

Logo

106-E, Kamla Nagar, New Delhi-110007, India.
Tel: 91-11-23843955, 23845654, 23845886, +918800733955
Mobile: +91-9811043595
Email: npcs.ei@gmail.com, info@entrepreneurindia.co
Website: www.entrepreneurIndia.co

Modern Technology of Paints, Varnishes & Lacquers (3rd edition)

Code: NI345	Format: paperback
Indian Price: ₹2200	US Price: \$200
Pages: 616	ISBN: 978-81-957447-2-5
Publisher: Asia Pacific Business Press Inc.	

Description

(Solvents, Plasticizers, Distempers, Whitewash, Putties & Emulsion, Lacquers, Primers, Powder Coatings, Pigments, Alkyd Resin, Solvent-type Resins, Hydrocarbon Thinners, Epoxy Resins with Formulations, Machinery Equipment Details and Factory Layout)

Paints, varnishes, and lacquers are chemicals or substances that you can use to change the color, texture or shine of a surface. These materials can be applied to a wide range of surfaces, including those made of metal, wood, paper, and plastic. They can be used to paint canvas works of art, to coat beautiful things with a layer of protection, or for practical uses like polishing furniture. The most popular kind of paints are oil-based paints, which are created using pigments that, when dried, leave an oily layer on the surface. Due to their lower levels of toxicity as compared to paintings made with an oil base, acrylics have grown in popularity in recent years.

Paints, varnishes, and lacquers are essential supplies for any job involving home décor. Numerous colours are available for these products to match any style. Additionally, you can choose the finish that best meets your needs because they come in a variety of finishes. These products come in a variety that makes it simple to obtain just what you need without having to purchase numerous different things. These paints, varnishes, and lacquers are not only long-lasting but also simple to use thanks to current technology.

The size of the global market for paints, varnishes, and lacquers is anticipated to increase at a CAGR of 7.8%. The demand is on the rise, and technological developments in the paint business are the main drivers of this expansion. Global population growth is also driving up demand for residential and commercial real estate, which will drive up demand for paints, varnishes, and lacquers globally. This sector's growth can be attributed to a variety of factors. More paints, varnishes, and lacquers will be required when there is a rise in the demand for new housing due to population growth. As homeowners attempt to make their homes appear newer with fresh coats of paint, industry analysts predict that sales will increase even further. In order to meet the expectations of the market, manufacturers must also adapt. While they look for new markets to supply, they have been investing in machinery and extending their manufacturing lines. In fact, it's one of the fastest-growing manufacturing industries. This industry not only has a high growth rate but also offers tremendous opportunities for entrepreneurs to enter this booming business. Modern paint, varnish, and lacquer technologies have made it simpler for people to design unique paint jobs for use on furniture. Due to the low entrance requirements, this industry benefits entrepreneurs, to launch your business.

The Major Contents of the books are Solvents, Plasticizers, Distempers, Whitewash, Putties & Emulsion, Lacquers, Primers, Powder Coatings, Pigments, Alkyd Resin, Solvent-type Resins, Hydrocarbon Thinners, Epoxy Resins with Formulations, Factory Layout, and Photographs of Machinery with Supplier Contact Information.

A comprehensive reference to manufacturing and entrepreneurship in the Paints, Varnishes & Lacquers products business. This book is a one-stop shop for everything you need to know about the Paints, Varnishes & Lacquers products manufacturing industry, which is ripe with potential for manufacturers, merchants, and entrepreneurs. This is the only comprehensive guide to commercial Paints, Varnishes & Lacquers products manufacture. It provides a feast of how-to knowledge, from concept through equipment purchase.

Content

1. Introduction 1.1 Components 1.1.1 Vehicle 1.1.2 Binder or Film Former 1.1.3 Diluent or Solvent or Thinner 1.2 Pigment, Dye and Filler 1.3 Additives 1.4 Color Changing 1.5 Art 1.6 Application 1.7 Product Variants 1.8 Finish Types 1.9 Failure 1.9.1 Dilution 1.9.2 Contamination 1.9.3 Peeling/Blistering 1.9.4 Chalking 1.9.5 Cracking 1.9.6 Erosion 1.10 Types of Paint 1.10.1 Oil Paint 1.10.2 Emulsion Paint 1.10.3 Enamel Paint 1.10.4

