

Here are excerpts from a recent surveyor's discussion group thread on chain plates.

"Many riggers suggest that chain plates be pulled for inspection every 10-12 years. They are, in fact, consumable parts (along with the rest of the rig), just like exhaust manifolds and risers. Some can last "forever" under the perfect circumstances, but this is seldom the case.

While on the subject of chain plate corrosion, don't forget to recommend inspection of chain plate bolts, including external chain plates that are bolted through the hull.....inspection should be on the same schedule and for the same reasons."

"What type of application procedure and sealant do you folks recommend for the installation of chain plates in order to reduce the probability of crevice corrosion before the next inspection?"

"Island Packet Yachts, with their chain plate arrangement, has a lot at stake to prevent oxygen starvation driven crevice corrosion of chain plates. When I last consulted, they recommended a silicon based adhesive GE Silpruf for bedding chain plates. Apparently, through their testing, it was decided that a silicon based adhesive had superior adherence quality to metal surfaces relative to polysulfides or polyurethane based adhesives."

"Whatever the sealant is, it needs to stop water ingress so it's going to seal off the oxygen supply."

"The key here is that, if the metal surfaces are dry, they won't corrode. If they are starved of oxygen, wet and in a corrosive environment, they will suffer from pitting and crevice corrosion (which, on the chain plates, results in a special category known as stress corrosion cracking, since they are under a tensile stress).

So, if they are completely sealed and dry, there may be no oxygen but there will be no corrosion either."

"If the chain plates are well coated (using a coating manufacturer's spec for the coating) where they are embedded, this will help protect the chain plates. This keeps them dry and will reduce the chance of corrosion."

Here's a suggestion for chain plate installation modification (if not already in place):

"Rabbit back the deck core from the chain plates so there isn't any direct contact between the wood and the stainless steel.

Leave the deck area around the chain plate open on the inside of the vessel so that any water that may leak in in the future will not pool against the stainless steel.

If the chain plates are encapsulated inside the vessel, consider a different mounting system or try to create a dam to prevent any water entry in the event of a leak."