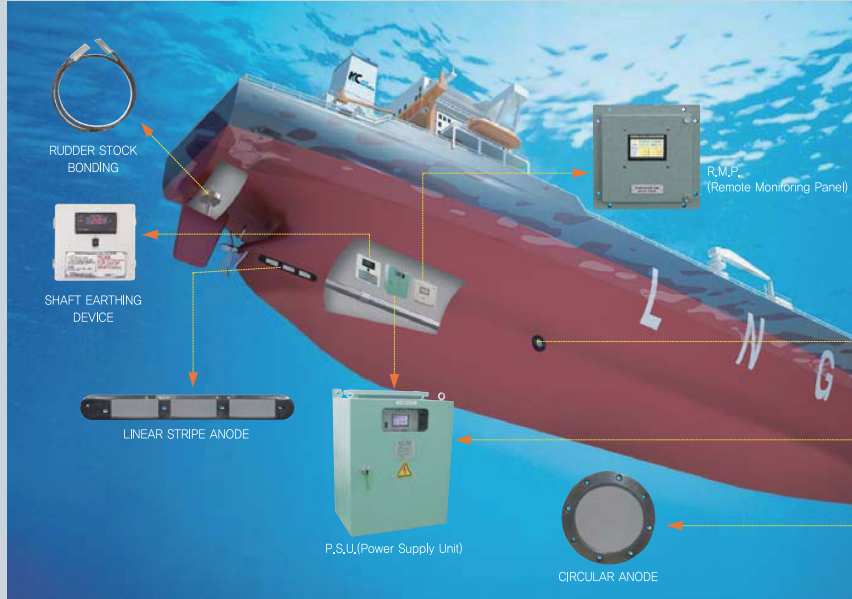




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Main Products CATHSYS®

I.C.C.P. (Impressed Current Cathodic Protection) System
 Supply Reference : 7,605 shipsets



I.C.C.P. System



CATHSYS® I.C.C.P. (Impressed Current Cathodic Protection) system has been designed based on ship's total wetted surface area of hull (including rudder / propeller) and mean current density.

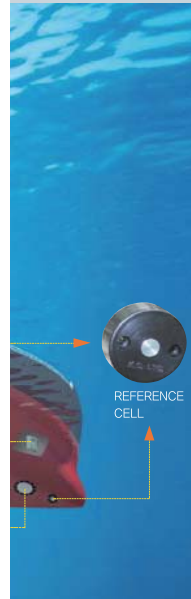
In order to keep ship's hull plate from corroding excellent anti-corrosion paints are applied with its proper thickness on the steel plate. However the problem is that whatever excellent anti-corrosive material may be adopted it is impossible to keep hull plate perfect like new building ships till next dry dock under severe sea water condition. So it comes necessary to provide corrosion protective device when ship's hull paint is partly damaged. The electric potential of ship's steel hull plate varies and reference cell as sensing unit catches up it well, which is based on full automatic control system without any additional try for ship's engineers to control.

When system starts there is no need of any sacrificial anodes around hull plate and then ship's owner can save the cost of renewal of sacrificial anodes to be carried out every vessel's dry docks.

The most efficient protective current is automatically controlled and dissipated through anodes for the optimum potential ceaselessly measured by reference cells, which is world common technical knowledge in the field of impressed current system. Apart from the full AUTO mode control our sophisticated system can work on MANUAL mode which can force protective current as operators want to set. To maintain a good system for hull protection it's quite necessary to check all the readings on log sheet. So we regularly receive monthly log sheet from superintendents or ship's engineers by fax or e-mail and we do carry out free professional system diagnosis and report to confirm if the system works well or not.

Our ICCP System is well known to the world wide clients on following features.

- Auto/Manual mode
- 4.3" TFT Touch screen LCD display
- Data download is applicable through USB memory
- Very convenient operation on easy and sophisticated controller
- Data communication and alarm signal can be connected to ship's AMS
- Simple installation to all kinds of new building as well as retrofitting ships



The world best system for Corrosion Protection

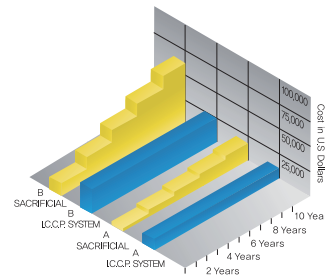


without K.C. SYSTEM (Before)



with K.C. SYSTEM (After)

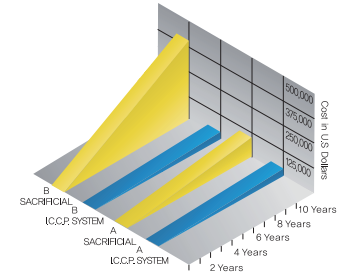
Cost comparison sacrificial anode vs ICCP system



Notes

1. Ship Types : A=30,000 dwt General Cargo/ B=170,000 dwt Bulk Carrier
2. Design Basis : Sacrificial 15mA/m², impressed 25mA/m²
3. Escalation : Material & Labour 7% annually

Comparison of Additional Fuel required to maintain Service Speed



Notes

1. Ship Types : A=30,000 dwt General Cargo/ B=170,000 dwt Bulk Carrier
2. Costings based on data for increased drag contained in BS CP1021
3. Escalation : 4% annually