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Hot zinc

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In the hot zinc line of workout equipment, we process support poles using hot dip galvanizing. Attachments - crossbars, wall bars, handrails - we paint in black moire.



Advantages of this method

An effective method of protecting steel from corrosion

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Hot-dip galvanizing is widely used in areas where reliability and durability of metal structures are required (difficult climatic conditions, aggressive environments, hard-to-reach areas).

Low cost in terms of product life

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Hot zinc workout equipment initially costs more than powder-coated workout equipment. But hot-dip galvanized products serve at least twice as long (30–50

years). At the same time, they do not need to be carefully monitored and periodically tinted.

Global trend

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There are currently 800 hot-dip galvanizing plants in Western Europe alone. For comparison: non-industrial enterprises in Germany operate about 180 baths for immersing parts in hot zinc, in Russia - about 50 baths.

Aging beautifully

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Hot zinc ages beautifully and as a result of this aging looks stylish and brutal. Especially when hot-dip galvanized support posts are combined with black rungs and clamps.

Not afraid of local damage

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Poles will not rust even if they are scratched by vandals. The fact is that

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zinc protects iron not only passively, but also actively. When zinc is applied to iron, a galvanic couple is formed. In this pair, iron is the less active metal, while zinc is the more active. When in contact with moisture and oxygen, zinc reacts first, donating its electrons to fight corrosion, while iron accepts electrons, is protected and remains untouched by rust.

In addition, scratches and other mechanical damage on hot-dip galvanized poles are not as noticeable as on painted ones.

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Method hot dip galvanizing

Drying. The product is placed in a drying chamber: the flux dries, and the metal is heated to 120 ° Celsius.



Hot dip galvanizing. The product is immersed in a bath of molten hot zinc (450 ° Celsius).



Cooling. The product is cooled to ambient temperature: in a bath of clean water or in open air.

Degreasing. Grease stains, oils and other organic contaminants are removed from the metal surface.



Acid pickling. Remove scale, carbon deposits and rust from the metal surface.



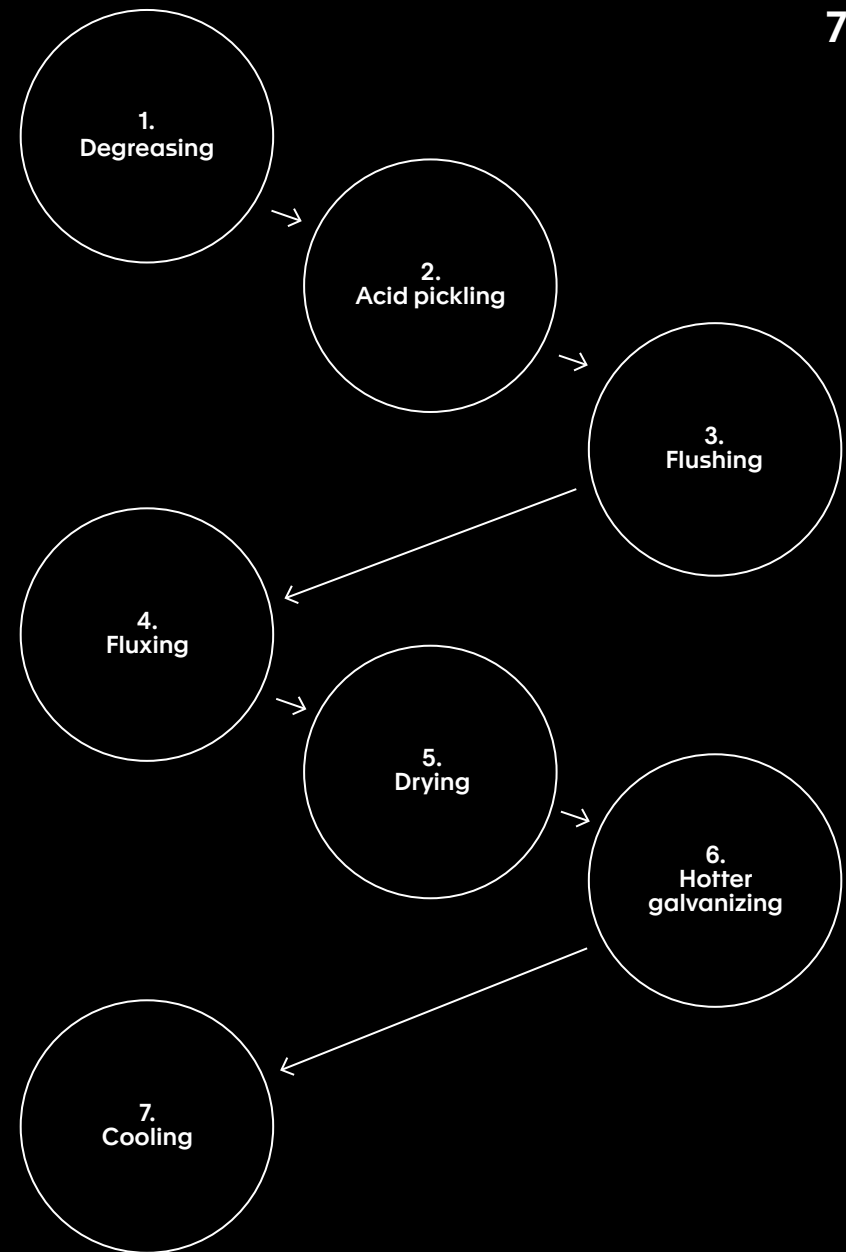
Flushing. Removes residual solutions from the surface after etching.



