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Re: Variations in US10B Finish

As a finish in the hardware industry US10B (613) is one of the most misunderstood due to the fact that when this finish is requested, the final product will continue to change. This finish is basically not consistent from one manufacturer to another, and it is not intended to be, based on the process used to attain the finish.

The procedure for finishing US10B (613) on various types of hardware products (flat plates, locks, exit devices, etc...), is to use an oxidation process. Oxidation will change the surface color of the brass or bronze based material. The more copper in the base material the darker shade the final finish will be. Various hardware products are desired with dark oxidized finishes, as viewed on BHMA match plates.

According to ANSI/BHMA A156.18-2012 the finish referred to as US10B (613) is a category "B" finish. "Category B finishes are those that are unstable and are applied to the base material or are the base material defined by the description in 5.2. These finishes shall be compatible with the BHMA match plates, but these finishes cannot and do not match from one alloy or form of material to the next and from one manufacturer to the next."

The most common problem in misunderstanding this finish is to think that all products will appear to be identical. Most individuals will hold the products side by side and expect that the finishes will match precisely. This will not be the case. The time in the solution, the base metal, the composition of the solution, the humidity of the area where the process takes place, electrical currents in the plating baths, even local temperature and altitude will affect this finish. Additional causes for differences in color or hue will be the amount of oil applied (this is normally a hand operation) as well as the amount of time from manufacturing to end-use. Once oil is applied to the product, it begins to dry. Depending on climatic conditions, the oil may dry faster and offer less protection.

Hopefully this information may help architects, designers and end users in understanding the purpose and intent of a finish that may have been unexplained in the past. This letter is just to fill in some of the blanks.

Sincerely,



Mark A. McRae
Director of Engineering
Hager Companies, Inc.