The Effect of Masonry Materials on Anodized Finishes

Anodized aluminum finishes are very hard and corrosion resistant, but they are readily affected by medium to strong acids and bases. Examples of acids are hydrochloric (muriatic) acid, sulfuric acid, phosphoric acid and nitric acid. Examples of bases are sodium hydroxide (lye) and calcium hydroxide. These are typically not an exposure issue since they are considered hazardous chemicals.

Unfortunately, two of these hazardous materials are used in the masonry trade. Calcium hydroxide is a major component in mortar. If mortar comes in contact with an anodized finish, it must be removed immediately. Another hazardous chemical used is hydrochloric acid. This is commonly called muriatic acid, and is used to wash down the brick and mortar as a final cleaning step. If this acid comes in contact with an anodized finish, it also must be immediately rinsed off. Unfortunately, even then, it may be too late to save the finish. Best practice is to cover the aluminum and glass components with plastic prior to this acid spraying procedure.

When an anodized finish has been attacked by mortar, it is usually completely dissolved and bare aluminum is exposed when the mortar is removed. The effect of exposure to muriatic acid can range from an iridescent appearance to complete dissolution of the finish. The obvious sign of this attack is a pattern of streaking and pooling consistent with liquid flow. In either case, the finish cannot be repaired. The affected component must be replaced, removed for re-anodizing or clad.

Further information regarding this subject is available from AaCron's Technical Service experts.

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