

Construction Technology of Water-based Single-layer Ceramic Coating

I. A coating curing process:

Take the curing group 1 as an example, add A to B (**A+B=60%**), tightly cover the bucket with the lid, place them on the curing machine for curing, and had better make a rotating speed of 80-120r. (The rotating speed can be adjusted properly in winter and summer), after curing for 15-30min, the liquid in the bucket causes an exothermic reaction; at this time, the bucket expansion phenomenon occurs, which belongs to the normal phenomenon. Cure on the curing machine for 4-5 hours.

II. Coating preparation:

After the curing of A.B is completed, the coating preparation can be carried out. During coating preparation, shake well the base/color paste, ensure no caking sinking to the bottom (the color paste very easily sinks to the bottom, and therefore first use the wooden stick or hammer to vigorously knock on the bottom so as to disperse the caking sinking to the bottom, and then place the color paste on the curing machine for 15min high-speed rolling), then add the cured and filtered A.B to the bucket with base/color paste shaken well, and place it on the curing machine for 15min rolling so as to use the 300-mesh filter screen for spraying.

Precautions:

1. Once component A and component B are mixed together, please place them on the rolling machine for curing within 2 minutes, otherwise they are very easily scrapped, and the longest time shall not exceed 15 minutes. If they cannot be cured timely, please do not mix them together..
2. The color paste is the high-concentration color paste, and therefore deposition will occur during storage. Be sure to roll and stir the color paste uniformly before coating preparation, use the wooden stick or rubber stick to knock on the bottom if necessary so as to loosen the deposition, then place the color paste on the curing machine for 20min high-speed stirring, and be sure to ensure that the coating preparation can be carried out only after the color paste is stirred well.

III. Coating spraying:

1. Substrate preheating: ensure that the substrate temperature ranges from 45°C to 55°C during spraying, and ensure the residual temperature of about 35°C after the spraying of base coat and top coat is completed.

Precautions: The excessively low temperature will result in the phenomena of shrinkage, sagging, particles, etc. The excessively high will result in the unhealthy phenomena of no oiling or surface drying, gloss reduction, etc.

2. Coating spraying: keep the spraying uniform. The spraying film thickness is controlled within about 20-25 microns without unfinished area.

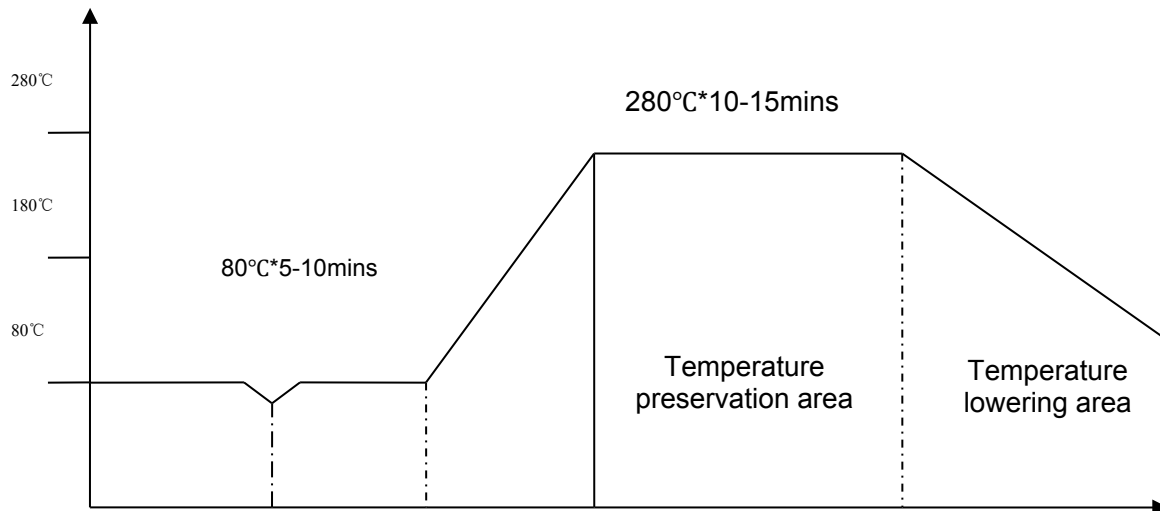
Precautions:

The ceramic coating is the low viscosity system with high solid content. If the ceramic

coating stands for a long time, the phenomenon of deposition or stratification will occur, and the coating shall be rotated and stirred during spraying. If it is found that the mixing blade is higher than the coating liquid level, the coating shall be supplemented timely when the coating cannot be stirred so as to ensure that the coating is always in a flow state.

IV. Coating baking technology:

The sintering furnace shall be divided into two temperature areas. The temperature of the low-temperature area is set between 120 °C and 150 °C, and the temperature of the high-temperature area is set as 280 °C. The sintering time cannot be less than 10 minutes.



V. Ceramic coating storage and safety:

1. The ceramic coating is the inorganic compound with higher activity, and therefore the ceramic coating shall be stored in the air-conditioned room so as to ensure the temperature of about 25°C, and the ceramic coating cannot be under the blazing sun for quite a long time so as to avoid deterioration.

2. The unspent coating shall be covered tightly and placed into the air-conditioned room, and the temperature is about 22°C. After the curing of A.B, they can be used within 2 days under the conditions of no color paste. If the color pasted is added, they shall be used up within a day.

3. During use, please follow the management principle of “first-in first-out”. After the coating guarantee period expires, the coating shall be used after it is qualified through inspection.