

Operation Specifications of Water-based Double-layer Ceramic Coating

I. A coating curing process:

Take the curing group 1 as an example, add A to B (Base coat/A+ base coat/B=60% of total base coat amount) ightly 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), Cure on the curing machine for 4-6 hours.

The curing of the top coat is almost the same as that of the base coat. Such as the top coat of curing group 1, add top coat/A to top coat/B (top coat/A+ top coat/B=10% of total top coat amount), and cure for 4-6 hours.

Precautions:

1. When degassing during curing, wear rubber gloves for operation to avoid scalding the skin; when degassing, pay attention to the protection of eyes, and wear the protective goggles to prevent the hot water vapor and liquid from splash into eyes.
2. Once component A and component B are mixed together, please place them on the rolling machine for curing within 2 minutes, otherwise the phenomenon of incomplete curing very easily occurs so as to result in the unhealthy phenomena of matte spraying gloss, no wet spraying, gelatinization or caking, etc.

II. Coating process with paint:

After the curing of A.B is completed, the coating preparation can be carried out. The coating preparation is divided into base coat and top coat. During the preparation of base coat, uniformly roll the base/color paste (the rolling and stirring time is more than 40 minutes), ensure no caking sinking to the bottom, then add the cured A.B to the bucket with base/color paste shaken well, and place it on the curing machine for 10-20min rolling so as to use the 400-mesh filter screen for spraying.

During the preparation of top coat, use the 300-mesh filter cloth to filter the cured A and B, shake well the top/color paste (the rolling and stirring time is more than 40 minutes), be sure to ensure that the top/color paste is shaken well, add it to the cured top/A.B, and roll for 10-20 minutes. The filtration is generally unnecessary before spraying. If necessary, the 100-mesh to 150-mesh filter cloth shall be used.

Precautions:

1. 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 for stirring. Be sure to ensure that the coating preparation can be carried out only after the color paste is stirred well.
2. The pearl powder in the top coat is relatively rough and cannot be filtered after mixing, and therefore A/B agent is only filtered for the top coat.

III. Coating spraying:

1. Substrate preheating: ensure that the substrate temperature ranges from 50~



65°C during spraying, and ensure the residual temperature of about 40 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. Base coat spraying: keep the coating uniform. For the spraying of the base coat, the film thickness is generally controlled as about 20 microns (excluding sand blasting thickness) without exposed base.

Top coat spraying: keep the coating uniform. The wet-to-wet spraying is adopted for the top coat. The top coat will be directly sprayed after the base coat is sprayed, and the film thickness will be controlled by about 8 microns. Be sure to ensure the uniform spraying.

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.

(2) If the top coat stands for a long time, the stratification will occur. If the spraying is interrupted for more than 10 minutes, be sure to reset the spray gun or remove the excess materials in the oil pipe so as to ensure that the top coat in the oil pipe and pressure tank is remixed well for spraying.

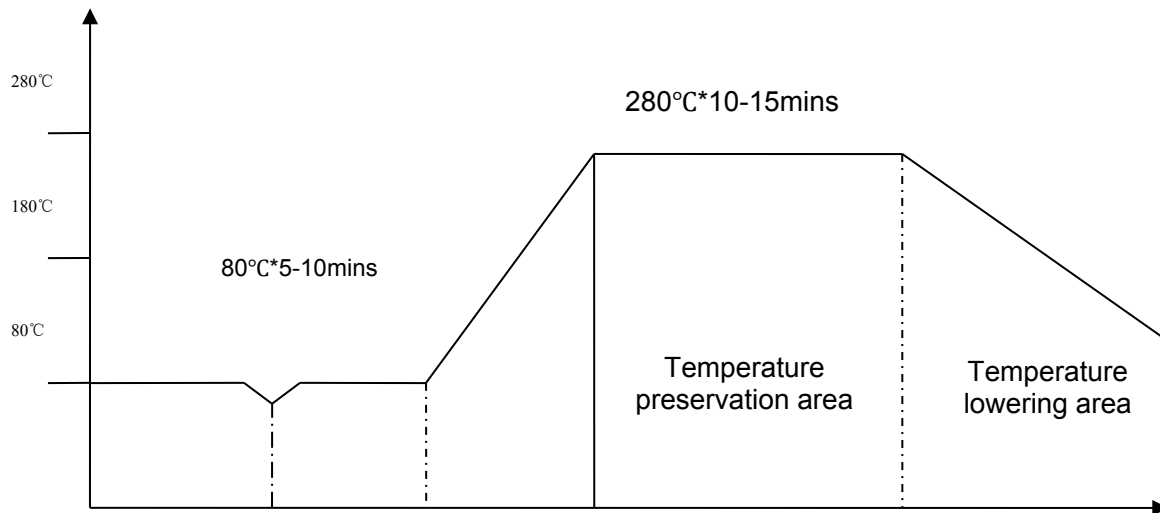
IV. Coating baking technology:

1. Surface drying (applicable to the production line with a surface drying furnace)

After the spraying of base coat and top coat is completed, the surface drying furnace shall be introduced as soon as possible. The surface drying furnace is set between 80 °C and 120 °C. If there is not a surface drying furnace, the surface baking furnace shall be introduced as soon as possible. The surface baking furnace shall be provided with the low-temperature area of 120 °C ~ 180 °C.

2. Sintering:

If there is not a surface drying furnace, The sintering furnace shall be divided into two temperature areas. The temperature of the low-temperature area is set between 120 °C and 180 °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.