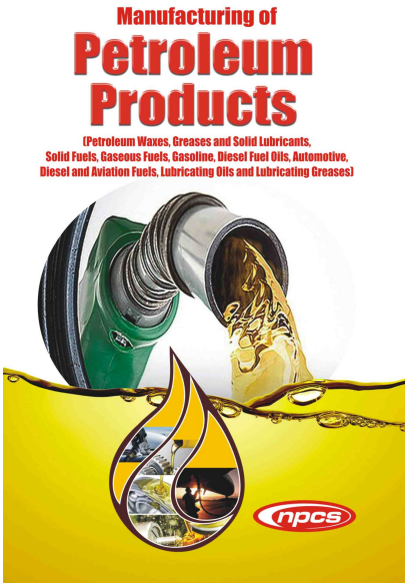
Entrepreneur India

106-E, Kamla Nagar, New Delhi-110007, India.
Tel: 91-11-23843955, +91 9097075054
Mobile: +91-9097075054
Email: npcs.ei@gmail.com, info@entrepreneurindia.co
Website: www.entrepreneurIndia.co



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)

Code	NI527
Format	paperback
Indian Price	₹1675
US Price	$150
Pages	376
ISBN	9788193733905

Publisher	NIIR PROJECT CONSULTANCY SERVICES

Description

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.

Content

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. 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.