Bituminous Paint 1.10.5 Aluminium Paint 1.10.6 Anti-Corrosive Paint 1.10.7 Synthetic Rubber Paint 1.10.8 Cement Paint 1.10.9 Speciality Home Paints: Lasts Long, Protects Longer 1.11 Properties 1.11.1 Wear Ability 1.11.2 Covering Ability 1.11.3 Ease of Cleaning 1.11.4 Environmentally Friendly 1.11.5 Aesthetic 1.11.6 Practical and Cost Effective 1.12 Paint Compositions and Their Functions in Paints 1.12.1 Pigments 1.13 Prime Pigments 1.13.1 Extender Pigments 1.14 Inorganic Pigments in Pictures 1.15 Organic Pigments in Pictures 1.15.1 Binders 1.15.2 Linseed Oil 1.16 Tips & Techniques 1.16.1 Safflower Oil 1.16.2 Acrylic Resin Dispersion 1.16.3 Gum Arabic 1.16.4 Kaolin 1.16.5 Waxes 1.16.6 Dextrin 1.16.7 Schellac 1.16.8 Alkyd Resin 1.16.9 Alkyd Polymers (Resins) 1.16.10 Epoxy Polymers (Resins) 1.16.11 Liquid Metal Paint 1.17 Types of Liquid Metal Paint 1.17.1 Liquid Epoxy Coating 1.17.2 Polyurethane Coating 1.17.3 Polyaspartic Coating 1.18 Common Uses of Liquid Metal Paint 1.19 Additives 1.19.1. Environmental Issues Determine the Development Trend of Coatings 1.19.2 Additive Types and Effects 2. Paint Production Process 2.1 Raw Materials 2.2 Laboratory 2.3 Weighing the Raw Materials 2.4 Dispersion 2.5 Pre-Mixing 2.6 Grinding the Pigments 2.7 Fineness Inspection 2.8 Colour Inspection 2.9 Stability Inspection 2.10 Filling 3. How to Start a Painting Business? 3.1 Steps 3.1.1 Step 1: The Fundamentals 3.1.2 Step 2: Sign Up for a Business Name 3.1.3 Step 3: Choose the Best Painting Services and Desired Target Market 3.1.4 Step 4: Register Business and Purchase Insurance 3.1.5 Step 5: Purchase Essential Painting Materials 3.1.6 Step 6: Establish a Business Bank Account 3.1.7 Step 7: Hire Painters 3.1.8 Step 8: A Marketing Strategy for Painting Company 4. Oils Used in Paints and Varnishes 4.1 Drying Oils 4.1.1 Linseed Oil 4.1.2 Boiled Oil from Linseed Oil 4.1.3 Blown Oil from Linseed Oil 4.1.4 Stand Oil from Linseed Oil 4.1.5 Perilla Oil 4.2 Conjugated Oils 4.2.1 Tung Oil 4.2.2 Oiticica Oil 4.2.3 Kamla Seed Oil 4.2.4 Dehydrated Castor Oil or D.C.O. 4.3 Semi Drying Oils 4.3.1 Soyabean Oil 4.3.2 Safflower Oil 4.3.3 Tobacco Seed Oil 4.3.4 Sunflower Oil 4.3.5 Cotton Seed Oil 4.3.6 Fish Oil 4.4 Non-Drying Oils 4.4.1 Castor Oil 4.4.2 Coconut Oil 4.5 Derivatives of Drying Oils 4.5.1 Maleic Treated oil 4.5.2 Styrenated Oils 4.5.3 Extraction of Oil 4.6 Refining of Oils 4.6.1 Mechanical Refining 4.6.2 Acid Refining 4.6.3 Alkali Refining 5. Solvents 5.1 Hydrocarbons 5.1.1 White Spirits 5.1.2 Toluene ($C_6H_5CH_3$) 5.1.3 Xylene ($C_6H_4(CH_3)_2$) 5.1.4 Benzene (C_6H_6) 5.1.5 Water White Kerosene 5.2 Ketones 5.2.1 Acetone ($CH_3.CO.CH_3$) 5.2.2 Methyl Ethyl Ketone ($CH_3-C-CH_2-CH_3$) 5.2.3 Methyl Isobutyl Ketone (M.I.B.K.) [$CH_3COCH_2CH(CH_3)_2$] 5.2.4 Di-isobutyl Ketone 5.3 Esters 5.3.1 Ethyl Acetate ($CH_3COOC_2H_5$) 5.3.2 Amyl Acetate ($CH_3-C-O-CH_2CH_2CH_2CH_3$) 5.3.3 Butyl Acetate ($CH_3COOC_4H_9$) 5.3.4 Propyl Acetate ($CH_3-C-O-CH_2-CH_2-CH_3$) 5.4 Glycol Ethers 5.4.1 Methyl Cellosolve ($CH_3-O-CH_2-CH_2-OH$) 5.4.2 Ethylene Glycol Monoethyl Ether ($CH_3-CH_2-O-CH_2-CH_2-OH$) or Cellosolve 5.4.3 Carbitol: Diethylene Glycol Monoethyl Ether ($CH_3-CH_2-O-CH_2-CH_2-O-CH_2-CH_2-OH$) 5.5 Alcohols 5.5.1 Ethyl Alcohol (CH_3-CH_2-OH) 5.5.2 Isopropyl Alcohol ($CH_3-CH-CH_3$) 5.5.3 Butyl Alcohol (C_4H_9OH) 5.6 Terpenes 5.6.1 Turpentine 5.6.2 Dipentene 5.6.3 Pine Oil 6.