Fluxing. The product is immersed in a solution of zinc salts and ammonium salts: to improve the reaction between zinc and iron.

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Disadvantages

We need to wait until the zinc becomes beautiful



Stylish and brutal appearance of hot zinc is one of its advantages. But to achieve such a result, you need to wait six months or a year when the hot zinc gets old. Rather, this is not a drawback, but a property, but we must warn about it.

Immediately after installation, white streaks and spots may be observed on the support poles. Small dark spots may also form. These are zinc oxide and hydroxide deposits. So "young" zinc reacts to storage conditions with high humidity and insufficient ventilation. These streaks and stains do not affect the durability and durability of the zinc coating.

Over time, in the fresh air, a zinc patina forms on

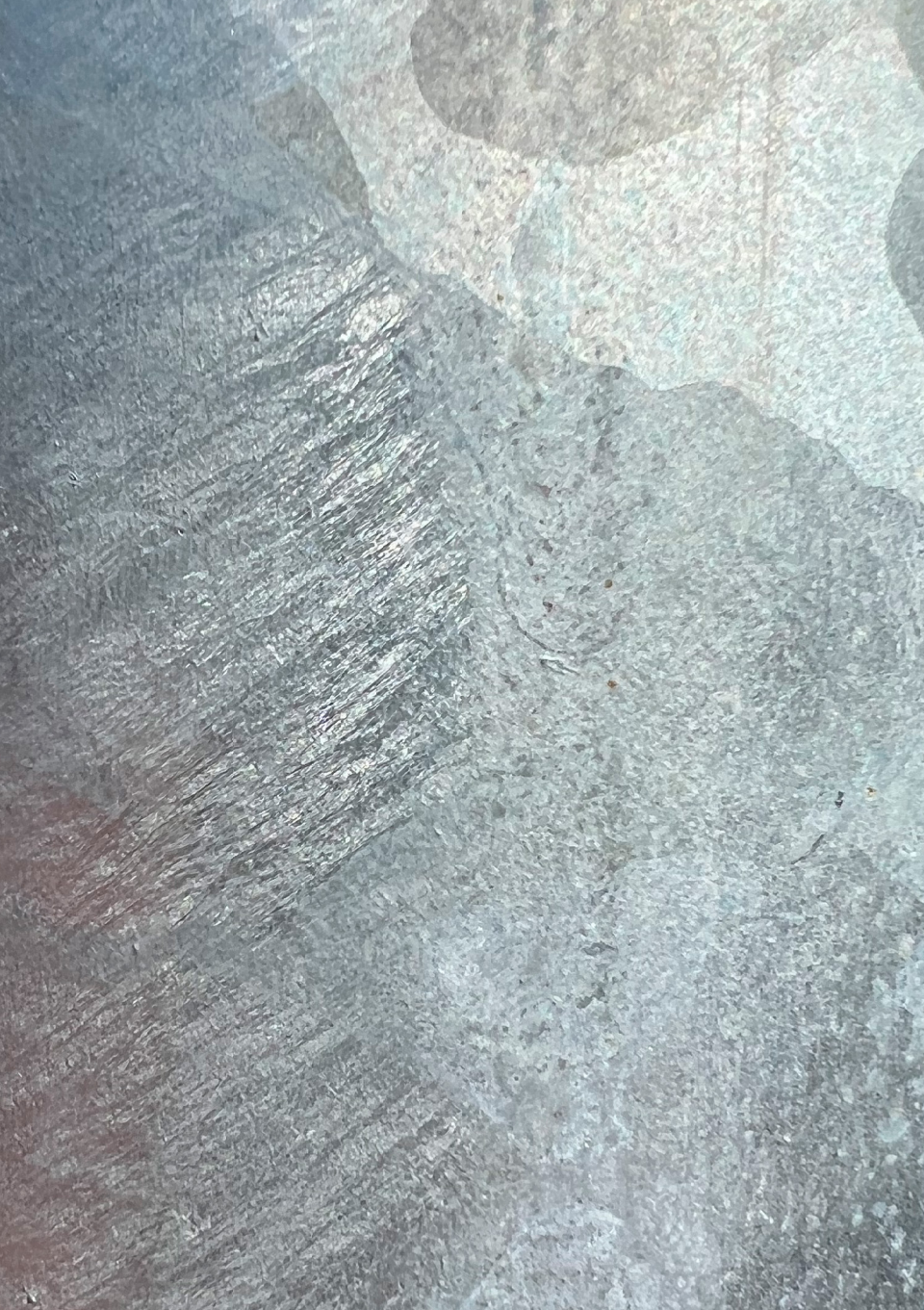
the surface of the supporting pillars - a protective film consisting of zinc corrosion products.

The fully formed patina works as an additional impenetrable barrier. It usually takes 6-12 months for a patina to develop, depending on weather conditions.

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White streaks on
equipment immediately
after installation
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Fully formed patina
↓
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Equipment one year
after installation







Kenguru



info@kengurupro.eu
www.kengurupro.eu

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