Modern Technology of Petroleum, Greases, Lubricants & Petro Chemicals (Lubricating Oils, Cutting Oil, Additives, Refining, Bitumen, Waxes with Process and Formulations) 3rd Revised Edition

Author:- NIIR Board of Consultants & Engineers
Format: paperback
Code: NI45
Pages: 624
Price: Rs.1995**US$** 150
Publisher: NIIR PROJECT CONSULTANCY SERVICES
Usually ships within **5** days

Lubricants, greases and petrochemicals are most versatile on the Industrial Plateau now a day. The significance of Lubricants, Greases and specialty products in the day to day functioning of nearly every machine part, instrument, appliance & device cannot be over emphasized lubricants reduce friction & wear between rubbing parts, thereby enhancing their life. A lubricant is a substance introduced to reduce friction between moving surfaces. It may also have the function of transporting foreign particles. The property of reducing friction is known as lubricity. The broad types of lubricating oils are as under; crankcase oils, gear oils, metal working oils, metal drawing oils, spindle and other textile oils, steam turbine oils. Synthetic lubricants have a higher viscosity index, but are less stable to oxidation. They are suitable for high temperature applications. In the modern industrial year, greases have been increasingly employed to cope with a variety of difficult lubrication problems, particularly those where the liquid lubricant is not feasible. Greases are essentially solid or semi solid lubricants consisting of gelling or thickening agent in a liquid lubricant. Greases and lubricants are one of the important products derived from crude petroleum. Petroleum is formed by hydrocarbons (a hydrocarbon is a compound made up of carbon and hydrogen) with the addition of certain other substances, primarily sulphur. Petroleum in its natural form when first collected is usually named crude oil, and can be clear, green or black and may be either thin like gasoline or thick like tar. The principal product of petroleum refining are motor gasoline, aviation gasoline, kerosene, jet fuels, diesel fuels, lubricating oils and fuel oils. Considerable quantities of petroleum wax, bitumen, liquid petroleum gases (LPG), industrial naphtha and coke are also produced. Petrochemicals are chemicals made from petroleum (crude oil) and natural gas. Petroleum and natural gas are made up of hydrocarbon molecules, which are comprised of one or more carbon atoms, to which hydrogen atoms are attached. The Indian lubricants industry claims to be the sixth largest in the world. The petrochemical industry in India has been one of the fastest growing industries in the country. This industry also has immense importance in the growth of economy of the country and the growth and development of manufacturing industry as well.
Some of the fundamentals of the book are types of lubricating oils, crankcase oils, gear oils, metal working oils, metal drawing oils, spindle and other textile oils, steam turbine oils, synthetic lubricants, formulations and com pounding of lubricants, additives for straight mineral oil gear lubricants, raw materials for lubricants, equipments for lubricants manufacture, reclamation of used lubricating oil, nature of contaminants in used lubricating oil, gravity methods of

purification, metal forming and deforming lubricant, cutting oils, heat treatment oils, greases, sodium soap greases, lithium soap greases, aluminium soap greases, mixed soap greases, complex soap greases etc.
The objective of this book is to furnish comprehensive information about nearly all prominent types of lubricants, greases and petrochemicals. This book covers formulae, processes of various petroleum items. This book is an invaluable resource for entrepreneurs, existing units, professionals, institutions etc.

The effect of crystallinely modifying agents of the properties of paraffin wax
Utilization of petroleum waxes
19. BITUMEN
Emulsions and cutbacks
Rheological Properties
Wetting and adhesive properties
Application
Industrial applications
20. PETROLEUM PRODUCTS
L.P.G. (Liquefied Petroleum Gas)
Synthesis Gas
Motor Gasoline
Aviation Gasoline
Kerosene
Jet Fuels
Diesel Fuels
Industrial Naphthas
Heating Oils and Residual Fuel Oils
Light, Medium and Heavy Fuel Oils
Petroleum Waxes
Micro Crystalline Wax from slack wax
Petroleum Jelly
Bitumen
Petroleum Coke
Carbon Black
21. ABS RESIN
Uses and Applications
Manufacturing Process
22. ACETALDEHYDE
23. ACETIC ACID
24. ACETONE
25. ACRYLAMIDE MONOMER
26. ACRYLONITRILE
27. BENZALDEHYDE
28. ADIPIC ACID
29. BENZENE HEXACHLORIDE (B.H.C.)
30. BENZOIC ACID
31. BENZYL CHLORIDE
32. BISPHENOL -A
33. BUTADIENE
34. DIETHYL TOLUAMIDE
35. DIMETHYL FORMAMIDE
36. ETHYL ACETATE
37. ETHYLENE OXIDE
38. FORMALDEHYDE
39. FORMIC ACID
40. FUMARIC ACID
41. ISO PROPYL ALCOHOL
42. METHYL AMINES
43. NITROBENZENE
44. PHTHALIC ANHYDRIDE
45. POLY CARBONATES

46. POLYOLS
47. POLYURETHANE FOAM
48. VINYL CHLORIDE
49. STRUCTURE OF PETROLEUM
Molecular Species in Petroleum
Volatile Fractions
Nonvolatile Constituents
Resin Constituents
Composition
Structure
Molecular Weight
50. SCOPE AND LIMITS OF LUBRICANT TESTING
Fresh oil testing of industrial oils
Fresh oil testing of engine oils
51. LUBRICANT STORAGE
Lubricant life
52. COLLOIDAL STABILITY OF LUBRICANTS
Low-Temperature Stability
Hot-Temperature Stability
53. REFINERY WASTES
Process Wastes
Desalting
Distillation
Thermal Cracking
Coking Processes
Fluid Catalytic Cracking
Hydro cracking and Hydro treating
Catalytic Reforming
Alkylation
Isomerization
Polymerization
Deasphalting
Dewaxing
Gas Processing
54. TYPES OF WASTE
Gases and Lower Boiling Constituents
Higher Boiling Constituents
Waste Water
Spent Caustic
Solid Waste
55. WASTE TOXICITY
56. MANAGEMENT OF REFINERY WASTE
57. PLANT & MACHINERY PHOTOGRAPHS

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, Start-

up 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

Sat, 17 May 2025 09:10:15 +0000