



Marine Protection Systems

# IDENTIFYING CORROSION

The best protection against corrosion is to get a quality corrosion specialist to inspect your asset and give you the best personalised advice for your vessel.



## **GALVANIC COUPLING**

Dissimilar metals exposed to the same electrolyte (water) makes a galvanic coupling and galvanic corrosion. To eliminate this, hull fittings, gate valves, glands or intakes should be of a matched material.



## **ALKALINE DEGRADATION**

Wood rot caused by zinc anodes destroying the cellulose fibres in wood. Zinc anodes should not be used on timber vessels. Repair and install only Maddox Anode™ on timber vessels.



## **ELECTROLYSIS - ENGINE COMPONENTS**

Most often caused by stray current from an engine or on board electrical component. Common causes are alternators, battery chargers and bilge pumps. Seek professional assistance.



## **DEZINCIFICATION - PINKING**

Bronze is a composite metal that contains some alloys. This is being pulled from the bronze and leaving it weak, brittle and pink. This metal has lost contact with an anode or bonding system, has no integrity or strength and must be replaced.



## **PAINT BLASTING**

Most commonly seen on stainless steel trim tabs, swim platforms or marlin board supports. Caused by over protection from zinc. Seek professional assistance for best protection levels.



## **POOR BONDING**

Seen in many vessels even new from the factory. Insufficient wire size, not tinned and not in AS/NZS 1125 approved ships wiring insulated sheath. Poor connections and bad conductivity. Seek professional assistance.



## **ZINC PASSIVATION**

Zinc anodes can build up a crust layer over the metal as a natural form of defence. This is usually caused by changes in current draw on the anode. Ensure correct anode type installed.



## **ELECTROLYSIS - SUBMERGED METAL**

Caused by either stray currents from on board electronics, faulty wiring or from marina stray current. Install Electrolysis Blocker first, then test the rest of the on board systems for stray current and proper cathodic protection.



## **ATROLYTIC - WORM CORROSION**

Atmospheric corrosion of aluminium surfaces. Acid wash and repair any major damage, apply good quality clear coat designed specifically for aluminium components.