

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)

Introduction

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.

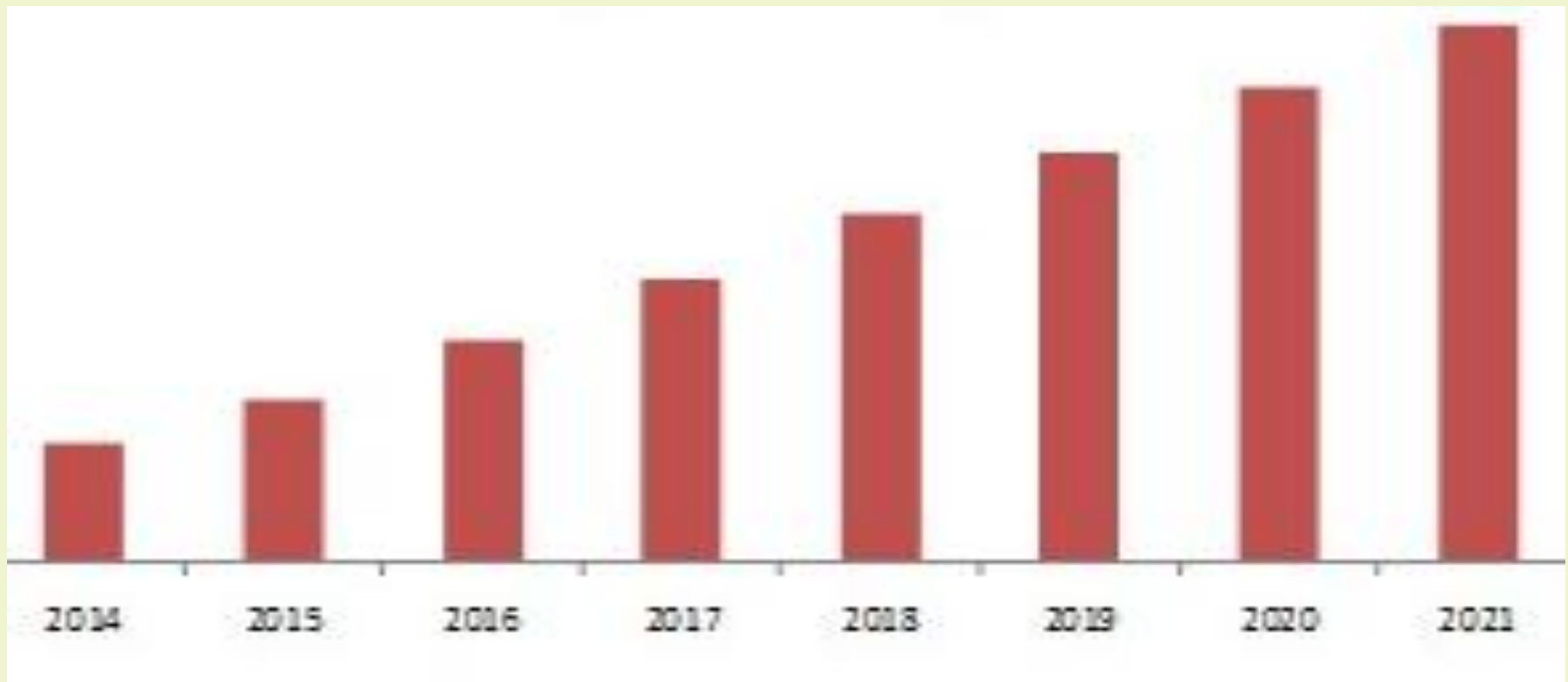
A great potential exists for development of new materials involving, for example, coatings of metals composites particle incorporated anodic coatings and even films of sapphire like materials, porous films of niobium etc. and coating of refractory metals like molybdenum and tungsten.

Market Outlook

The global electroplating market is expected to increase at an average CAGR over the forecast period.

The global electroplating market was valued above US\$ 14,540.5 Mn in 2016 and is expected to expand at a CAGR of 3.7% to cross US\$ 21,160.0 Mn by the end of 2026.

Electroplating Market



The global phosphate market was valued at 67.28 Billion in 2015 and is projected to reach 75.17 Billion by 2021, at a CAGR of 1.9% from 2016 to 2021.

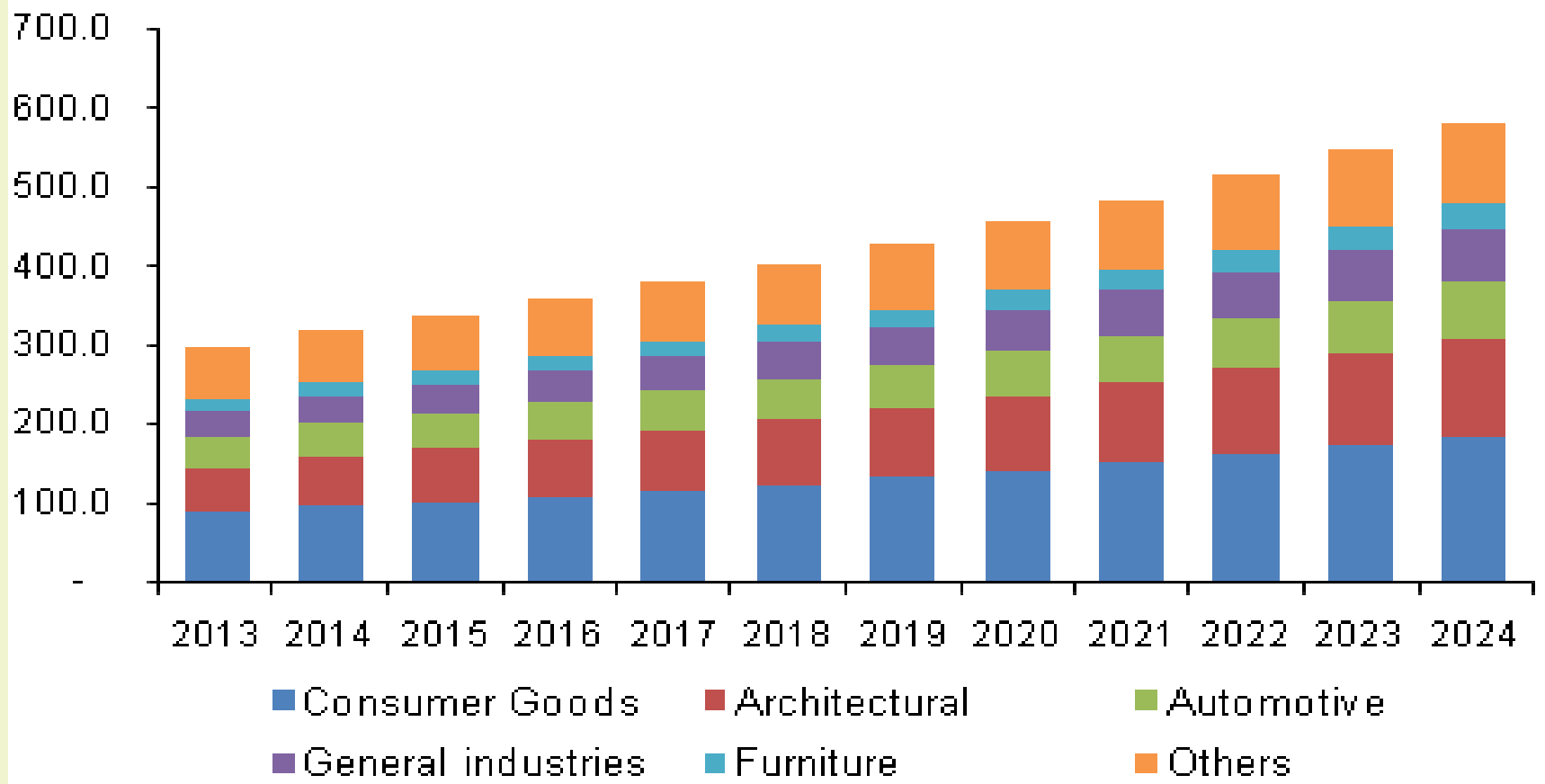
The powder coatings market is projected to reach USD 13.49 Billion by 2022, at a CAGR of 6.75% from 2017 to 2022.

