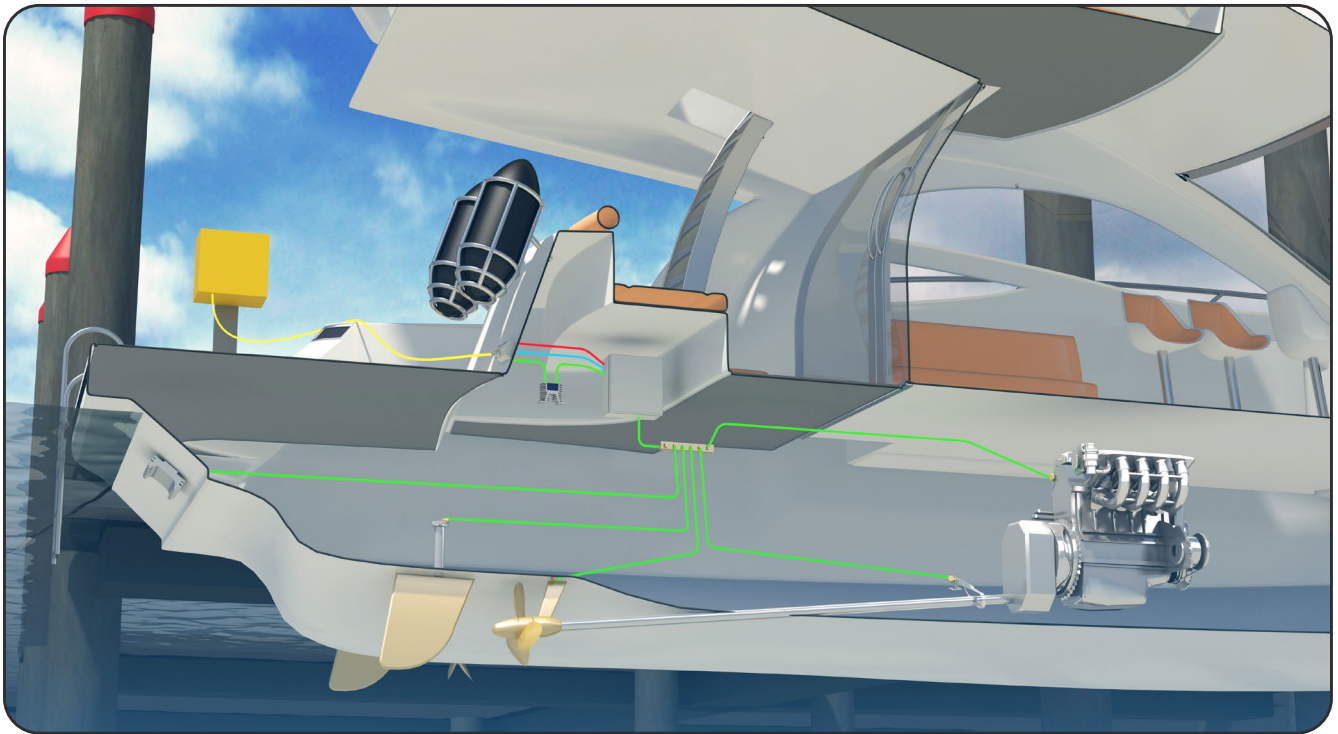


# Tips for Bonding your Vessel

Cathodic Protection Bonding Systems provide for an electrical connection to carry low voltage galvanic current, simply wiring all the vessels below water metals together. The differing potentials (or voltage generated in water) are equalized. The integrity of the bonding system and the components used in the bonding system are very important to ensure that there are no deficiencies in the system.




There are many different compositions of wires and lugs used by Marine electricians. Some of these materials are not effective for use in a bonding system and as such the galvanic current is not carried. Additionally if there is a break in the bonding system such as a faulty connection or damaged wire it can also leave the vessel inadequately protected.