Plasticizers 6.1 General Properties of Plasticizers 6.1.1 Di-(2 Ethyl Hexyl) Phthalate 6.1.2 Butyl Benzyl Phthalate 6.1.3 Tricresyl Phosphate 6.1.4 Triphenyl Phosphate 6.1.5 Butyl Stearate 7. Additives in Surface Coatings 7.1 Some important Additives 7.2 Driers 7.3 Wetting and Dispersing Agents 7.4 Anti Skinning Agents 7.5 Anti Settling Agents 7.6 Antifloating and Antiflooding Agents 7.7 Levelling and Flow Control Agents 7.8 Defoaming Agents 7.9 Preservative and Fungicides 8. Formulary with Processes of Distempers, Whitewash, Putties & Emulsion 8.1 White Distemper 8.2 Sky Blue Distemper 8.3 Yellow Distemper 8.4 Method of Preparation 8.5 White Wash 8.6 Putties (U.S. Patent 2,346, 408) 8.7 Preventing Putty Sticking to Hands 8.8 Alberene Stone Filler or Cement 8.9 Non-Freezing Putty (Dutch Patent 67, 940) 8.10 Modified Putty 8.11 Emulsion Paints 9. Formulations 9.1 Enamels 9.1.1 Transparent Enamel 9.1.2 To Prepare Enamels in Different Colours 9.2 Floor Paints 9.3 Luminous Paints 9.4 Paint for Structural Steel 9.5 Window Paint (Temporary) 9.6 Luminous Artists Oil Colours 9.7 Latex Semi-Gloss White Paint 9.8 Asbestos Paints 9.9 Mica Lustre Paint 9.10 Fire Resistant Coating 9.11 To Clean Paint Brushes 9.12 Water Emulsion Paints for Exterior Use 9.13 Lacquers 9.13.1 Wood Lacquer 9.13.2 Metal Lacquer 10. Lacquers 10.1 Cellulose Products 10.2 Ethyl Cellulose 10.3 Lacquer Manufacture 10.4 Merits of Cellulose Lacquers 10.5 Aeroplane Lacquer 10.6 Book Lacque 10.7 Varnishes 10.8 Different kinds of Varnishes 10.9 Oil Varnish 10.10 Turpentine Varnish 10.11 Spirit Varnish 10.12 Water Varnish 10.13 Oil Varnishes 10.13.1 Resins 10.13.2 Drying Oils 10.13.3 Dryer 10.13.4 Thinners 10.14 Preparation of Oil Varnishes 10.15 Gum Running 10.16 Addition of Drying Oils 10.17 Thinning 10.18 Maturing 10.19 Different kinds of Oil Varnishes 10.20 Exterior Varnish 10.21 Interior Decorators Varnish 10.22 Rubbing Varnish 10.23 Polishing Varnish 10.24 Flat Varnish 10.25 Gold Size 10.26 Black Varnish 10.27 Formulas of Oil Varnishes 10.28 Spirit Varnish or Lacquer 10.29 Resins 10.30 Solvents 10.31 Plasticizers 10.32 Alcohol Varnish 10.33 Turpentine Varnishes 10.34 French Varnish 10.35 Varnish prepared from Synthetic Resins 10.36 Spar Varnish 10.37 Process 11. Paint Manufacturing Different Types of Paints and Various Formulations 11.1 Premixing 11.2 Commonly Used Machines for Pre-Mixing 11.3 Precautions Taken during Premixing Operation 11.4 Grinding Operation 11.5 Precaution Taken 11.6 Thinning 11.7 Precaution 11.8 Tinting Operation 11.9 Precautions Taken 11.10 Refining 11.11 Filling 11.12 Labelling and Packing 11.13 Oil Based Paints 11.14 Typical Formulations 11.15 Modern Gloss Finishes 11.16 Heat Resisting Paints 11.17 Flame Retardant Paints 11.18 Plastic Paints 11.19 Floor Paints 11.20 Types of Floor Paints 11.21 Primary Requirements for Floor Paints 11.22 Flat Paints 11.23 Flat Oil Paint 11.24 Aluminium Paint 11.25 Wrinkle Finishes 11.26 Hammer Finishes 11.27 Marine Coatings 11.27.1 Introduction 11.28 Ship Paints 11.29 Hull Paints 11.30 Top Sides Finish 11.31 Boot Topping Paints 11.32 Marine Paint to Resist Sea Water 11.33 Antifouling Paints 11.34 Anti-Corrosive Paints 11.35 Road Marking Paints 11.36 Chemical Resistant Coatings 11.37 Synthetic Enamel Paints

