ANODE ENGINEERING

GREEN AMP™ MARINE
Patented technology

PROTECT STEEL HULLS AGAINST CORROSION

GreenAmp Marine is an Impressed Current Cathodic Protection system (ICCP) for ship's hulls bearing where the amount of protective current is controlled automatically to maintain accurately at all times a pre-set level of protection. The GreenAmp Marine system can be remotely monitored and is unique in that it data logs operational and protection levels.

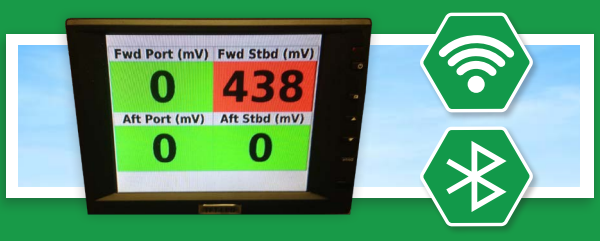
The GreenAmp Marine system is simply an arrangement of anodes and reference electrodes which are wired to a control panel.

While the controlling electrodes measure the electrical potential at the seawater interface it will send a signal to the control panel. The control panel will automatically raise or lower the output to the anodes so that the best level of corrosion protection is maintained continuously.

The anode surrounds the dielectric shield which helps to send the current over the total hull surface including the areas around the propellers and rudder. This way the corrosion is completely neutralised.

GreenAmp Monitor

The GreenAmp Monitor system is designed to allow either sacrificial anode systems or impressed current systems to be monitored and logged electronically. The advantage is that it does not need 4-20mA signal conditioners and can be fitted with no other sophisticated power or PLC communication systems.



Contact Anode Engineering for further information

1800 446 400 | www.anodeengineering.com

MONITOR & MAINTAIN

CONTROLLER POWER UNIT

The DC output controller power unit operates from the ships DC supply system in order to ensure a balanced load on the generator plant and a smooth DC output. The DC regulation of power to the GreenAmp Marine ICCP system controls the amount of DC current required to provide the cathodic protection of the hull while also logging up to five years of operating data. The GreenAmp Marine technology also allows for remote access to both the data and the operational parameters of the GreenAmp Marine system.

ANODES

The system normally incorporates one basic type of anode which uses inert materials in order to provide a long system life. The anode is encapsulated in glass reinforced resin which is attached to the external surface of the hull. Since, in service, current output involves local high current densities and voltage gradients, a dieletric shield of suitable area is used in the immediate vicinity of the anode.

These anode types are employed on all types of vessels where anodes are installed in way of the engine room. The high current output of anodes means that a dielectric shield area is required and as the plating in way of these anodes is generally curved, it is necessary to use an applied epoxy mastic, rather than a rigid sheet type shield. The hull penetration arrangements for all types of anodes include a watertight cofferdam assembly with double gland sealing, and are approved by all major Classification Societies.

REFERENCE ELECTRODES

A minimum of two and most often four stabilised zinc reference electrodes are used to monitor hull potential and control the output of each GreenAmp Marine Automatic Impressed Current Cathodic Protection System DC power supply unit/s.

SHAFT EARTHING

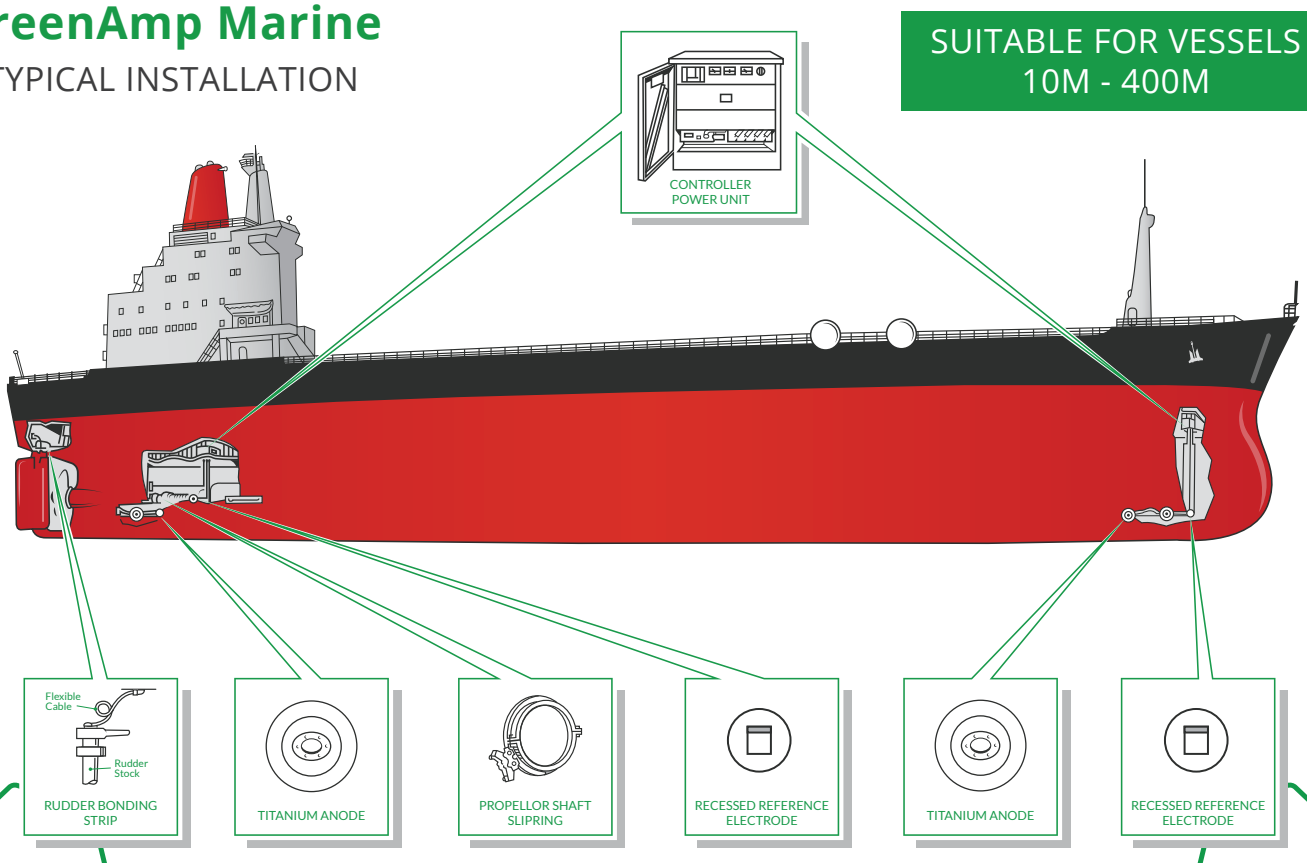
Provided the propeller shaft/s are adequately grounded by correctly designed earthing assemblies, the GreenAmp Marine automatic ICCP systems will inhibit dezincification of bronze propellers and provide protection to the propellers and shafts.

The rudder grounded to the hull by heavy flexible copper conductors (usually yard supplied and fitted) are also protected by the GreenAmp Marine Automatic Impressed Current Cathodic Protection systems.

GreenAmp Marine

A TYPICAL INSTALLATION

SUITABLE FOR VESSELS
10M - 400M



REDUCE YOUR MAINTENANCE COSTS FOR GOOD

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