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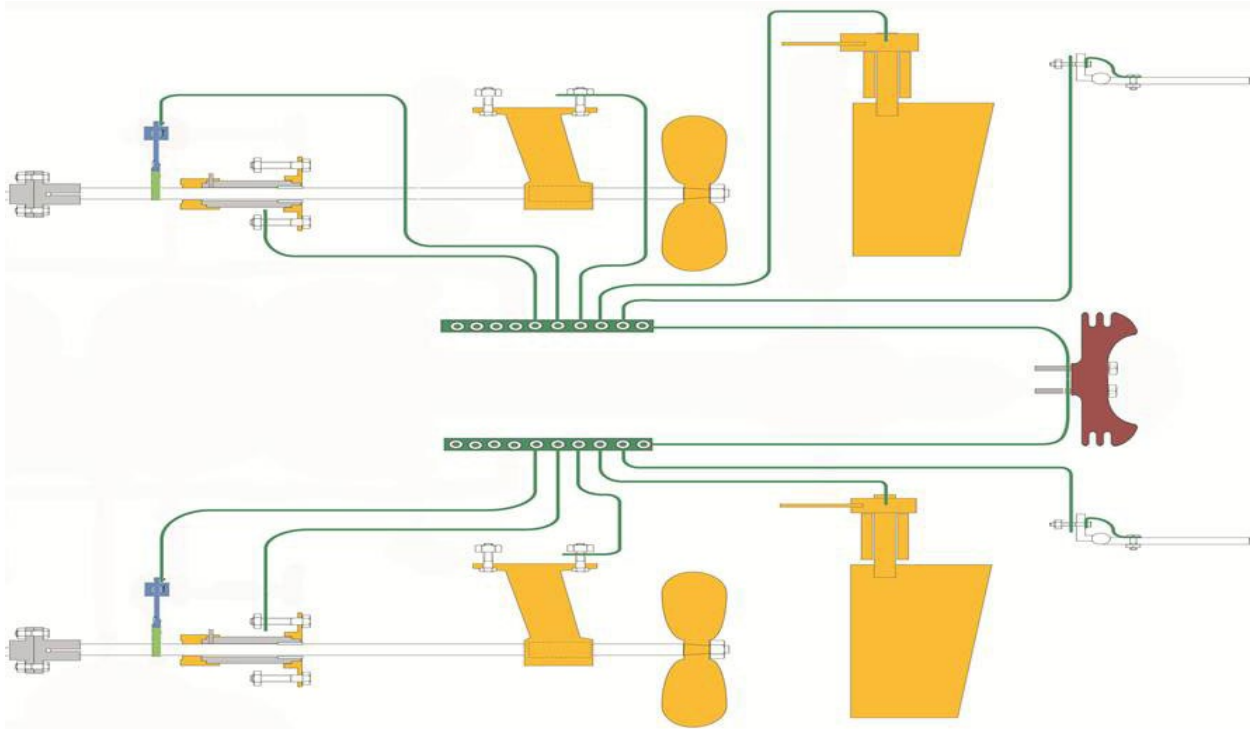
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CORROSION CONTROL THAT WORKS

# MEASURES FOR CONSTRUCTING A BONDING SYSTEM

	<p>Tinned copper cable (fine strand) is required for the bonding wires. Depending on the distance between connections and the metallic fitting connection, a 6mm<sup>2</sup> to 10mm<sup>2</sup> should be adequate.</p>
	<p>The eyelets for the bonding wire ends must be fabricated from electrical quality copper and then electro-tinned. Once connections are made, they must be encapsulated with waterproof heat shrink to prevent water penetration and environmental degradation.</p> <p>High quality stainless steel 316 busbar. Busbar should be isolated from hull and maintained to protect against environmental degradation.</p>
	<p>Through hull fittings should be matched to gate valves, for example a stainless steel 316 through hull fitting should have a stainless steel 316 gate valves. The use of dissimilar metals (for example a stainless steel through hull fitting with a bronze gate valve) promotes galvanic activity.</p>



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