11.38 Bituminous Coatings 11.39 High solids Finishes 11.40 Curing Agent 11.41 Graphite and Graphite Paints 11.42 Graphite Paints 12. Primers 12.1 Primer for Metals 12.2 Types of Primers 12.2.1 Blast Primers 12.3 Metallic Zinc Primers 12.4 Red Oxide/Zinc Chrome Primers 12.5 Lead Based Primer 12.6 Wash Primer 12.7 Reactions 12.8 Primers for Wood 12.9 Leadless Primers 12.10 Aluminium Primer 12.11 Emulsion Primers 12.12 Wall Primers & Sealers 13. Powder Coatings 13.1 Thermoplastic Coatings 13.2 PVC Coatings 13.3 Polyamides 13.4 Polyethylene 13.5 Cellulose Esters 13.6 Polyesters 13.7 Thermosetting Coating Powders 13.8 Epoxy Powder Coatings 13.9 Polyurethane 13.10 Acrylic Resins 13.11 Formulation of Powder Coatings 13.12 Manufacturing Process 13.13 Ingredients Required 13.13.1 Melt Mixing Process 13.14 Application Method 13.15 Fluidized Bed Coating 13.16 Electrosatic Fludized Bed Coatings 13.17 Electrostatic Spray Coating 13.18 Flame Spraying 13.19 Test Methods 13.20 Future Trend 14. Pigments—General Classification and Description 14.1 Definition of Paint 14.2 Purposes of Pigments in Paint 14.3 Tyeps of Pigments 14.4 Principles of Hiding Power 14.5 Hiding Power of Paint 14.6 Extender Pigments 14.6.1 General Properties of Extenders 14.7 Pigment Manufacturing 14.7.1 Silicate Pigments 14.7.2 Barium Sulfate Pigments 14.7.3 Calcium Sulfate Pigments 14.7.4 Calcium Carbonate Pigments 14.7.5 Specific Extenders 14.7.6 The Future of Extender Pigment Technology 15. White Hiding Pigment 16. Organic Toners and Mineral Pigments 16.1 Color Blending 16.2 Metallic Pigments 16.3 Blacks 16.4 Earth Colors 16.5 Inorganic Blues 16.6 Organic Blues 16.7 Browns 16.8 Greens 16.9 Organic Greens 16.10 Marron Pigments 16.11 Oranges 16.12 Reds 16.13 Violets 16.14 Yellows 17. Alkyd Resin Technology 18. Solvent-Type Resins 18.1 Brush Lacquers 18.2 Ethyl Cellulose and “Parlon” 18.2.1 Ethyl Cellulose 18.3 “Parlon” 18.4 Vinyl Resins, Polystyrene and Styrene Resins, Acrylate and Methacrylate Resins, Allyl Resins, Pliolite, And Silicone Resins 18.4.1 Vinyl Resins 18.5 Polystyrene and Styrene Resins 18.6 Acrylate and Methacrylate Resins 18.7 Allyl Resins 18.8 “Pliolite” 18.9 Silicone Resins 19. Hydrocarbon Thinners 19.1 Volatile Lubricants 19.2 Measures of Solvency 19.3 Composition 19.4 Viscosity Reduction 19.5 Tests for Purity 19.6 Volatility 19.7 Conclusion 20. Formulation of the “Volatiles” in Nitrocellulose Lacquers 20.1 Solvents and Diluents 20.2 Viscosity 20.3 Toluene vs. Naphtha 20.4 Effect of Resins 20.5 Flow 20.6 Latent Solvents 20.7 Evaporation 20.8 Orange Peel 20.9 Diluents 20.10 Viscosity 20.11 Blushing 20.12 Thinners 20.12.1 Typical Solvent Formulas 21. The Testing of Raw Materials 21.1 Reasons for Testing Raw Materials 21.2 Completeness of Testing 21.3 Solvents 21.3.1 Drying Oils 21.4 Resins 21.5 Conclusion 22. Resin and Varnish Manufacture 22.1 Tung Oil 22.2 Oiticica Oil 22.3 Perilla and Linseed Oils 22.4 Other Oils 22.5 Oil-Resin Combinations 22.6 Spar Varnishes 22.7 Floor Varnishes 22.8 Application Methods 23. Water and Emulsion Paints 24. Epoxy Resins 24.1 Physical and Chemical Characteristics of Epoxy Resins 24.1.1 Manufacture 24.1.2 Curing Mechanisms 24.1.3 Other Epoxy Resins 24.2 Two-Package or Amine-Cured Epoxy

