Abstract

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Study of Sacrificial Cathodic Protection on Marine Structures in Sea and Fresh Water in Relation to Flow Conditions

The extent of corrosion between a miniature steel ship model at different relative velocities of seawater fitted with commercial sacrificial anodes of aluminum (Al) in sea water and magnesium (Mg) in freshwater is studied. The experimental results show that the degree of cathodic protection represented by the cathode potential at a given distance from different types of sacrificial anodes decreases slightly with increasing the relative velocity. The results also show that the amount of Al Mg required to protect the ship cathodically increase with increasing relative velocity.