IDENTIFYING CORROSION

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PROPSPEED®, THE INDUSTRY LEADER IN FOUL-RELEASE COATINGS, HAS BEEN PROTECTING UNDERWATER ASSETS FOR OVER 21 YEARS.

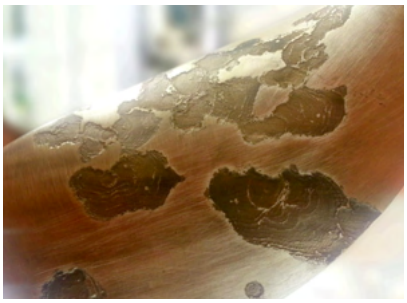
Corrosion on vessels has plagued the maritime industry from the first day sailors began using metal components on boats. There are three types of corrosion that are commonly seen in the marine environment: galvanic, electrolytic, and atrolytic (also known as crevice corrosion). For over 21 years boat owners and captains alike have seen first hand the positive effects of a **robust insulating coating system like Propspeed has in preventing severe corrosion.**

GALVANIC CORROSION

- Occurs when two dissimilar metals are connected, either physically or through an electrical connection.
- The more active metal will sacrifice itself to protect the more noble metal. For example, a bronze propeller on a stainless steel shaft will sacrifice itself to protect the shaft. This is the principle behind your traditional **anode system.**
- While the anode is an essential part of this system, we can go a step further in preventing corrosion by adding a **protective coating such as Propspeed**. Coatings can **isolate** the metal, significantly reducing the conductivity of the component. In short, insulating a metal underwater from either the water itself or the surrounding metals will greatly reduce the rate of corrosion.

ELECTROLYTIC (ELECTROLYSIS) OR STRAY CURRENT CORROSION

- This happens when stray currents, either from a marina, another vessel, or poorly bonded systems on the vessel itself induces a current into the water.
- The best thing to do is remove the source of the stray current. If this isn't possible, we can add sacrificial anodes to bonded metal surfaces. However, anodes will only partially solve the problem as once an anode is degraded, the corrosion will begin to attack a more stable metal. Therefore we still need to isolate one of the metal components in order to break the galvanic cycle.
- This is another scenario where a polymer like silicone, such as **Propspeed, is a vastly superior insulator** to traditional paint systems and will be effective in isolating the component from the electrolyte.



ATROLYTIC OR CREVICE CORROSION

- This happens in a small, tight area such as the threads of a screw fitting or shaft seal where a small amount of water is trapped between two metal surfaces.
- In these cases, coatings can often be the only barrier to the corrosion occurring. Coatings are a good preventative measure in keeping crevice corrosion at bay, but due to the close contact of mating surfaces, it's always a good idea to closely inspect any trouble areas.