STOCK'D SUPPLY TECH TALK

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"ANODIZING: WHAT IS IT?"

Anodizers have managed to take a base metal aluminum that is relatively soft, easily corroded or abraded, and electrically conductive, and turn it into something that is hard surfaced, corrosion and abrasion-resistant, and non-conductive. All aluminum has an oxide film on any exposed surface, between 10 and 20 millionths of an inch thick. The aluminum molecules literally reach out and "grab" passing oxygen molecules to form this surface.

Influence of Corrosion on Fatigue of the Fastening Bolts

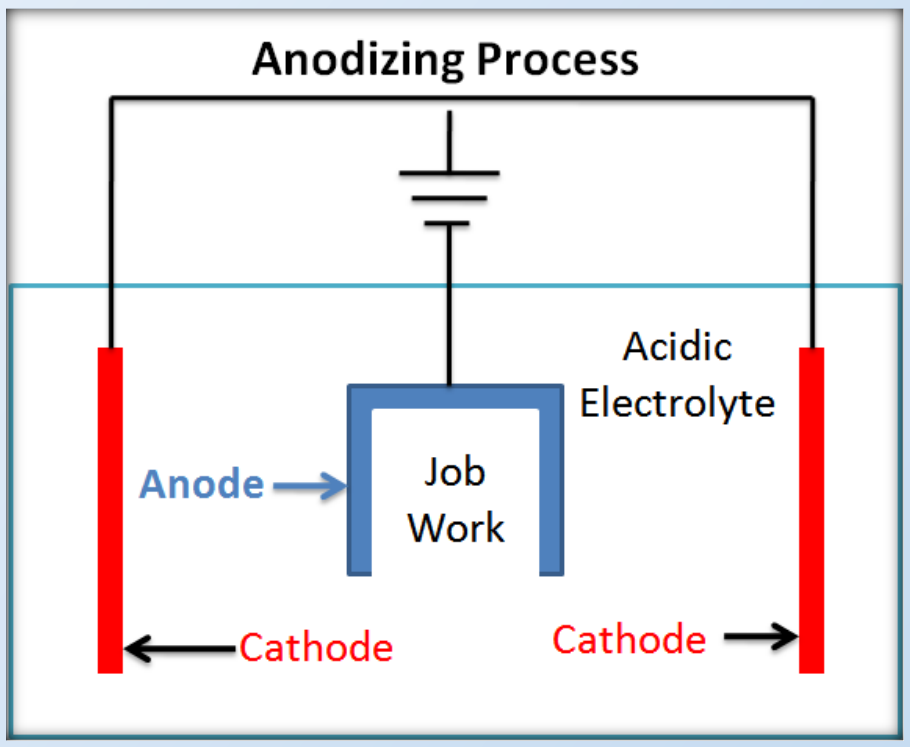
THE PROCESS OF ANODIZING uses a combination of chemicals and electricity to produce a thicker and more controllable aluminum oxide ''skin." This skin is normally between .00002" and .003" thickness depending on the alloy and the process.

Unlike most coating processes, the skin is actually a part of the metal. And, can be made into virtually any color of the rainbow.

RACKING PROCESS:

Anodizing requires many steps, and is a very labor intensive operation. The first step in the operation is racking.

Since the process is electro-chemical, the parts must be racked so that the electric current passes through the parts when they are placed in the anodizing tank.



ELECTRIAL CONNECTION: In fact, anodizing gets its name from the fact that the parts become the positive anode in the electrical connection. This is the opposite of most metal plating processes, in which the metal to be plated is the negative terminal, or cathode.

Anodizers use aluminum racks to mount and dip low production parts, but because the racks themselves become anodized during the process (and therefore non-conductive), they must be reworked in order to be reused.

High production parts are usually attached to titanium racks, which are not affected by the process and can be reused many times.

Your Stock'd Supply representative is trained to assist you in the decisions you make each day in buying fasteners.

They stand ready at your nearest branch to help you solve your fastener dilemma.

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