Manufacturing of Petroleum Products (Petroleum Waxes, Greases and Solid Lubricants, Solid Fuels, Gaseous Fuels, Gasoline, Diesel Fuel Oils, Automotive, Diesel and Aviation Fuels, Lubricating Oils and Lubricating Greases)

Author:- NPCS Board of Consultants & Engineers Format: paperback Code: NI527 Pages: 376 Price: Rs.1675US\$ 150 Publisher: NIIR PROJECT CONSULTANCY SERVICES Usually ships within 5 days

The petroleum waxes are semi refined or fully refined products obtained during the processing of crude oil. According to their structure they are divided into macrocrystalline waxes (paraffin waxes) and microcrystalline waxes (ceresine, petrolatum, others). Grease, thick, oily lubricant consisting of inedible lard, the rendered fat of waste animal parts, or a petroleum-derived or synthetic oil containing a thickening agent. Greases of mineral or synthetic origin consist of a thickening agent dispersed in a liquid lubricant such as petroleum oil or a synthetic fluid. Diesel fuel, also called diesel oil, combustible liquid used as fuel for diesel engines, ordinarily obtained from fractions of crude oil that are less volatile than the fractions used in gasoline. Lubricating oil, sometimes simply called lubricant/lube, is a class of oils used to reduce the friction, heat, and wear between mechanical components that are in contact with each other. Lubricating oil is used in motorized vehicles, where it is known specifically as motor oil and transmission fluid.

The global wax market was valued at around USD 9 billion in 2017 and is expected to reach approximately USD 12 billion in 2024, growing at a CAGR of slightly above 3.5% between 2018 and 2024. The India lubricant market is expected to register a CAGR of 4.64%, during the forecast period, 2018-2023. The major factors driving the growth of the market are the increasing vehicular production along with the growing industrial sector. The global market for lubricants is expected to reach USD 70.32 billion by 2020. The global grease market is expected to grow at a CAGR of 2.13% during the forecast period, 2018 - 2023. Aviation fuel market size will grow by over USD 34 billion during 2018-2022

Some of the fundamentals of the book are composition of the petroleum waxes, solvent extraction, greases and solid lubricants, solid fuels, other significant tests or properties, gaseous fuels, properties of waxes, gasoline, diesel fuel oils, automotive, diesel and aviation fuels, special processes for motor-fuel blending components, crude distillation, lubricating oils, lubricating greases, nature of lubricating oils, photographs of machinery with suppliers contact details

A total guide to manufacturing and entrepreneurial success in one of today's most lucrative petroleum industry. This book is one-stop guide to one of the fastest growing sectors of the petroleum industry, where opportunities abound for manufacturers, retailers, and entrepreneurs. This is the only complete handbook on the commercial production of petroleum products. It serves up a feast of how-to information, from concept to purchasing equipment.

1. THE PETROLEUM WAXES

Wax-Production Methods Paraffin Waxes, Natural And Synthetic **Functional Tests for Paraffin Waxes** Synthetic Paraffin Waxes **Microcrystalline Waxes Oxidized Microcrystalline Waxes** Petrolatums Field of Use of Petrolatum Industrial uses of Petroleum-Wax Paper Manufacturing Paper Milk Cartons Candlemaking Drugs, Cosmetics, Chemicals, and Matches **Electrical Goods and Metal Casting Textile Industry Rubber Compounding**

2. SOLVENT EXTRACTION

3. GREASES AND SOLID LUBRICANTS Definition **Applications for Grease Lubrication** Structure and Properties of Greases Materials Used in Making Greases Characteristics of Greases from Various Metallic Soaps Greases from Nonsoap Thickeners Pure Petroleum Greases Grease Additives and Fillers Laboratory Testing of Greases Consistency **Apparent Viscosity Dropping Point Oxidation Stability** Water Resistance **Extreme Pressure Qualities Grease Specifications** Solid Lubricants Introduction Laminar Solids **Organic Compounds Radiation Damage to Greases**

4. SOLID FUELS Introduction Wood Coal Heating Value Proximate Analysis 5. OTHER SIGNIFICANT TESTS OR PROPERTIES Analyses, Occurrence, and Uses of Coals **Coal Sizes** Calculation of Proximate Analysis and Heating Value on Various Bases **Coal Coke** Petroleum Coke **Fuel Briquettes** Tests on Coke 6. GASEOUS FUELS **Composition of Gaseous Fuels** Natural Gas Liquefied Petroleum Gases **Refinery Oil Gas Producer Gas** Blast Furnace Gas Water Gas Carburetted Water Gas Oil Gas Coal Gas or Coke Oven Gas Sewage Gas Gas Testing Specific Gravity or Density of Fuel Gases **Direct Weighing Pressure Balance Displacement Balance Bunsen Apparatus** Conversion from Dry to Saturated Basis Analysis of Fuel Gas Spectrometry Gas Chromatography Distillation **Chemical Absorption**

