



NON-TAR TYPE EPOXY RESIN PAINT COMPOSITIONS, PAINTING METHODS OF
OUTSIDE SHELLS OF SHIPS' HULLS AND PAINTED SHIPS' HULLS

ABSTRACT

The non-tar type epoxy resin paint composition of the invention comprises (a) a bisphenol epoxy resin, (b) a vinyl chloride copolymer and (c) a hardener comprising a polyamide or its modified product. The vinyl chloride copolymer (b) is preferably a vinyl chloride/alkyl vinyl ether copolymer. The heavy-duty coating film of the invention is a film formed from the above-mentioned paint composition. The paint composition shows excellent performance as a heavy-duty coating composition employable for all of the ship parts, such as an outside shell, exposed deck, super structure, hold and ballast tank. If the surface of the heavy-duty coating film (film of the paint composition) is coated with organotin-free hydrolyzable antifouling paints or various top coats, excellent adhesive strength between the heavy-duty coating film and other films can be provided. The painting method of an outside shell of a ship's hull according to the invention comprises the steps of coating (i) a bottom of a ship's hull or (ii) a bottom and a boot topping of a ship's hull with a non-tar type epoxy resin heavy-duty coating composition as a primer to form a primer film, and then further coating the surface of the primer film with an organotin-free hydrolyzable antifouling paint. The above-mentioned non-tar type epoxy resin paint composition is favorable as the heavy-duty coating composition. In this painting method, films having excellent anticorrosive properties, weathering resistance and antifouling

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76

properties can be formed with few kinds of paints. Therefore, the method can accomplish shortening of the painting time and reduction of the costs for paint storage and is advantageous in the hygienic qualities for painting workers and the environmental protection. The painted ship's hull of the invention has a non-tar type epoxy resin heavy-duty coating primer film applied on (i) a bottom of the ship's hull or (ii) a bottom and a boot topping of the ship's hull and has an organotin-free hydrolyzable antifouling film applied on the primer film.

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