Coatings 24.2.1 Basic Curing Mechanism and Curing Agent Requirements 24.2.2
Curing Agent Selection 24.2.3 Selection of Epoxy Resin Type 24.2.4 Solvent Selection
24.2.5 Two-Package Maintenance Coatings 24.2.6 Heavy-Duty Coatings 24.2.7 Trade
Sales Formulations 24.2.8 Epoxy/Coal Tar Coatings 24.2.9 Solventless and Super-High
Solids Coatings 24.2.10 Zinc-Rich Epoxy Primers 24.2.11 Government Specifications
24.3 Epoxy Esters 24.3.1 Selection of Epoxy Resins and Acids for Esterification 24.3.2
Formulation Principles and Calculations 24.3.2 Manufacturing Procedure 24.3.3 Drier
Selection 24.3.4 Epoxy Esters from Liquid Epoxy Resins 24.4 High-Performance Baking
Finishes 24.4.1 Epoxy-phenolic Coatings 24.4.2 Preparation 24.4.3 Amino Resin-
Converted Epoxy Coatings 24.4.4 Use of Epoxy Resins with Thermosetting Acrylics
24.5 Other Types of Epoxy Coatings 24.5.1 Epoxy Powder Coatings 24.5.2
Epoxy/Polyamide-Splash Zone Coatings 24.5.3 Thermoplastic Epoxy Resin Coatings 25.
White Pigments 25.1 Opacity 25.2 The Reactive White Pigments 25.2.1 Basic
Carbonate White Lead 25.2.2 Basic Sulfate White Lead 25.2.3 Basic Silicate White Lead
25.2.4 Dibasic Lead Phosphite 25.2.5 Zinc Oxide 25.2.6 Leaded Zinc Oxide 25.2.7
Antimony Oxide 25.3 The Nonreactive White Pigments 25.3.1 Zinc Sulfide 25.3.2
Lithopone 25.3.3 Titanium Pigments 26. Coloured Pigments 26.1 Chrome Yellows 26.2
Zinc Yellows 26.3 Strontium Yellow 26.4 Nickel Titanate Yellow 26.5 Nickel Azo Yellow
26.6 Cadmium Yellow 26.7 Yellow Iron Oxide 26.8 Hansa Yellows 26.9 Benzidine
Yellows 26.10 Vat Yellows 26.11 Chrome Orange 26.12 Molybdate Orange 26.13
Cadmium Orange 26.14 "Mercadium" Orange 26.15 Benzidine Orange 26.16
Dinitraniline Orange 26.17 Vat Dye Oranges 26.18 Chrome Greens 26.19 Chromium
Oxide 26.20 Hydrated Chromium Oxide 26.21 Copper Phthalocyanine Green 26.22
Organic Green Toners 26.23 Iron Blues 26.24 Copper Phthalocyanine Blues 26.25
Ultramarine Blue 26.26 Organic Blue Toners 26.27 Indanthrone Blue 26.28 Carbazole
Dioxazine Violet 26.29 Organic Violet Toner 26.30 Mineral Violet 26.31 Quinacridone
Violet 26.32 Lithols 26.33 Para Reds 26.34 Toluidine Reds 26.35 Lithol Rubine 26.36
Chlorinated Para Red 26.37 Quinacridone Reds and Maroons 26.38 Red Iron Oxide
26.39 Cadmium Red and Maroons 26.40 "Mercadium" Reds and Maroons 26.41 Red
Lead 26.42 Thioindigo Reds and Maroons 26.43 Arylide Maroons 26.44 Siennas, Ochres
and Umbers 26.45 Carbon Blacks, Lampblacks and Bone Blacks 26.46 Tinting
Properties of Colored Pigments 27. Paint Formulation 27.1 Art 27.2 Science 27.3 Raw
Materials 27.4 Manufacture 27.5 Cost 27.6 Performance 27.7 Principles 27.8 Pigment
Volume Concentration 27.9 Critical Pigment Volume Concentration 27.10 Pigments
27.11 Vehicle 27.12 Solvents and Driers 27.13 Formulation Example 27.14 White
House Paint 27.15 Computer 28. Pigment Dispersion 28.1 Definition 28.2 Method 28.3
Equipment 28.4 Mill Base Formulation 28.5 Setting Up a Laboratory Formula 28.6
Equipment Setups and Limitations 28.7 Tank Configuration 28.8 Premixers 28.9
Conclusions 29. Emulsion Paints 29.1 Ingredients of an Emulsion Paint 29.1.1
Surfactants 29.1.2 Behavior of Emulsions 29.1.3 Protective Colloid 29.1.4 pH 29.2