7. PROPERTIES OF WAXES

8. GASOLINE Introduction **Classification of Fuel Properties** Volatility **General Requirements Distillation Test of Gasoline Reid Vapor Pressure Test Starting Characteristics** Vapor Locking Acceleration and Warm-up **Fuel Distribution** Volumetric Efficiency **Carburetor Icing Specifications Combustion Quality** Knocking

Surface Ignition Mechanical Octane Number **Fuel Octane Number Knock Rating Knock Rating Methods Knock Intensity Measurement** Significance of Knock Test Results **Fuel Sensitivity Road-Knock Rating Procedures** Anti-knock Compounds Tetraethyllead Effect of Molecular Structure of Fuels upon Lead Susceptibility Effect of Sulfur on Lead Susceptibility **TEL Addition to Commercial Blends** Heating Value of Gasoline Gasoline Dye **Chemical Stability** Gum in Gasoline Gum Tests Corrosiveness **Corrosive Impurities** Sulfur Determination **Copper Strip Test** Doctor Test

9. DIESEL FUEL OILS

Diesel Fuel Economics Composition of Fuel an Important factor Properties Determining Fuel Performance Cetane Value an Expression of Ignition Quality Increased Importance of Ignition Delay Test Methods for Diesel Fuel Oils Calculated Cetane Index Significance of tests on Diesel Fuels Stationary Diesel-engine Field Highly Competitive Need of Automotive Diesels for Wide Range of Fuels Marine Diesel Engines Many Fields of Use for Diesel Tractors

10. AUTOMOTIVE, DIESEL AND AVIATION FUELS Gasoline Aviation Gasoline Jet Propulsion fuels Tractor fuel

11. SPECIAL PROCESSES FOR MOTOR-FUEL BLENDING COMPONENTS Alkylation Isomerization Polymerization Naphtha Reforming

12. CRUDE DISTILLATION

Desalting Crude Oils Vacuum Distillation Auxiliary Equipment Crude distillation unit products Problems

13. LUBRICATING OILS Introduction Hydrodynamic Lubrication **Boundary Lubrication ZN/P** Curves Viscosity Dimensions and Units of Viscosity Theory of Viscosity Measurement of Viscosity Viscosity-Temperature-Pressure Relations Viscosity of Blends Viscosity Index Viscosity Temperature Coefficient Significance of Viscosity and Viscosity Index **Cloud and Pour Point** Significance of Cloud and Pour Point Additives Viscosity Index Improvers **Pour Point Depressants Oil Classification Systems** Oiliness **Oiliness Carriers Extreme Pressure Lubricants** Sludge and Lacquer Formation Anti-Oxidants **Corrosion Inhibitors** Detergents **Commercial Additives** Bench Tests for Oxidation Stability Acidity **Carbon-Forming Tendencies** Work Factor Test **Oil Volatility** Sulfur Cleanliness Gravity Color Synthetic Lubricating Oils **Dibasic Acid Esters Organo-Phosphate Esters** Silicate Esters Silicons **Polyglycol Ether Compounds** Fluorinated and Chlorinated Hydrocarbons Effect of Radiation

14. LUBRICATING GREASES

Introduction The main grease components Manufacture Laboratory tests Grease Structure Grease rheology Conclusions

15. NATURE OF LUBRICATING OILS The nature of crude oil Production of basic grades of lubricating oils Laboratory and rig tests and their significance Lubricating oil additives SAE classification of lubricating oils Selection of oils for various duties Physical properties of lubricating oils other than viscosity

16. PHOTOGRAPHS OF MACHINERY WITH SUPPLIERS CONTACT DETAILS

About NIIR

NIIR PROJECT CONSULTANCY SERVICES (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our various services are: Detailed Project Report, Business Plan for Manufacturing Plant, Startup Ideas, Business Ideas for Entrepreneurs, Start up Business Opportunities, entrepreneurship projects, Successful Business Plan, Industry Trends, Market Research, Manufacturing Process, Machinery, Raw Materials, project report, Cost and Revenue, Pre-feasibility study for Profitable Manufacturing Business, Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Business Opportunities, Investment Opportunities for Most Profitable Business in India, Manufacturing Business Ideas, Preparation of Project Profile, Pre-Investment and Pre-Feasibility Study, Market Research Study, Preparation of Techno-Economic Feasibility Report, Identification and Section of Plant, Process, Equipment, General Guidance, Startup Help, Technical and Commercial Counseling for setting up new industrial project and Most Profitable Small Scale Business.

NPCS also publishes varies process technology, technical, reference, self employment and startup books, directory, business and industry database, bankable detailed project report, market research report on various industries, small scale industry and profit making business. Besides being used by manufacturers, industrialists and entrepreneurs, our publications are also used by professionals including project engineers, information services bureau, consultants and project consultancy firms as one of the input in their research.

Our Detailed Project report aims at providing all the critical data required by any entrepreneur vying to venture into Project. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line.

NIIR PROJECT CONSULTANCY SERVICES, 106-E, Kamla Nagar, New Delhi-110007, India. Email: npcs.india@gmail.com Website: NIIR.org

Fri, 09 May 2025 06:24:50 +0000