Enhance the function of metal surface

As carbon steel plate and steel tube cold drawing forming, stamping and cold extrusion forming, metal blank cold tender forming and cold worked surface layer, improve the metal ductility, reducing friction, lubrication, release properties, etc.. For example, stamping parts not phosphating treatment, even in small punch pressure (8.6 T) and the ratio of section reduction (F =20%) of the smaller cases, severe stab wound still appears piece surface of punching. Steel plate by stamping phosphating, required less pressure and can withstand the reduction rate increases, it is good for stamping. When the coating thickness, although Chong pressure (63 5T) and reduction in area of high (F=80%), stamping the surface still good.

As pieces of metal processing surface abrasion resistance, anti rust layer. Like steam accessories (screws, bolts), mold, movement bearing parts (valve, piston rings, valve tappet gear, etc.), hydraulic fittings (solenoid valve, pump accessories (stator), pan), a magnetic element (NdFeB) phosphate process, can play to wear, rust proof function. Examples are as follows.

A. screw, bolt of automobile tire temperature zinc phosphating, can improve the abrasion resistance of the filament teeth (not common phosphating wire wear, can not be used), achieve the purpose of rust (neutral salt spray test 72h).

The service life of B. steel die after phosphating can be extended to more than 10000 times.

To increase the insulating metal materials. Examples are as follows.

A. motor and transformer silicon steel sheet by the phosphating treatment, can improve the electrical insulation (insulation resistance up to 5 * 107 Omega breakdown voltage of 240 ~ 380V) and heat resistance (duty factor is small).

B. has a polycrystalline iron fiber as absorbing material manufacture and fill in the blanks wave paint, because it has good electromagnetic properties. But the surface resistivity polycrystalline iron fiber is very low, consisting of a conductive network in the coating, for reflection of electromagnetic waves, but also influence the surface resistivity of coating, these will have an impact on the wave absorbing property. In order to improve the resistivity polycrystalline iron fiber surface, must phosphating, and the requirements to ensure that their saturation magnetization. Using the magnetic phase iron phosphating appropriate (zinc and manganese are non-magnetic phase).