

Petroleum Products Refining and Distillation (Lubricants, Waxes and Petrochemicals)

Description:

Petroleum Products: Refining and Distillation (Lubricants, Waxes and Petrochemicals) Manufacture of Crude Oil, Gasoline, Kerosene, Absorbent, Oils, and Fuels Oils, Petroleum Asphalts

The most dynamic industry of the century is the petroleum and petrochemicals industry. It has taken the fundamental knowledge of chemistry and chemical engineering and transformed itself from a simple processing industry for fuel and lubricants to an extremely complex chemical process industry which has branched out into synthetic rubber, plastics, fertilizers and many other fields. Petroleum (crude oil) is a mixture of different hydrocarbons. Many useful products can be made from these hydrocarbons. The fractions are separated from one another using a process called fractional distillation. This process is based on the principle that different substances boil at different temperatures. The applications of distillation in petroleum industry are quite varied. The assaying of crude oils and the evaluation many petroleum products depend on distillation. Petroleum products obtained from processes such as distillation often need supplementary purification. Refining is a process of purification of products by means of chemical process. Chemical engineering and petroleum processing have in a very real sense grown up together. Studies on fluid flow, heat transfer, distillation, absorption, and the like were undertaken and applied to wide variety of materials because of need in the petroleum processing field. The largest share of oil products is used as energy carriers: various grades of fuel oil and gasoline. Heavier (less volatile) fractions can also be used to produce asphalt, tar, paraffin wax, lubricating and other heavy oils. Refineries also produce other chemicals, some of which are used in chemical processes to produce plastics and other useful materials. Hydrogen and carbon in the form of petroleum coke may also be produced as petroleum products. Petrochemicals have a vast variety of uses. The use of petroleum hydrocarbons to make synthesis gas has made petroleum and natural gas the world main source of ammonia, the source of almost all nitrogen fertilizers. While petroleum product demand in the western world is relatively stagnant, for developing countries, particularly those in Asia, demand is booming. It is all about growing populations and their escalating need for energy.

For more details download PDF file.

Keywords: Asphalt crude oil, Asphalt Manufacturing Process, Asphalt Production and Oil Refining, Asphalt production plant, Asphalt refining process, Best small and cottage scale industries, Business guidance to clients, Business guidance, Business Plan for a Startup Business, Business start-up, Chemical Thermodynamics for Industry, Crude oil distillation process, Crude Oil Processing, Crude oil refining process, Distillation and Refining of Petrochemicals, Distillation and Refining of Petroleum Products,

Created At: 04 Nov, 2017