

**A well applied ballast tank coating = green ballast tank coating**

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When a ship reaches the end of its service life it is broken down at a demolition site to recover steel and other useful items. The recycling process itself imposes risks to the human health and safety, as well as to our habitat by sending toxic components into the atmosphere and the maritime environment. Not all parts and products can be recycled and thus waste, toxic and non-toxic, is generated. Extending the service life of a ship can contribute to the protection of human life and the environment.

The same is valid when looking at the service life from the ship construction point of view. If the service life of a ship is extended less ships have to be built. To estimate the energy consumption of steel production Javaherdashti (2008) suggests that the energy required to produce one ton of steel is approximately equal to the energy an average family consumes over 3 months and roughly worldwide one ton of steel turns into rust every 90 seconds (Javaherdashti, 2008). The service life of a ship is not determined by the external battering of the ship's hull by wind and waves but mainly by the internal gradual corrosion of the ballast tanks (Thapar, 2013). The latter implicates that a coating with a longer service life will have a direct impact on the life cycle of the ship, the toxic components send into the atmosphere and the energy consumption.

Most ballast tanks are prepared and coated according to the IMO Performance Standard for Protective Coating (PSPC), using a light-coloured epoxy coating that, when on board maintenance is being performed by the crew, should remain in a good condition for 15 years. Ship owners are not only pushed by international legislation (IMO, 2009) but also by commercial needs in preserving a good reputation, to keep the ballast tanks of their vessels in a good condition to avoid extra inspections and costs. Aiming to extend the service life of your vessel to 25 years with ballast tanks in a good condition, a full-recoat must be considered. Recoating is bad for the environment as toxic components are sent into the atmosphere.