

# Identifying Corrosion

Understanding the type of corrosion activity on a vessel is the most crucial step in providing an effective solution and prevent further corrosion activity.



## Galvanic Coupling

Dissimilar metals exposed to the same electrolyte (water) makes a galvanic coupling and galvanic corrosion.

**Solution: Ensure all fittings are of the same material, or bond to an anode for cathodic protection.**



## Alkaline Degradation

Wood rot caused by overprotection from anodes destroying the cellulose fibres in wood.

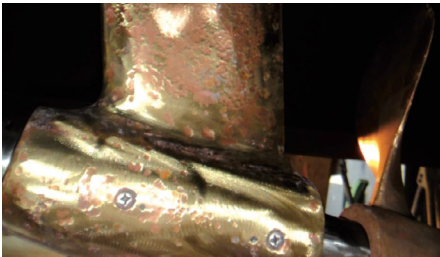
**Solution: Install only Maddox Anode™ on timber vessels where anode protection is required.**



## Engine Components

Most often caused by stray current from an engine or on board electrical component. Common causes - lack of galvanic isolation, alternators, battery chargers and more.

**Solution: Seek professional assistance.**



## Dezincification - Pinking

Bronze is a composite alloy metal. When not properly connected to an anode, the alloy will leach from the bronze and leaving it weak, brittle and pink.

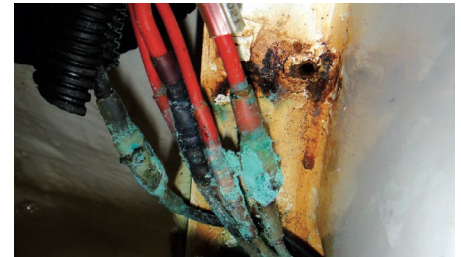
**Solution: Improve bonding/connection to an appropriate anode.**



## Paint Blasting

Most commonly seen on stainless steel trim tabs, swim platforms or marlin board supports. Caused by over protection.

**Solution: See Anode Selection Guide and seek professional assistance for best protection levels.**



## Poor Bonding / Electrical

A common problem - . Insufficient wire size, not tinned or fine strand, localized corrosion & poor connections result in high resistance & poor conductivity.

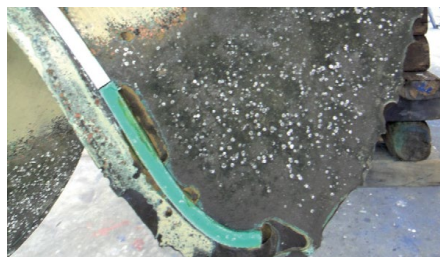
**Solution: See our Bonding Guide & Seek professional assistance.**



## Zinc Passivation

Zinc anodes can build up a crusty layer over the metal as a natural form of oxidation defense. This is usually caused by changes in current draw on the anode or environmental influences.

**Solution: Ensure correct anode type installed. See Anode Selection Guide.**



## Electrolysis Submerged

Caused by DC stray currents from on board electronics, faulty wiring or from marina stray current if no galvanic isolation is installed.

**Solution: Seek professional advice.**



## Atrolytic - Worm Corrosion

Commonly affects stainless steel components where water becomes trapped (stern tube, threads, pipes) - becomes highly acidic and destroys the stainless steels protectant layer. Can be exacerbated by overprotection or indifference between surfaces.

**Solution: Regular flushing with water, appropriate sealing of threads and efficient bonding system.**