evaporation of water in the circulation cooling water system is suppressed, which is preferable.

[0042]

The circulation time of the circulation cooling water system is preferably 20 to 30 hours, more preferably 20 to 28 hours and still more preferably 20 to 24 hours.

When the circulation time is 20 hours or longer, a favorable corrosion-preventing effect can be obtained. In addition, when the circulation time exceeds 30 hours, since it is not possible to expect enhancement of the corrosion-preventing effect that is proportional to the time, the circulation time is preferably 30 hours or shorter from the viewpoint of the corrosion-preventing effect.

[0043]

Step (2)

In the initial treatment method, it is preferable to provide a step (2) of adding one or more zinc compounds selected from the group consisting of zinc and zinc salts into the circulation cooling water system after the step (1).

The zinc compound has an effect of suppressing a cathode reaction on the surface of the metal member in the circulation cooling water system as opposed to the tartaric acid compound has an effect of suppressing an anode reaction on the surface of the metal member. Therefore, the step (2) provided after the step (1) makes it easy for a more excellent corrosion-preventing effect to be obtained by a synergistic effect of the tartaric acid compound and the zinc compound.

When the tartaric acid compound and the zinc compound are added at the same time, a tartaric acid ion acts as a dispersant on a zinc ion, which makes it difficult to obtain a favorable corrosion-preventing effect.

[0044]

The zinc compound is a compound selected from the group consisting of zinc and zinc salts. Examples of the zinc salts include zinc chloride and zinc sulfate. One of the above-described zinc compounds may be used singly or two or more thereof may be used in combination.

[0045]

The concentration of the zinc compound added in the circulation cooling water system is preferably 1 to 50 mg/L, more preferably 2 to 30 mg/L, still more preferably 3 to 20 mg/L and particularly preferably 3 to 10 mg/L in terms of zinc.