

Electroplating, Phosphating, Powder Coating and Metal Finishing (Electroplating Plant, Copper Plating, Electroforming, Brass Plating, Silver Plating, Tin-Nickel Alloy Plating, Gold Plating (Gilding), Cadmium Plating, Zinc Plating)

Description:

Electroplating is a process that uses electric current to reduce dissolved metal cations so that they form a thin coherent metal coating on an electrode. The term is also used for electrical oxidation of anions onto a solid substrate, as in the formation silver chloride on silver wire to make silver/silver-chloride electrodes. Electroplating is primarily used to change the surface properties of an object (e.g. abrasion and wear resistance, corrosion protection, lubricity, aesthetic qualities, etc.), but may also be used to build up thickness on undersized parts or to form objects by electroforming.

Powder Coating is a type of coating that is applied as a free-flowing, dry powder. The main difference between a conventional liquid paint and a powder coating is that the powder coating does not require a solvent to keep the binder and filler parts in a liquid suspension form. The coating is typically applied electrostatically and is then cured under heat to allow it to flow and form a "skin". The powder may be a thermoplastic or a thermoset polymer. It is usually used to create a hard finish that is tougher than conventional paint. Powder coating is mainly used for coating of metals, such as household appliances, aluminum extrusions, drum hardware, and automobile and bicycle parts. Newer technologies allow other materials, such as MDF (medium-density fibreboard), to be powder coated using different methods.

Phosphating is a chemical process for treating the surface of steel whereby metal-phosphate layers that are hardly soluble are formed on the base material. The layers created are porous, absorbent and are suitable without further treatment as a conversion layer for subsequent powder coating. They are also suitable as temporary corrosion protection if subsequently treated with oil, water or passivations.

Metal finishing has now come to be known as surface engineering. Surface engineering techniques are generally used to develop a wide range of functional properties. In addition to the decorative aspects, metal finishing aids the protection of metals and alloys from corrosion and rusting. A great potential exists for development of new materials involving, for example, coatings of metals composites particle incorporated anodic coatings and even films of sapphire like materials, porous films of niobium etc. and coating of refractory metals like molybdenum and tungsten.

For more details download PDF file.

Keywords: Electroplating Plant, Automatic Equipment, Surface Coatings and Treatments, Electroplating and Coating Plants, Electroplating Plant Equipment, Powder Coating Plants, Powder Coating Equipments, How to Start Powder Coating Business, Powder Coating Business Plan, Business Plan on Powder Coating, Start Powder Coating Business, Start High Profit Powder Coating Business, Starting Metal Polishing Business, Electroplating Business, Gold Plating Business, How to Start Metal Plating Business, Starting Zin

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