



KS-SYSTEM Procedure-specification		Document-title: Procedure-specification for DuoZink AS Chapter/Files: PR-O-01		
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Procedure-specification for DuoZink AS Borgeskogen

1. Method:

In our Establishment at Borgeskogen we use "the dry method" for Hot Dip Galvanizing.

2. Control before galvanizing:

The goods (metal) are visually checked before hot dip galvanizing to make sure there are no hidden "pockets" or cavities. We also check to reveal any stains from paint or grease. Hidden pockets are ventilated by drilling or burning holes. Any paint or grease are removed with the aid of paint-remover or a steel-brush. If there are larger amounts of either paint or grease we will send it to sandblasting.

3. Preconditioning:

Pickling in acid is an essential part of the process. We use diluted Hydrochlorid acid (HCL). The concentration in the baths is checked every second week to make sure it has the right level of g.HCL/liter - g.Fe/liter. There is also an added "inhibitor" (Hexamin) in the baths to avoid over-pickling of the goods. The liquid is refilled with 14 % HCL.

Limit Values:

HCL 175-20, Fe 0-240, % HCL 4-15

4. Flux

The Flux-bath is normally held at approx. 40°C. We make use of ready mixed flux.

The baths are checked once every second week to determine the pH-value and Be °. The composition of 2NH₄Cl (Ammonium chloride) and ZnCl₂ (Zink-Chloride) are controlled. And Fe is tested in a laboratory in Belgium every three months. At these controls it is determined if deposits (Seditment) of Fe is necessary. Deposits of Fe has taken place when the concentration exceeds 3 g/l.

The normal facts of composition of flux in our baths are:

pH = 3,5 – 5
2NH₄Cl = 195 g/l
ZnCl₂ = 230 g/l
Fe = 1 – 10 g/l

5. Drying:

After preconditioning all goods are air-dried on a chain-move, where they all hang free.



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6. Galvanizing:

We use a CH Evensen bath for the Zink. For heating we make use of electric power. The temperature lies between 445C°- 460 C°. The temperature in the bath can always be read on an instrument in the control room, and is periodically controlled with an immersion-thermometer, at least once a day. This depends on the composition of the goods.

The Zink we use is Zinical Ni 0,12% Spes High Grade, this is a Zink with guaranteed purity of 99,95 % Zn.

The composition of the Zink-bath is controlled at least 6 times a year by an external laboratory.

7. Cooling of the goods

After the Hot dip galvanizing the goods are air-cooled on a chain-move (Cooled in air).

8. Final Inspection

The goods are checked visually for damages. A quantity control is also done (Pieces and weight). If nothing else is agreed upon with the customer, the goods shall satisfy NS-EN ISO 1461.