

MEDWAY METAL FINISHING

STANDARD QUALITY AND FINISHING TERMS FOR PATINATION PROCESS

OVERVIEW

This document specifies the characteristics and procedures associated with the Bronze Manganese Antique finish.

The above process is the chemical patination of alloys which is the reaction of chemicals on gilding metal, bronze, gunmetal and brass. The above is a colour process which continues to mature into a rich antique patina. Should a section be damaged or marked, the consequences are that it would have to be stripped back to base metal and re-chemically patinated, but it would not match existing previously mature patina until it is given time to age and to gain a depth of colour.

DEFINITION, CHARACTERISTICS & MANUFACTURING PROCESSES

All metal alloys on site prior to being chemically patinated must be prepared in a satin finished finish before being installed. When chemically patinated there will be a difference in colour on the mitered joint sections i.e. a darkening of colour caused by the grain running at different angles. Also for instance drilled and countersunk holes in bronze or brass plates will often cause streakiness when toning as they tend to hold the dampness in the crevices and therefore will not dry out the same as the even bronze toning powder on the adjoining flat surfaces. Accordingly, this also applies when toning bronze incised engraving on bronze plaques. Depending on the metal's grain structure which may vary, this will often cause shading and patches when the colouring technique is completed. The shade of colour produced by the bronzing process may in some instances be influenced by the composition of the alloy hence some variations in shade may be experienced between one section of metal and another as explained above.

When using brass glazing bead in windows and door fittings, there will be a visible colour difference when held against the background of 90/10 gilding metal or copper but given time the texture of the finish will settle and become more uniformed and pleasing to the eye.

In certain instances, we are instructed to patinate brass fingerplates, bronze handrails and brass and gilding metal door handles to a BMA finish.

It is essential that you are aware that when there is a heavy usage of these articles i.e. large volume of people handling the above in general day to day usage the patination will wear through to the bare metal very quickly regardless of whether they are lacquered or wax sealed. In most cases this is accepted as a distressed finish and adds character and distinction to a building of quality.

VISUAL APPEARANCE

This section covers optical quality i.e. distortion of colour such as the metamerism effect of lights reflecting from the surface of alloys. Artificial light can create the illusion that the patination's are of two different colours. However, when placed side by side with the finishing grain running parallel they will then appear as a uniformity of colour. As a rule, the degree of distortion will be less with small sections of metal whereas with very large panels when toned they generally give a grainy appearance (as in wood grain). Accordingly, larger panels will always require a settling down period for the

chemical patination to take on the oxidation of its full rich mature colour with a maintenance programme in place.

PROTECTION & ASSESSMENT

It is strongly recommended that if other trades are to work on the newly chemically patinated metalwork, they should wear latex gloves. This will prevent any black patches appearing on the surface of the bronze at a later stage which is due to perspiration from handprints and is not acceptable as a snag at a later stage in installations.

When assessing surface faults, the bronze work is to be observed from a distance of 3 metres under normal daylight conditions. Angle of observation is to be 90 degrees to the metal surface.

SAMPLES

Samples supplied by us if sealed with a surface wax will, during the course of time, change colour i.e. mature and go darker. If supplied many months before approved installation, there will be a noted difference to the finished work when completed on site.

MAINTENANCE / AFTERCARE

When bronze has been chemically patinated to an approved colour, it is either sealed with a crystalline wax finish or sprayed lacquer. In the case of wax sealant applied to the newly patinated metal, it is essential that it is given an undisturbed curing time for the colour to settle.

When the bronze is first patinated it is essential that when the glazed windows adjacent to the newly toned bronze are cleaned, the residue of water is not allowed to run down over the bronze and left to dry.

It is imperative that the window cleaners dry the bronze with a leather otherwise the cleaning substance which they put in the water will stain and mark the bronze.

It is recommended that your client takes out a specialised maintenance agreement with an approved company that will clean and treat the bronze so that when waxed it will go on producing a rich patina and if continuously cared for and polished using the correct materials will maintain the desired and rich appearance to the surface of the alloy.