Emulsion Formation 29.2.1 Emulsion Polymerization 29.2.2 Ingredients 29.2.3 Post-Emulsification 29.3 Stability of Emulsions 29.4 Phase Volume 30. Aluminum Pigments and Paints 30.1 History 30.2 Methods of Manufacture 30.3 Properties and Characteristics of the Pigment 30.3.1 Particle Size Characteristics 30.3.2 Light Reflectance 30.3.3 Heat Reflectance 30.3.4 Water Permeability 30.3.5 Density 30.3.6 Chemical Characteristics 30.3.7 Leafing Layer 30.3.8 Leafing Stability 30.3.9 Toxicity Hazards 30.4 Aluminium Pigment Products 30.4.1 Standard Products 30.4.2 Special Products 30.5 Testing Aluminum Pigments 30.6 Aluminum Paints 30.6.1 Maintenance Paints 30.6.2 Heat-Resistant Aluminum Paints 30.6.3 Trade Sales and Aerosol Paints 30.6.4 Colored Aluminum Paints 30.6.5 Roof-Coatings 30.6.6 Aluminum Priming Paints 30.6.7 Industrial Finishing 30.6.8 Hammer Finishes 30.6.9 Colored Metallescent Enamels 30.6.10 Flamboyant Finishes 30.6.11 Brilliant or Chrome Finishes 30.7 Application Methods 31. BIS Specifications 32. ISO Standards 33. Factory Layout 34. Photographs of Plant and Machinery with Supplier's Contact Details • Alkyd Resin Plant • Paint Making Machine • Paint Manufacturing Machine • Paint Manufacturing Plant • Thermoplastic Paint Making Machine • Floor Paint Making Machine • Lacquer Coating Making Machine • Coating Varnishing Machine • Roll Varnish Machine • Impregnation Vessel • Vacuum Pressure Impregnation System • Varnish Plate Making Equipment • Solvent Packaging Machine • Surface Protection Film Coating Machine • Primer Making Machine • Thinner Filling Machine • Pigment Color Mixer Machine • Roll Mill • Colloid Mill Machine • Paint Filtration Machine

About NIIR Project Consultancy Services (NPCS)

NIIR Project Consultancy Services (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. Its various services are: Pre-feasibility study, New Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Preparation of Project Profiles and Pre-Investment and Pre-Feasibility Studies, Market Surveys and Studies, Preparation of Techno-Economic Feasibility Reports, Identification and Selection of Plant and Machinery, Manufacturing Process and/or Equipment required, General Guidance, Technical and Commercial Counseling for setting up new industrial projects and industry. NPCS also publishes various technology books, directories, databases, detailed project reports, market survey reports on various industries and profit making business. Besides being used by manufacturers, industrialists, and entrepreneurs, our publications are also used by Indian and overseas professionals including project engineers, information services bureaus, consultants and consultancy firms as one of the inputs in their research.

Tel: 91-11-23843955, 23845654, 23845886, +918800733955

Mobile: +91-9811043595

Email: npcs.ei@gmail.com, info@entrepreneurindia.co

Website: www.entrepreneurIndia.co