The global powder coatings market is witnessing high growth due to the superior and durable performance of powder coatings over traditional liquid coatings or paintings, especially in terms of usage. Also, flexibility, durability, and impact resistant characteristics are the other factors that make their performance superior to wet coatings. Also, powder coatings are eco-friendly and do not emit any volatile organic compounds.

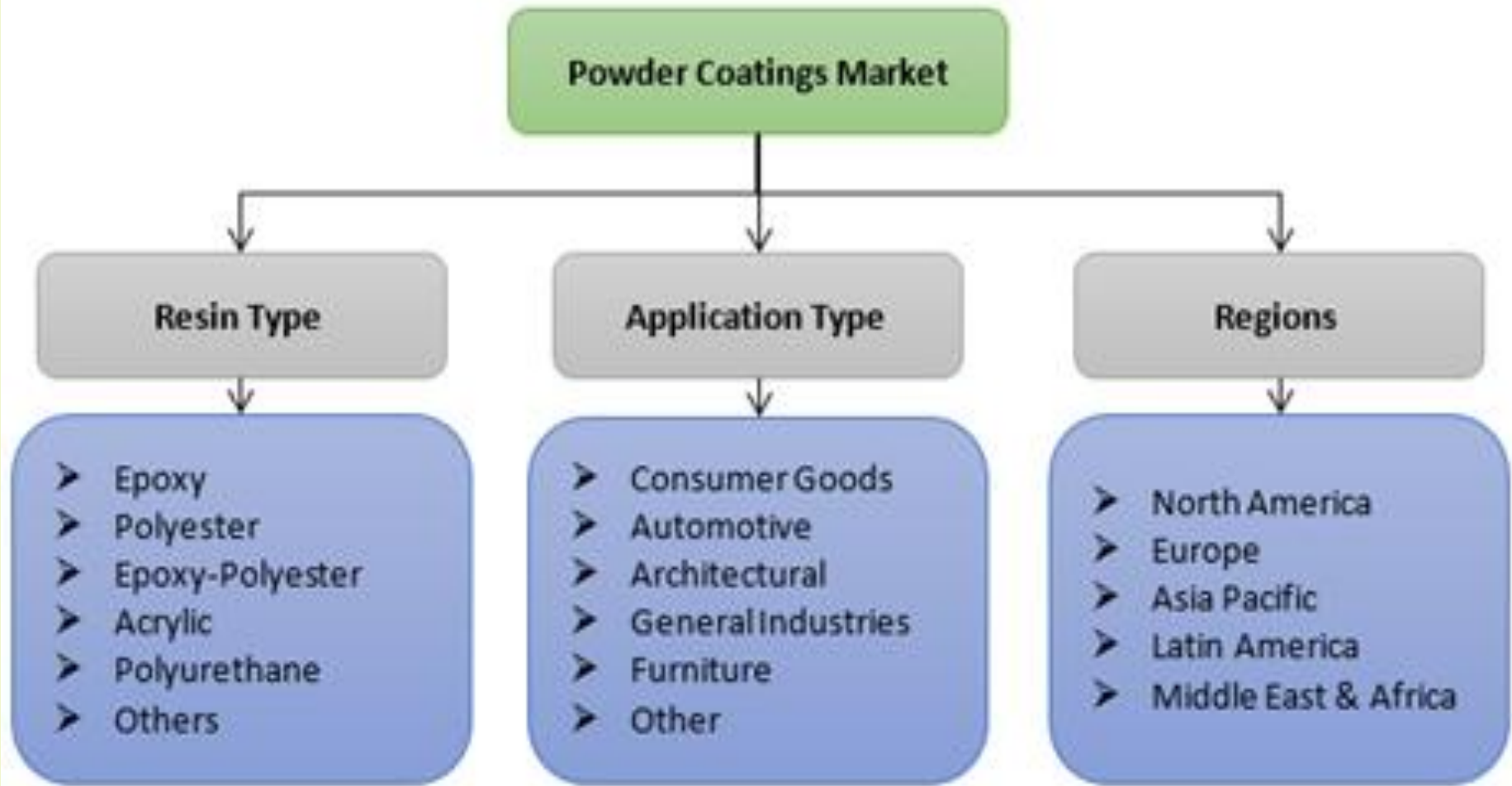
They are highly resistant to physical, chemical, and environmental factors, which make them more suitable across diverse applications in the automotive, architectural, appliances, agricultural, and furniture industries. Vendors in the market are also coming up with application-specific powder coatings. Powder coatings used in the automotive industry are different from those utilized across the architectural and furniture industries.

The global powder coatings market size was USD 8.66 billion in 2015 and is expected to witness significant growth over the forecast period primarily owing to its various superior properties over conventional paints including high resistance to corrosion, high-quality finish, chipping and abrasion, durability, cost-effective, and reduced processing time.

U.S. Powder Coatings Market Volume



Global Powder Coating Market Segmentation



The global metal finishing equipment market is growing, due to increasing need for wear resistant, durable and long lasting metal products, up surging demand from developing countries, and growth of automotive and steel industries.

The Global metal finishing market is growing at a CAGR of 6.50% during the period 2014-2020. Among all the segments in the market the inorganic metal finishing market dominates the rest in terms of both market share and volume.

Due to the increasing demand from end user industries such as Automotive, Electronics, Aerospace the global market for inorganic metal finishing technologies was worth \$64.2 billion in 2014 and is expected to reach \$95.8 billion with a CAGR of 6.91% by the end of 2020. Among the inorganic metal finishing technologies inorganic metal finishing processes have the largest share of market worth \$42.1 billion in 2014. Surface preparation/pretreatment has the second largest market share worth \$15.4 billion in 2014.

Table of Contents

1. ELECTROPLATING PLANT

- Automatic Equipment
- Fixed Sequence Automatic Plating Plant
- Trojan and Gem Type Automatic Plant
- Vulcan Lattice Arm Type Automatic Plant
- Titan Type Automatic Plant
- Digit Pivoted Arm Type Automatic Plant
- Straight-through Type Automatic Plant
- The Glydo System
- Special Transporter Designs
- Methods of Transporter Control

- Programmed Controllers
- Programme Preparation
- Programming Systems
- Photo-Electric Cell Type Reader
- Microprocessor and Computer Control
- Semi-Automatic Plating Plant
- Barrel Planting Plant
- Suitability of Articles for Barrel Plating
- Barrel Types
- Immersed Perforated Plating Barrels
- Glydo/Glydette Barrel Plating Equipment
- Horizontal Barrels
- Barrel Perforations
- Cathode Contacts

- Current Control
- Voltage
- Speed of Barrels
- Anodes
- Types of Cathode Contacts
- Calculation of Work Loads
- Perforated Obliquic Barrels
- Single Station Barrel Plating Units
- Horizontal Barrels
- Open-ended Plating Barrels
- Manual Planting Plant
- Modular Plant and Specialised Equipment for the Electronics Industry
- Uniplan
- Uniplan Barrel Plating

2. ELECTROPLATING EQUIPMENT

- Process Tanks
- Welded Steel Tanks
- Plastic Tanks
- Plastic Tanks Reinforced with Glass Fibre
- Glass Fibre (GRP) Tanks
- Stainless Steel
- Tank Lining Materials
- Rubber
- Treatment of Rubber Linings
- Key to Table
- Polyvinyl Chloride

- Ilex Grade Plastic Lined Tanks
- Lead
- Materials of Construction Containers, Hooks, Dipping Baskets
- Aluminium
- Glass
- Brass, Bronze and Copper
- Monel Metal
- Nichrome (Chrome Wire)
- Rods & Connections for Process Tanks
- Solution Heating
- Stem Heating
- Steam Coils
- Plain Steel Coils
- Galvanised Steel Coils

- Lead and Lead Alloy Coils
- Titanium Coils
- Zirconium Coils
- Tantalum Coils
- Incoloy 825 Coils
- Stainless Steel Coils
- Fluorocarbon Coils (Dupont Teflon Heat Exchangers)
- External Heat Exchangers
- Water Jackets
- High and Medium Pressure Hot Water Heating
- Liquid Phase Heating
- Gas Heating
- Electric Heating
- Metal Cased Heaters

- Teflon Immersion Heaters
- Silica Cased Heaters
- Earthing of Electrically Heated Tanks
- Electric Heating of Plastic or Plastic Lined Tanks
- Solution Level Control
- Lagging and Heat Conservation
- Chroffles
- Calculation of Heating Requirements
- Allowance for Heating Losses
- Steam Boilers
- Hot Water Boilers
- Gas Heating
- Electric Heating
- Temperature Control

- Temperature Indicators
- Thermostatic Control Equipment
- Solution Cooling
- Solution Agitation
- Air Agitation
- Mechanical Work Movement
- Fume Extraction and Shop Ventilation
- Fume Scrubbers and Demisters
- Filtration of Solutions
- Sentinel Filter Units
- Sieber Filter Units
- Hendor Filter Units
- Solution Circulation and Transfer
- Filter Media & Filter Aids

- Filter Media
- Filter Aids
- Pumps for Pressure Filtration
- Pipework for Filtration
- The Drying of Components
- Centrifugal Dryers
- Automated Centrifuge Units
- Hot Air Ovens
- Hot Sawdust and Grit-o-cobs
- Jigs & Racks For Electroplating, Anodising and Other Surface Coatings and Treatments
- Plating Jig Design
- Jig Contacts

- Anodising Jigs
- Jig Insulation
- Safety Precautions
- Ohmax Coating Procedure
- Equipment
- Maintenance
- Removal of the Insulated Coatings

3. ELECTRICAL EQUIPMENT

- Rectifiers Rectifier Rating
- Rectifier Installation and Maintenance
- Single PhRectifier Control
- Auto-transformers
- Stepless Regulators
- Thyristor controlled rectifiers
- Constant Voltage and Constant Current Control
- Controllers for Anodic Oxidation Processes
- Automatic Control
- ASE Rectifier Units
- Current Interrupters and Periodic Reverse Units

- Periodic Control Units for use with separate rectifiers
- Electrical Instruments
- Ammeters
- Voltmeters
- Ampere Time Meters
- Pre-setting Ampere-time Meters and Panels
- Heavy Current DC Switch-gear
- Connecting Up Plating Equipment
- D.C. Wiring Systems
- Busbars

- Busbar Ratings
- Busbar supports
- Jointing with flat busbars
- Copper Rod and Flexible Conductors

4. CLEANING, PICKLING AND DIPPING

- Routine Operations in Cleaning
- Preliminary Cleaning and Degreasing
- Solvent Cleaning
- Aqueous Neutral Detergent Pre-Cleaners
- Mersol Soak Cleaner
- Solution Composition
- Solution Preparation
- Operating Conditions
- Operating Procedure
- Ultrasonic Cleaning

- Alkaline Cleaners
- Hot Alkaline Cleaners
- Classification of Metal Cleaners
- Electrolytic Cleaning
- Equipment for Hot Alkaline Cleaners
- Barrel Cleaning
- Activax Cleaner
- Equipment
- Solution Preparation
- Solution Concentration and Operating Conditions
- Cleaning of Zinc Base Alloy Die Castings
- Barrel Cleaning
- Solution Maintenance
- Nuvax Cleaner

- Equipment
- Solution Preparation
- Cleaning of Zinc Base Alloy Die Castings
- Barrel Cleaning
- Solution Concentration and Operating Conditions
- Solution Maintenance
- Cleaner
- Equipment
- Solution Preparation
- Solution Concentration and Operating Conditions
- Solution Maintenance
- Multiklense
- Equipment

- Solution Preparation
- Solution Maintenance
- Cleaner No. 50
- Solution Concentration and Operating Conditions
- Solution Composition
- Solution Preparation
- Operating Conditions
- Solution Maintenance
- Anozyn
- Equipment
- Solution Composition
- Solution Preparation
- Operating Conditions

- Solution Maintenance
- 10-15 Cleaner
- Equipment
- Solution Concentration and Operating Conditions
- Solution Preparation
- Solution Maintenance
- 10-55 Cleaner
- Equipment
- Solution Preparation
- Operating Conditions
- Solution Maintenance
- Emphax
- Equipment

- Solution Composition
- Operating Conditions
- Solution Maintenance
- Zonax Metal Cleaner
- Solution Concentration and Operating Conditions
- Anodax Metal Cleaner
- Equipment
- Solution Composition
- Solution Preparation
- Operating Conditions
- Solution Maintenance
- Alkaline Cleaners for Aluminium
- For Cleaning without Etching the Surface
- For Light Etch Cleaning of Aluminium

- For Frosted Etch Finish
- Minco Cleaner
- Equipment
- Solution Concentration and Operating Conditions
- Solution Maintenance
- Kelco Cleaner
- Equipment
- Solution Composition
- Solution Preparation
- Operating Conditions and Procedure
- Solution Maintenance
- Maintenance of Metal Cleaners
- Additions of Metal Cleaner

- Pickling and Dipping
- Zonax Dry Acid Salt
- Equipment
- Solution Concentration and Operating Conditions
- Solution Preparation
- Sulphuric Acid Pickling
- Equipment
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Hydrochloric Acid Pickling
- Solution Composition
- Equipment
- Operating Procedure
- Skalene Pickle for Iron and Steel

- Alkaline Deruster Salts
- Additional Uses of Alkaline Deruster Salts
- Equipment
- Section A. Cyanide-free Solution for Rust Removal
- Solution Composition
- Solution Preparation
- Operating Conditions
- Section B. Cyanide Solution for Rust and Scale Removal
- Solution Composition
- Operating Conditions
- Process Sequence used in Sections A and B
- Treatment of High Tensile Steels
- Spray Suppression

- Effluent Treatment
- Solution Maintenance
- Hydrofluoric Acid Pickling
- Solution Composition
- Equipment
- Operating Procedure
- Pickling of Magnesium Alloys
- Pickling of Stainless Steel
- Equipment
- Operating Procedure
- Pickle Aid
- For Combined Pickling and Degreasing Solutions
- As a Spray Suppressant
- Equipment

- Concentration
- Operating Conditions
- Solution Maintenance
- Bright Dipping of Copper Alloys
- Aqua Fortis Bright Dipping Acid
- Solution Composition
- Equipment
- Bright Dipping Procedure
- Chromic Acid Dip for Brass, Copper and its Alloys
- Solution Composition
- Equipment
- Operating Procedure
- Nitric Free Bright Dip C22924 for Copper and its Alloys

- Solution Composition
- Equipment
- Operating Procedure
- Solution Maintenance
- Barrel Pickling
- Second Stage or Surface Activation Cleaning
- Cyanide Containing Cleaners
- Klenowell
- Equipment
- Solution Composition
- Solution Preparation
- Operating Conditions
- Operating Procedure

- Solution Maintenance
- Kleenax
- Solution Concentration
- Operating Conditions
- Operating Procedure
- Solution Maintenance
- Non-Cyanide Cleaners
- Activax Cleaner
- 10-55 Cleaner and Anodax Metal Cleaner
- Anozyn
- Alkaline Deruster
- Emphax Cleaner
- Acid Etching

- Anodic Sulphuric Acid Etching of Iron and Steel
- High Concentration Acid Etch for Steel
- Equipment
- Solution Composition
- Solution Preparation
- Operating Conditions
- Operating Procedure
- Solution Maintenance
- Acid Etching of Steel and Iron before Heavy Deposition
- Solution Composition
- Solution Preparation
- Operating Conditions
- Solution Maintenance

- Pre-Treatment Systems
- Pre-Cleaning
- Typical Cleaning Cycles
- Nickel Plating of Mild Steel
- General Method
- Where a cyanide-free cleaning line is required
- Use of a sulphuric acid etch to ensure maximum adhesion of deposit
- D.Energy Saving Cleaning Line
- Cadmium and Zinc Plating of Mild Steel
- Rack Plating
- Notes
- Barrel Plating
- Notes

- Plating on High Carbon Steel
- Plating on Cast Iron and Malleable Castings
- Plating on Stainless Steel
- Nickel Chloride Strike for Stainless Steel
- Nickel Sulphate Strike for Stainless Steel
- Nickel Plating of Brass and Other Copper Alloys
- General Method
- Alternative method where a cyanide-free cleaning line is required
- Nickel Plating of Copper
- Nickel Plating of Leaded Brass
- Copper and Nickel Plating on Zinc Base Alloy Die-Castings
- Plating on Aluminium and its Alloys
- The Bondal Process

- Bondal Cleaner
- Equipment
- Solution Composition
- Solution Preparation
- Operating conditions
- Solution Maintenance
- Bondal Dip
- Standard process sequence for electro-plating on aluminium and its alloys
- Modification to the standard process
- Articles likely to carry over solution

- Deposition of metals other than nickel
- Jigging
- Dips and Rinses
- Dilute Acid Dips
- Cyanide Dips
- Rinsing or Swilling
- Rinse-Aid
- Scouring

5. ELECTROLYTIC AND CHEMICAL PROCESSES FOR THE POLISHING OF METALS

- Electro-polishing Solutions
- Aluminium and Aluminium Alloys
- Aluminium Electro-polishing Solution
- Equipment
- Solution Composition
- Solution Preparation
- Operating Conditions
- Operating Procedure
- Solution Maintenance
- Brytal Process

- Equipment
- Operating Conditions
- Desmutting
- Stainless Steels
- Canning Stainless Steel Electro-polishing Solution
- Solution Composition
- Equipment
- Operating Conditions
- Process Sequence
- Solution Maintenance

- Copper, Brass and Nickel Silver
- Canning Non-Ferrous Electro-polishing Solution
- Solution Composition
- Equipment
- Operating Conditions
- Process Sequence
- Solution Maintenance
- Chemical Polishing of Aluminium
- Typical Operating Conditions

6. COPPER PLATING

- Properties of Copper
- Decorative Applications
- Functional Applications
- Copper Plating Solutions
- Rates of Deposition and Specification Requirements
- Cathode Efficiency of Copper Plating Solutions
- Rates of Deposition
- Deposit Specifications
- Equipment
- Cyanide Solutions
- Anodes
- Cyanide Copper Plating Processes

- Copper Strikes
- pH Control
- Cuprax High Efficiency Copper Solution
- Anodes
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Purification
- Analytical Standards
- Plating Procedure for Zinc based diecastings
- Zonax Copper Solution
- Anodes
- Solution Composition
- Operating Conditions

- Maintenance of the Solutions
- Low Cyanide Strike Solution for Cast Iron, Lead and Soldered Articles
- Analytical Standards
- Rochelle Copper Solution
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Analytical Standards
- Acid Copper Plating Processes
- Cuprasol Mk 2 Bright Levelling Acid Copper Plating Solution
- Preparation of the Cuprasol Mk. 2 Base Solution
- Solution Composition

- Operating Conditions
- Solution Maintenance
- Chloride Content
- Visual Control of the Cuprasol Solution
- Acid Copper Sulphate Solution
- Solution Compositions
- Operating Conditions
- Solution Maintenance
- Correction of Faults in Acid Copper Sulphate Solutions
- Copper Pyrophosphate Plating Solution
- Super Pyrobrite Copper Pyrophosphate Plating Solution
- Solution Composition
- Solution Maintenance

- Plating Procedure
- Neutral Copper Plating Solutions
- Solution Composition
- Operating Conditions
- Plating Procedure
- Immersion Plating Without Applied Current
- On Steel
- Solution Composition
- On Brass
- Solution for Barrel Copper Plating
- Barrel Plating with Zonax Copper Solution
- Solution Compositions
- Operating Conditions
- Maintenance of Solutions

- Analytical Standards
- Barrel Plating With Cuprax Copper Solution
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Analytical Standards
- Barrel Plating in Rochelle Copper Solution
- Operating Conditions
- Analytical Standards
- Solutions for Heavy Copper Deposition
- Cuprasol Mk. 2 Acid Copper Plating Process for Heavy Deposits
- Preparation of the Acid Copper Base Solution

- Solution Composition
- Operating Conditions
- Solution Maintenance
- Analytical Standards
- Copper Fluoborate Solution
- Equipment
- Operating Conditions
- Solution Maintenance
- Purification
- Analytical Standards
- Super Pyrobrite Copper Pyrophosphate Plating Solution
- Properties of the deposit
- Operating Conditions

- Purification
- Cuprux Cyanide Copper Solution
- Copper Plating Procedure
- Cyanide Copper Solutions
- Zinc Base Alloy Diecastings
- Special Techniques used in Printing Application
- Photogravure
- Building Up Copper Cylinders
- Skin Deposits
- Cast Iron and Steel Cylinders

- Aluminium Cylinders
- Copper Electrotypes
- Lithography
- Stopping-Off
- Methods for Stripping Copper Deposits
- From Steel
- Universal Stripping Salts for Steel
- Alkaline Cyanide Solution
- Immersion Process
- Sulphuric Acid Etch
- From Zinc Alloy Diecastings

7. ELECTROFORMING

- Applications of Electroforming
- Materials for Electroforming
- Nickel Solution
- The Watts Solution
- The Sulphamate Solution
- The Ni-speed Solution
- Zero-stress conditions for the Ni-speed process
- Nickel/Cobalt Alloy Solutions
- Copper Plating Solution
- Throwing power
- Sodium High-Sulphate Nickel Solution
- Operating Techniques

- Mandrels for Electroforms
- Permanent Mandrels
- Stainless steel
- Mild Steel
- Copper and Brass
- Electroformed Nickel
- Rigid Plastic
- Collapsible Plastics
- Expendable Mandrels
- Aluminium
- Zinc alloys
- Fusible alloys
- Plastics
- Wax

- Other Materials
- Post Plating Treatment
- Electroforming in Gramophone Record Production
- Printing Application
- Printing Methods
- Electroplating Techniques Special to the Printing Industry
- Electroplating Solutions used in the Printing Industry

8. BRASS PLATING

- Decorative Brass Plating
- Zonax Brass Solution for Decorative and General Plating
- Equipment
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Colour Consistency and Control
- Analytical Standards
- Plating Procedure
- Brass Plating upon Cast Iron and Lead
- Barrel Brass Plating

- Solution Composition
- Operating Conditions
- Solution Maintenance
- Analytical Standards
- Brass Plating for Rubber Adhesion
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Analytical Standards
- Plating Procedure
- Correction of Faults in Zonax Brass Plating Solutions.

9. SILVER PLATING

- Cyanides Systems
- High-Speed Selective Plating
- Non-cyanide System
- Iodide Solutions
- Trimetaphosphate Solution
- Thiosulfate Solutions
- Succinimide Solutions
- Organic Solvent Solutions
- Summary
- Tin, Lead, and Tin-Lead Plating
- Additives
- Tin, Lead, and Tin-Lead Plating Baths
- Tin Barrel, Still, and High-Speed Baths

- Lead Barrel and Still Baths
- 60 Tin/40 Lead Solder Barrel, Still, and High-Speed Baths
- 90 Tin/10 Lead Barrel, Still, and High-Speed Baths
- 93 Lead/7 Tin Barrel and Still Baths
- 10 Tin/88 Lead/2 Copper Ternary Alloy Barrel and Still Baths
- Fluoborate Plating
- Methane-Sulfonic-Acid-Based Plating
- Tin Plating From Stannate Baths
- Anodes in Stannate Baths
- Operation of Stannate Baths
- Reflowing Tin Deposits
- Determination of Acid Neutralization Value

10. TIN-NICKEL ALLOY PLATING

- Properties and Applications
- The Plating Baths
- Chloride-Fluoride Baths
- Chloride-Fluoride Solution Preparation
- Solution Agitation
- Anodes
- Effects of Process Variables
- Effects of Solution Contaminants
- Table 4. Solution Composition and Control Limits for Pyrophosphate-Glycine Bath
- Pyrophosphate-Glycine Bath
- Troubleshooting Guidelines

11. GOLD PLATING (GILDING)

- Properties of Gold
- History of Gold Plating
- Applications of Gold Plating
- Rates of Deposition and Specification Requirements
- Specification Requirements
- Undercoats
- Corrosion Resistance
- Carat Value
- Equipment for Gold Plating
- Anodes
- Effluent Treatment
- Gold Deposits and Solutions
- Ultra-pure Gold Deposits

- Low-Alloy Gold Deposits
- High-Alloy Decorative Golds
- General Gold Plating Procedure
- Plated Undercoats
- Barrier Layers
- Strike solutions
- Post plating treatment
- Traditional Gold Plating Practice (Gilding)
- Gilding Articles Inside
- Immersion Gilding
- Stripping Gold Deposits
- Electrolytic Process for Stripping Flux and Oxide from Gold

12. CADMIUM PLATING

- Properties of Cadmium
- Applications and Corrosion Resistance
- Cadmium Deposits on Non Ferrous Metals
- Passivation Processes
- Specification Requirements and Rates of Deposition
- Rates of Deposition and Plating Times
- Determination of Deposits Thickness
- Strip and re-weigh method for average thickness of cadmium deposits
- Test for Porosity of Deposit
- Cadmium Plating Equipment
- Cadmium Plating Solutions
- Cadmium Plating Salts

- Zonax Cadmium Plating Solution
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Analytical Standards
- Kadax Cadmium Solution for Barrel Plating
- Solution Composition
- Operating Conditions.
- Solution Maintenance
- Analytical Standards
- Kadamax High Speed Bright Cadmium Plating Solution
- Equipment
- Solution Composition
- Operating Conditions

- Solution Maintenance
- Analytical Standards
- Cadmium Plating Procedure
- Cleaning and Preparation of Work
- Removal of Embrittlement
- Treatment after Cadmium Plating
- Kadip Bright Dip
- Equipment
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Chromic Acid Dip

- Equipment
- Solution Composition
- Operating Conditions
- Stripping Cadmium Deposits
- Using Ammonium Nitrate Solution
- Using Ammoniacal Persulphate Solution
- Using Hydrochloric Acid

13. ZINC PLATING

- Properties of Zinc
- Applications Corrosion Resistance
- Specification Requirements and Rates of Deposition
- Thickness Requirements for Zinc Deposits
- Determination of Thickness of Zinc Deposit
- Rate of Deposition
- Zinc Plating Equipment
- Cyanide solutions
- Zinc Plating Solution
- Cyanide Zinc Plating Solutions
- Base Solution Composition

- Unizin Universal Zinc Brightner
- Anodes
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Analytical Standards
- Purification
- Hylite 80 Bright Zinc Solutions
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Zinc Oxide
- Zinc Cyanide
- Purification
- Analytical Standards

- Treatment after Plating
- Cyanide Zinc Plating Procedure
- Cleaning and Preparation of Work
- Treatment After Zinc Plating
- Bright Zinc Plating
- Dilute Nitric Acid Bright Dip
- Dull Zinc Plating
- Correction of Faults In Cyanide Zinc Plating Solutions
- Alkaline Non-Cyanide Zinc Solutions
- Envirozin 2 Bright Alkaline Non-Cyanide Solution
- Solution Composition: Rack
- Solution Composition: Barrel
- Solution Preparation

- Operating Conditions
- Rate of Deposition
- Solution Maintenance
- Analytical Standards
- Purification
- Alkaline Non-Cyanide Plating Procedure
- Acid Zinc Plating Solutions
- Zincalux Bright Acid Zinc Solution
- Solution Composition
- Operating Conditions
- Rate of Deposition
- Solution Maintenance
- Purification
- Analytical Standards
- Treatment after Plating

- Chloride Zinc Plating Solution
- Equipment
- Solution Composition
- Operating Conditions
- Rate of Deposition
- Solution Maintenance
- Treatment of Work after Plating
- Acid Zinc Plating Procedure
- Stopping-off
- Stripping Zinc Deposits
- Immersion Process
- Correction of Faults in Acid Chloride Zinc Plating Solutions
- Electrolytic Process

14. PASSIVATION PROCESSES FOR ZINC AND CADMIUM ELECTRODEPOSITS

- Drying
- Passivation Processes For Zinc and Cadmium
- Full Passivation Processes
- Zonax Passivating Salts
- Equipment
- Solution Composition
- Operating Conditions
- Process Sequence
- Solution Maintenance
- Chromate Passivation Solution To D.E.F. 130

- Equipment
- Solution Composition
- Operating Conditions
- Process Sequence
- Analytical Standards
- Solution Maintenance
- Autopass Salts
- Equipment
- Solution Composition
- Operating Conditions
- Process Sequence
- Solution Maintenance
- Production of Blue Chromate Coating

- Full Passivation Concentrate
- Equipment
- Solution Composition
- Operating Conditions
- Process Sequence
- Solution Maintenance
- Production of Blue Chromate Coating
- Heavy Bronze Passivation
- Solution Composition
- Operation Conditions
- Process Sequence
- Solution Maintenance
- Black Chromate Passivation For Zinc

- Solution Composition
- Operating Conditions
- Process Sequence
- Solution Maintenance
- Olive Drab Chromate Passivation
- Solution Composition
- Operating Conditions
- Process Sequence
- Solution Maintenance
- Black Finish
- Light, Colourless or Blue Passivation Process
- Blue Passivating Salts For Zinc
- Equipment
- Solution Composition

- Operating Conditions
- Process Sequence
- Solution Maintenance
- Bright Passivation For Zinc
- Solution Composition
- Operating Conditions
- Process Sequence
- Solution Maintenance
- Zinc Chromate Passivation
- Equipment
- Solution Composition
- Operating Conditions
- Process Sequence
- Solution Maintenance
- Iridex

- Colourless Passivation on Cadmium
- Equipment
- Solution Composition
- Operating Conditions
- Coloured Finishes
- Black Dye for Olive Drab Passivation
- Blue Identidye
- Equipment
- Operating Sequences
- Test Procedure For Passivated Films
- Spot Test Solution for Chromate Passivation Films

15. THE PLATING OF PLASTICS AND OTHER NON-METALLIC MATERIALS

- Plating-on-Plastics
- Applications and Advantages
- Properties of Plated Plastics
- Moulding for Plating on Plastics
- Physical faults and their effects
- Faults caused by variations in machine parameters
- Simplas Process
- Equipment
- Swilling or Rinsing
- Cleaning

- Pre-etch
- Hot Alkaline Cleaner
- Etching
- Etch Composition for ABS Type Polymers
- Operating Conditions
- Solution Maintenance
- Analytical Standards
- Etch Composition: For PP co-polymers
- Alternatives:
- Operating Conditions
- Solution Maintenance
- Analytical Standards
- Neutralising
- Solution Composition

- Solution Maintenance
- Simplas Neutraliser
- Solution Composition
- Operating Conditions
- Activation
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Acceleration
- Solution Composition
- Operating Conditions
- Niplas Electroless Nickel
- Equipment
- Solution Composition
- Operating Conditions

- Solution Maintenance
- Solution Life
- Analytical Standards
- Electroplating on Electroless Nickel Plated Surfaces
- Plating Jigs
- Barrel Plating of Plastics
- Barrel Plating Technique
- Silvering
- Spray Silvering
- Solution Composition
- Operating Procedure
- Sensitiser

- Immersion Silvering
- Operating Procedure
- Electroplating on Silvered Surfaces
- Jigging
- Special Techniques Used In Printing Applications
- Metallising with Copper Bronze Powder
- Preparation
- Metallising
- Electroplating
- Polishing with Powered Graphite
- Vacuum Evaporation and Electrical Sputtering

16. PLATING FOR ELECTRONICS

- Printed Circuits
- Specialist Processes for Printed Circuit Production
- Print and Etch Circuits
- Applying the Resist
- Producing the Circuit Pattern
- Etching
- Finishing
- Plated Through Hole Circuits
- Drilling
- Pretreatment
- Additive Circuitry
- Semi-Additive circuits

- Fully Additive Circuits
- Gold Plating of Edge Connectors
- 65 Copper Etchant For Printed Circuits
- Equipment
- Solution Composition
- Operating Conditions
- Solution Maintenance
- Analysis of 65 Copper Etchant
- Estimation of Hydrogen Peroxide in Bath
- Estimation of Copper in Bath
- Copper Recovery
- P.D. Activator for Printed Circuits
- Solution Composition

- Operating Conditions
- Cuprasol PTH Copper Plating Process
- Equipment
- Solution Composition
- Operating Conditions
- Preparation of Cuprasol PTH Base Solution
- Solution Preparation
- Analytical Standards
- PTH Tin/Lead Plating Solution
- Equipment
- Solution Composition
- Operating Conditions
- Solution Maintenance

- Analytical Standards
- Dekote PB/SN 1
- Equipment
- Solution Composition
- Operating Conditions
- Operating Procedure
- Solution Maintenance
- Dekote Au
- Equipment
- Solution Composition
- Operating Conditions
- Operating Procedure
- Solution Maintenance

17. PHOSPHATING PROCESSES

- Applications
- Pre-treatment Prior to Organic Coatings
- Protection against Corrosion
- Anti-wear Coatings
- Phosphating as a Production Aid
- Types of Phosphate Coating
- Iron Phosphate
- Zinc Phosphate
- Manganese Phosphate
- Lead Phosphate
- Surfaces To Which Phosphate Coatings May Be Applied

- Preparation of Surfaces for Phosphating
- Specifications
- British Standard 1389: 1973 Phosphate Treatment of Iron and Steel
- DEF STAN 03-11/1 Phosphate Treatment of Iron and Steel
- Treatment of High Tensile Steels
- Equipment for Phosphating
- Immersion Phosphating Plant
- Spray Phosphating Equipment
- Tanks
- Solution Heating
- Fume Extraction
- Sludge Removal
- Phosphating Processes

- Key to Table
- Light Weight Iron Phosphate Processes
- Canphos 301
- Canphos 304
- Equipment
- Solution Composition and Operating Conditions
- Preparation of the 300 Range Phosphating Solutions
- Operating Sequences
- Solution Maintenance
- Heavy Zinc Phosphate Processes
- Equipment
- Canphos 401
- Canphos 402

- Solution Composition and Operating Conditions
- Preparation of the 400 Range of Phosphating Solutions
- Solution Maintenance
- Visual Control
- Calcium Modified Zinc Phosphate Processes
- Canphos 501
- Canphos 504
- Canphos 509
- Equipment
- Solution Preparation
- Operating Sequences
- Solution Maintenance
- Addition Rates

- Light Weight Zinc Phosphate Processes
- Canphos 505
- Canphos 508
- Solution Composition and Operating Conditions
- Solution Preparation
- Solution Maintenance
- Addition Rates
- Manganese Phosphate Processes
- Canphos 601
- Equipment
- Solution Composition
- Operating Conditions
- Solution Preparation

- Operating Sequences
- Solution Maintenance
- Phosphating Process Sequences
- Pre-Treatment Processes
- Alkaline Cleaners
- Equipment
- Maintenance
- Defoaming
- Pickling and Derusting
- Conditioning
- Post Phosphating Treatments
- Sealing Treatment
- Chromic Rinse Solution (DEF STAN 03-11/1)

- Equipment
- Oils and Lubricants
- Black Finishes
- Sealphos 721 Black Stain
- Sealphos 708 Matt Black
- Aluminium Pre-Treatment
- Alibond 802
- Equipment
- Solution Composition
- Operating Conditions
- Operating Sequence

- Solution Maintenance
- Solution Analysis
- General Phosphating Information
- Sludge Removal
- Control of Solution Composition and Chemical Balance
- Effluent Treatment

18. CHEMICAL FINISHING OF ALUMINIUM

- Introduction
- Etching
- Alkaline Etching
- Acid Etching
- On-Site Etching
- Bright Etching
- Chemical Brightening
- Electorbrightening

19. ELECTROPLATING ON ALUMINIUM

- Background To Plating
- Advantages of Electroplating Aluminium
- Examples of Electroplated Aluminium
- Alloys for Plating
- Processing
- Early Pre-treatment Methods
- Preplating Procedures
- 1 Polishing
- 2 Jigging
- 3 Cleaning
- 4 De-smut
- 5 Pre-treatment
- Electrodeposition

20. CHEMICAL COLOURING OF ALUMINIUM

- Introduction
- Conversion Coatings
- Thickened Oxide Coatings

21. ELECTROPAINTING OF ALUMINIUM

- The Process
- Principles of Electropainting
- Process Details
- Jigging
- Pre-treatment
- Paint Application
- 4 Rinsing and Ultrafiltration
- Stoving
- Costs
- Conclusion
- Developments
- The Future

22. POWDER COATING OF ALUMINIUM

- Method of Application
- Equipment
- Electrostatic Generator and Gun
- Powder Recovery
- Stoving
- Powder Coating Production
- Colour
- Thermoplastic Powder Coatings
- Polyethylene (Polythene)
- PVC
- Nylon
- Factors Affecting Use of Thermo-plastic Coatings

23. BRIGHT NICKEL ELECTRO-PLATING

- Brighteners
- Levellers
- Stress Relievers
- Wetting Agents
- Properties of electro-deposited bright nickel
- Brightness
- Reflectivity
- Roughness and Pitting
- Porosity
- Corrosion Resistance
- Chromability
- Adhesion and Surface Preparation

- Ductility
- Internal Stress
- Hardness
- Effect of hydrogen absorption
- Properties of Bright Nickel Baths
- Stability
- Cathode and anode efficiencies
- Operating range
- Simplicity of operation
- Throwing power
- The incorporation and effect of organic addition agents

- Mechanisms of incorporation of organic compounds in electro-deposits
- Cathodic Reduction
- Interaction of organic additions
- Levelling
- Effect of additives on structure
- Grain size, orientation and brightness of electro-deposits
- Effect of additions on stress, ductility and hardness
- Stress first decreases, then rises as concentration is increased.

24. ELECTROPLATING SOLUTIONS

- Brass and Bronze Plating
- White Brass
- Bronze Plating
- Cadmium Electro-plating
- Alkaline Cyanide Baths
- Preparation of the Plating Bath
- Production Plating Conditions

- Acid Sulfate Baths
- Preparation of the Plating Bath
- Production Plating Conditions
- Neutral Chloride Baths
- Preparation of the Plating Bath
- Production Plating Conditions
- Acid Fluoborate Baths

25. DECORATIVE CHROMIUM PLATING

- Chemistry for Hexavalent Chromium
- Chemistry Trivalent Chromium
- Operations
- Equipment
- Waste Treatment
- Corrosion Protection
- Decorative Black Chromium
- Bulk Chromium Plating

26. FUNCTIONAL CHROMIUM PLATING

- Chemistry
- Operating Conditions
- Power Supply
- Anodes
- Fixturing and Rack Design
- Stop Offs
- Tapes
- Lacquers
- Wax
- Shields and Robbers
- Specialty Chromium Baths

- Trivalent Chromium
- Black Chromium
- Porous Chromium
- Environmental Concerns
- Air Handling
- Impurity Removal From a Plating Bath
- Regulations

27. COPPER PLATING

- Copper Cyanide Baths
- General Purpose Strike
- Strike-Plate Bath
- High-Efficiency Bath
- Barrel Plating
- Bath Preparation
- Maintenance and Control
- Constituents
- Temperature
- Agitation
- Contamination
- Carbonate

- Copper Pyrophosphate Plating Baths
- Strike
- Typical Pyrophosphate Bath
- Printed Circuit Bath
- Maintenance and Control
- Constituents
- Temperature
- Agitation
- Contaminants
- Orthophosphate
- Other Alkaline Baths
- Copper Sulfate Baths

- Standard Acid Copper Plating
- High-Throw Bath
- Bath Preparation
- Maintenance and Control
- Constituents
- Temperature
- Agitation
- Contaminants
- Copper Fluoborate Bath
- Maintenance and Control

28. GOLD PLATING

- Decorative Gold Plating (Classes C and, sometimes, G)
- Barrel Plating (Classes A and B)
- Antique Golds (Classes A and B)
- Heavy Decorative Gold (Classes C-1 and C-2)
- Industrial/Electronic Gold Plating
- Alkaline Cyanide Baths (Group 1, Class D)
- Neutral Cyanide Solutions (Group 2, Class D)
- Acid Cyanide Plating Solutions (Group 3, Class E)

- **Directory Section**

Tags

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 Zinc Plating Business, How to Start Electroplating Business, How to Start Metal Finishing Business, Starting Metal Polishing Business, Metal Finishing Industry, Business Plans for Metal Finishing, Zinc Plating Process, Zinc Plating Plant, Electroplating Plant for Acid Zinc, Electroplating Plant Equipment, Fixed Sequence Automatic Plating Plant, Trojan and Gem Type Automatic Plant, Vulcan Lattice Arm Type Automatic Plant, Titan Type Automatic Plant, Digit Pivoted Arm Type Automatic Plant, Straight-Through Type Automatic Plant, Methods of Transporter Control, Microprocessor and Computer Control, Semi-Automatic Plating Plant, Barrel Planting Plant, Suitability of Articles for Barrel Plating, Glydo/Glydette Barrel Plating Equipment, Calculation of Work Loads, Manual Planting Plant, Single Station Barrel Plating Units, Modular Plant and Specialised Equipment for Electronics Industry, Electroplating Equipment, Welded Steel Tanks, Plastic Tanks Reinforced with Glass Fibre, Tank Lining Materials, Glass Fibre (GRP) Tanks, Treatment of Rubber Linings, Ilex Grade Plastic Lined Tanks, Galvanised Steel Coils, Lead and Lead Alloy Coils, Titanium Coils, Metal Cased Heaters, Teflon Immersion Heaters, Silica Cased Heaters, Earthing of Electrically Heated Tanks,

Tags

Electric Heating of Plastic or Plastic Lined Tanks, Lagging and Heat Conservation, Thermostatic Control Equipment, Jigs & Racks For Electroplating, Anodising and Other Surface Coatings, Removal of Insulated Coatings, Rectifier Installation and Maintenance, Single Phase Rectifier Units, Constant Voltage and Constant Current Control Controllers for Anodic Oxidation Processes, Current Interrupters and Periodic Reverse Units, Pre-Setting Ampere-Time Meters and Panels, Connecting Up Plating Equipment, Cleaning, Pickling and Dipping, Equipment for Hot Alkaline Cleaners, Cleaning of Zinc Base Alloy Die Castings, Cleaning of Zinc Base Alloy Die Casting, Anozyn, Equipment, Solution Composition, Solution Preparation, Operating Conditions, Plating on High Carbon Steel, Plating on Cast Iron and Malleable Castings, Plating on Stainless Steel, Nickel Chloride Strike for Stainless Steel, Nickel Sulphate Strike for Stainless Steel, Copper and Nickel Plating on Zinc Base Alloy Die-Castings, Standard Process Sequence for Electro-Plating on Aluminium and its Alloys, Electrolytic and Chemical Processes for Polishing of Metals, Aluminium Electro-Polishing Solution, Canning Non-Ferrous Electro-Polishing Solution, Copper Plating, Cyanide Copper Plating Processes, Zonax Copper Solution, Acid Copper Plating Processes, Gold Plating, Copper Fluoborate Bath, Standard Acid Copper Plating, Copper Pyrophosphate Plating Baths, Functional Chromium Plating, Decorative Black Chromium, Decorative Chromium Plating, Production Plating Conditions, Preparation of Plating Bath, Electroplating Solutions, Cadmium Electro-Plating, Adhesion and Surface Preparation, Bright Nickel Electro-Plating, Powder Coating of Aluminium, Chemical Colouring of Aluminium,

Tags

Electroplating on Aluminium, Chemical Finishing of Aluminium, Aluminium Pre-Treatment, Calcium Modified Zinc Phosphate Processes, Heavy Zinc Phosphate Processes, Equipment for Phosphating, Immersion Phosphating Plant, Spray Phosphating Equipment, Treatment of High Tensile Steels, Phosphating Processes, Pre-Treatment Prior to Organic Coatings, Plating for Electronics, Plating of Plastics and Other Non-Metallic Materials, Production of Blue Chromate Coating, Passivation Processes for Zinc and Cadmium Electrodeposits, Treatment of Work After Plating, Cadmium Plating, Gold Plating (Gilding), Tin-Nickel Alloy Plating, Silver Plating, Brass Plating, Electroforming

**Niir Project Consultancy Services (NPCS) can provide
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- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*



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- *Business Plan*
- *Industry Trends*
- *Market Research Reports*
- *Technology Books and Directory*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*



How are we different ?

- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*



Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

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- *Corporates*
- *Government Undertakings*
- *Individual Entrepreneurs*
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- *Consultancies*
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- *Alcoholic And Non Alcoholic Beverages, Drinks*
- *Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin*
- *Activated Carbon & Activated Charcoal*
- *Aluminium And Aluminium Extrusion Profiles & Sections,*
- *Bio-fertilizers And Biotechnology*
- *Breakfast Snacks And Cereal Food*
- *Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling*

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- *Bamboo And Cane Based Projects*
- *Building Materials And Construction Projects*
- *Biodegradable & Bioplastic Based Projects*
- *Chemicals (Organic And Inorganic)*
- *Confectionery, Bakery/Baking And Other Food*
- *Cereal Processing*
- *Coconut And Coconut Based Products*
- *Cold Storage For Fruits & Vegetables*
- *Coal & Coal Byproduct*

Sectors We Cover *Cont...*

- *Copper & Copper Based Projects*
- *Dairy/Milk Processing*
- *Disinfectants, Pesticides, Insecticides, Mosquito Repellents,*
- *Electrical, Electronic And Computer based Projects*
- *Essential Oils, Oils & Fats And Allied*
- *Engineering Goods*
- *Fibre Glass & Float Glass*
- *Fast Moving Consumer Goods*
- *Food, Bakery, Agro Processing*



Sectors We Cover *Cont...*

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- *Ferro Alloys Based Projects*
- *Fertilizers & Biofertilizers*
- *Ginger & Ginger Based Projects*
- *Herbs And Medicinal Cultivation And Jatropha (Biofuel)*
- *Hotel & Hospitability Projects*
- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*



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- *Infrastructure Projects*
- *Jute & Jute Based Products*
- *Leather And Leather Based Projects*
- *Leisure & Entertainment Based Projects*
- *Livestock Farming Of Birds & Animals*
- *Minerals And Minerals*
- *Maize Processing(Wet Milling) & Maize Based Projects*
- *Medical Plastics, Disposables Plastic Syringe, Blood Bags*
- *Organic Farming, Neem Products Etc.*

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- *Paints, Pigments, Varnish & Lacquer*
- *Paper And Paper Board, Paper Recycling Projects*
- *Printing Inks*
- *Packaging Based Projects*
- *Perfumes, Cosmetics And Flavours*
- *Power Generation Based Projects & Renewable Energy Based Projects*
- *Pharmaceuticals And Drugs*
- *Plantations, Farming And Cultivations*
- *Plastic Film, Plastic Waste And Plastic Compounds*
- *Plastic, PVC, PET, HDPE, LDPE Etc.*

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- *Printing And Packaging*
- *Real Estate, Leisure And Hospitality*
- *Rubber And Rubber Products*
- *Soaps And Detergents*
- *Stationary Products*
- *Spices And Snacks Food*
- *Steel & Steel Products*
- *Textile Auxiliary And Chemicals*



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- *Wood & Wood Products*
- *Water Industry(Packaged Drinking Water & Mineral Water)*
- *Wire & Cable*

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