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

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 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: Prefeasibility 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.

NIIR PROJECT CONSULTANCY SERVICES 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