

Ferroblack

Ferroblack is a black colouring method that can replace black-finishing.

Phosphatising

Phosphatising is a chemical surface conditioning that is performed on a number of metals and alloys.

Through phosphatising you get:

- An excellent ground for painting - adherence between the paint film and the metal surface increases considerably and when the paint layer is damaged it counteracts under-corrosion.
- Together with oil, it provides good protection against corrosion, especially suitable for mass articles like screws, bolts etc. Steel and cast iron however does not get a satisfying protection against corrosion through phosphatising. When phosphatising steel surfaces it is common to differ between three main types of coating - zinc, manganese and iron phosphate layers. These generally have different fields of application.

Zinc phosphatising

Zinc phosphatising is the most common process. The layers become grey and are given a smooth surface that after lacquer gives an excellent protection against corrosion. The layer thickness can vary greatly - from 1 to 30 µm.

Manganese phosphatising

Manganese phosphatising gives a black-grey layer, usually with rough crystalline. The layers are porous and brittle and also very thick, 20-30 µm. These features make them unsuitable as ground for lacquering but better suitable as lubricant carrier.

Details made from steel which are sensitive to hydrogen embrittlement should not be manganese phosphatised. In these cases zinc phosphatising are more suitable.

Iron phosphatising

Iron phosphatising gives hard and thin layers, 0,2-0,5 µm. The paint can vary from yellow to grey-blue. The layers have good paint binding characteristics and withstand after covering, amongst other things, bending without cracking. It gives though a lower protection against under-corrosion than the zinc phosphate and is therefore mainly used on products for indoor use, for example, steel furniture.

Some limitations for phosphatising

Phosphatised steel details can not be heated up to more than 200°C. At higher temperatures the phosphate layers' adherence and protection capacity deteriorate noticeable. Above 300°C they are transformed to pyrophosphate. High-alloy steel, foremost those that either contain more than approximately 12% chrome or two of the so-called carbide formers - chrome, molybdenum, vanadium, and wolfram -, are less suitable to phosphatise.

The corrosion protection for a phosphatised product rubbed with oil is very limited. In outdoor environments rust generally appears within a year. Our phosphatised stock-goods are zinc phosphatised and we can perform manganese phosphatising on request.

Environmental aspects:

The zinc bath does in some cases contain nickel, which is on the National Chemicals Inspectorate's list of substances to limit. Occurrence of phosphates in sewage.

Environmental effects:

Allergy arousing, bio-accumulating and poisonous for organisms living in water:

Contributes to over-manuring if emission is allowed.

Copperplating, Silverplating, Tin-coating

Technical coatings with different qualities.

Coatings that give good soldering characteristics, conductivity and reflection capability for electricity as well as heat. It is carried out on steel, invar, aluminium, copper/brass and press casted zinc and aluminium.

Field of application: Components for telecommunication, electrical and technical functions.

Environmental aspects:

The copper bath contains cyanide as sequestering agent. Cyanide is on the N.B.I.-list. Nickel in the surface coating is on the National Chemicals Inspectorate's list of substances to limit.

Environmental effects:

Cyanide is acute poisonous for organisms (living in water).

Allergy arousing, bio accumulating and poisonous for organisms living in water: