convention, which will be updated as and when necessary.

The Convention includes a clause in Article 12 which states that a ship shall be entitled to compensation if it is unduly detained or delayed while undergoing inspection for possible violations of the Convention.

The Convention provides for the establishment of a “technical group”, to include people with relevant expertise, to review proposals for other substances used in anti-fouling systems to be prohibited or restricted. Article 6 on Process for Proposing Amendments to controls on Anti-fouling systems sets out how the evaluation of an anti-fouling system should be carried out.

Resolutions adopted by the Conference

The Conference adopted four resolutions:

Resolution 1 Early and effective application of the Convention – This resolution requests Member States to prepare to be bound by the Convention and urges relevant industries to refrain from marketing, sale and application of the substances controlled by Annex 1 of the Convention.

Resolution 2 Future work of the Organization pertaining to the Convention – The resolution invites IMO to develop guidelines for brief sampling of anti-fouling systems; guidelines for inspection of ships; and guidelines for surveys of ships. The guidelines are needed in order to ensure global and uniform application of the articles of the Convention which require sampling, inspection and surveys.

The following have been developed and adopted:

- Guidelines for survey and certification of anti-fouling systems on ships - adopted by

Related Documents

 [Focus on IMO: Anti-fouling Systems \(2002 paper\) for background information \(272 KB\)](#)

Related Links

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The following have been developed and adopted:

- Guidelines for survey and certification of anti-fouling systems on ships - adopted by resolution MEPC.102(48);
- Guidelines for brief sampling of anti-fouling systems on ships - adopted by resolution MEPC.104(49); and
- Guidelines for inspection of anti-fouling systems on ships - adopted by resolution MEPC.105(49).

Resolution 3 Approval and Test Methodologies for Anti-Fouling Systems on Ships – This resolution invites States to approve, register or license anti-fouling systems applied in their territories. It also urges States to continue the work, in appropriate international fora, for the harmonization of test methods and performance standards for anti-fouling systems containing biocides.

Resolution 4 Promotion of Technical Co-operation – The resolution requests IMO Member States, in co-operation with IMO, other interested States, competent international or regional organizations and industry programmes, to promote and provide directly, or through IMO, support to States in particular developing States that request technical assistance for:

- (a) the assessment of the implications of ratifying, accepting, approving, or acceding to and complying with the Convention;
- (b) the development of national legislation to give effect to the Convention; and
- (c) the introduction of other measures, including the training of personnel, for the effective implementation and enforcement of the Convention.

It also requests Member States, in co-operation with IMO, other interested States, competent international and regional organisation and industry programmes, to promote co-operation for scientific and technical research on the effects of anti-fouling systems as well as monitoring these effects.

Background

Anti-fouling paints are used to coat the bottoms of ships to prevent sealife such as algae and molluscs attaching themselves to the hull – thereby slowing down the ship and increasing fuel consumption.

The new Convention defines “anti-fouling systems” as “a coating, paint, surface treatment, surface or device that is used on a ship to control or prevent attachment of unwanted organisms”.

In the early days of sailing ships, lime and later arsenic were used to coat ships' hulls, until the modern chemicals industry developed effective anti-fouling paints using metallic compounds.

These compounds slowly "leach" into the sea water, killing barnacles and other marine life that have attached to the ship. But the studies have shown that these compounds persist in the water, killing sealife, harming the environment and possibly entering the food chain. One of the most effective anti-fouling paints, developed in the 1960s, contains the organotin tributyltin (TBT), which has been proven to cause deformations in oysters and sex changes in whelks.

The adoption of the new Convention marked the successful outcome of the task set by Chapter 17 of Agenda 21 developed by the 1992 Rio Conference on Environment and Development. Chapter 17 called on States to take measures to reduce pollution caused by organotin compounds used in anti-fouling systems.

The harmful environmental effects of organotin compounds were recognized by IMO in 1989. In 1990 IMO's Marine Environment Protection Committee (MEPC) adopted a resolution which recommended that Governments adopt measures to eliminate the use of anti-fouling paint containing TBT on non-aluminium hulled vessels of less than 25 metres in length and eliminate the use of anti-fouling paints with a leaching rate of more than four microgrammes of TBT per day.

In November 1999, IMO adopted an Assembly resolution that called on the MEPC to develop an instrument, legally binding throughout the world, to address the harmful effects of anti-fouling systems used on ships. The resolution called for a global prohibition on the application of organotin compounds which act as biocides in anti-fouling systems on ships by 1 January 2003

In November 1999, IMO adopted an Assembly resolution that called on the Member States to develop an instrument, legally binding throughout the world, to address the harmful effects of anti-fouling systems used on ships. The resolution called for a global prohibition on the application of organotin compounds which act as biocides in anti-fouling systems on ships by 1 January 2003, and a complete prohibition by 1 January 2008.

This instrument was adopted as the International Convention on the Control of Harmful Anti-fouling Systems on Ships.

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