

# The history of aviation turbine fuel business essay

[Business](#)



**ASSIGN  
BUSTER**

To ensure that you receive the best service, every one of our 101 AFSs follows specific quality audits based on a Quality Control Index System benchmarked to global standards. In addition, 15 Quality Certification Laboratories provide complete specification tests round-the-clock. Ensuring that these standards are always upheld, there is a back up of a highly skilled, qualified and dedicated team of officers and refueling crew. IndianOil has a strategic partnership with Air BP, the world leader in aviation business. IndianOil regularly organizes seminars, symposiums and workshops to constantly interact with its partners, which apart from being a two-way channel of communication, helps us to stay abreast with advances in technology. SERVO brand, from IndianOil, is the brand leader among lubricants and greases in India and has been conferred the " Consumer Superbrand" status by the Superbrands Council of India. Recognised for its brand leadership by the World Brand Congress and as a Master Brand by CMO, Asia, SERVO has now carved a significant niche in over 20 countries across the globe. With over 1000 commercial grades and over 1, 500 formulations encompassing literally every conceivable application, SERVO serves as a one-stop shop for complete lubrication solutions in the automotive, industrial and marine segments. Recognised for cutting-edge technology and high-quality products, SERVO is backed by IndianOil's world-class R&D and an extensive blending and distribution network. The recent top-end offerings in the segment are all-new engine oils on a differentiated synthetic platform—SERVO Futura Synth, a 100% synthetic premium lubricant for diesel & petrol cars and SERVO 4T Synth, engine oil with advanced synthetic chemistry for 4-stroke two-wheelers—represent a big leap in bringing technologically advanced motor oils of global

<https://assignbuster.com/the-history-of-aviation-turbine-fuel-business-essay/>

standards to the Indian market. Both the products offer outstanding engine protection and performance that far surpasses the benefits offered by conventional mineral-oil based lubricants. (Please refer to the product sub-segment on this website for product specifications and recommendations of the newly-launched products). In the retailing segment, besides Indian Oil petrol stations, SERVO range of lubricants is available through a network of a unique SERVO Stockist Management System (SSMS) across the country. The products are available in every corner of the country through various retailing initiatives like SERVOXPRESS stations, bazaar outlets and thousands of auto spare parts shops across the country along with a unique concept of Gramin SERVO Stockists to reach the rural hinterland. SERVOXPRESS vehicle servicing centres are one-stop shops for quick, easy and convenient auto care, offering a refreshing experience to motorists. Opened in convenient locations like malls, petrol pumps or as stand-alone units, SERVOXPRESS stations have facilities for engine oil change, tyre & battery check-ups, air-conditioner service, vacuum cleaning, perfuming, upholstery cleaning, polishing, lamination installation, etc., besides replacement of minor parts for two and four-wheeler vehicles. Lubrication is the art of reducing friction between rubbing or rolling surfaces. In the recent past two terminologies have gained currency - Tribology, the science of Rubbing; Rheology, the study of stream or flow. The earliest knowledge of lubrication is evident from grease lubricated chariot wheels excavated from the ruins. The rapid development of this science can be said to have started from the 18th century, with significant technological progress in commercial usage in the 20th century. Most lubricants are liquids. Water is a natural

lubricant but has extremely limited application due to its very low viscosity and very low boiling point, besides its contribution to rusting and corrosion.

## **Marine Fuels & Lubricants**

Indian Oil caters to all types of bunker fuels and lubricants required by various types of vessels operating throughout the world in the shipping industry. Bunker supplies are made at all major ports of India; Mumbai, Kandla, Vasco, Chennai, Tuticorin, Kakinada, Visakhapatnam, Kochi, New Mangalore, Kolkata, Paradip, JNPT, Port Blair and Haldia. Apart from meeting 100% bunker requirement of the Indian Navy, it also supplies bunker fuels to all major shipping and dredging companies of India. Spot requirement of different vessels calling at Indian ports are met through nominations received from local shipping agents and international bunker traders/brokers. While Indian Oil supplies Furnace Oil (FO) and High Flash High Speed Diesel (HFHSD) meeting stringent BIS specifications, it also offers the entire range of SERVVO brand marine grade lubricants. Supplies are made through pipelines, barges and tank-trucks. Bunker supplies are undertaken through pipeline at specified jetties at Haldia, Vasco, Port Blair, Mangalore, Visakhapatnam, Kakinada, JNPT (Mumbai) and Chennai. Tank trucks are used for bunker supplies at Tuticorin, Paradip, Port Blair, Mangalore and Haldia. Barges are used for bunker supplies at jetties and inner anchorages at Haldia, Mumbai, Kandla, Visakhapatnam, Kochi and Chennai. Indian Oil has also started supplying Bonded 380 cst FO bunker fuel from Chennai from May 2009 as per ISO 8217: 2005 specifications. The price of this product is internationally competitive and revised on a weekly basis based on MOPS (Mean of Platts-Singapore). KeroseneKerosenes are distillate fractions of

crude oil in the boiling range of 150-250°C. They are treated mainly for reducing aromatic content to increase their smoke point (height of a smokeless flame) and hydrofining to reduce sulphur content and to improve odour, colour & burning qualities (char value). Kerosene is used as a domestic fuel for heating / lighting and also for manufacture of insecticides/herbicides/fungicides to control pest, weeds and fungi. Since kerosene is less volatile than gasoline, increase in its evaporation rate in domestic burners is achieved by increasing surface area of the oil to be burned and by increasing its temperature. The two types of burners which achieve this fall into two categories namely vaporisers & atomizers. The Indian Standard governing the properties of kerosene is IS 1459: 1974 (2nd Rev).

## **Bulk/Industrial Fuels**

In the large volume consumer segment, IndianOil's provides complete Fuel Management Solutions to customers who require fuels in bulk and have dedicated facilities for storage and handling. These customers benefit from IndianOil's efficient sourcing and supplies matched to their usage patterns and inventory. The optimization on and optimization of supplies is especially relevant in the light of high-energy input costs in the recent past, which is expected to continue in the future too. IndianOil's tankages are strategically located across the country and are custom-designed to maintain low-cost supplies that can be rapidly transported through a sophisticated supply-chain management system. Whether it is an immediate need, a long-term supply contract or even setting up dedicated storage and handling facilities at your premises, IndianOil's network is at your service. IndianOil's marketing

operations network of storage, distribution and supply hubs is backed by on-time logistics and round-the-clock after-sales service. Many institutional customers like the railways, steel plants, thermal power plants, textile mills, power plants, state transport undertakings, large corporates and fleet & logistics companies tie-up for long-term contracts backed by IndianOil's comprehensive fuel & lubricants consultancy-a formidable expertise that IndianOil has built over nearly five decades of working with a cross-section of customers from a wide-range of industrial sectors. IndianOil's bulk liquid fuel supply covers the complete gamut of fuels-Auto fuels, Light Diesel Oil, Low Sulphur Heavy Stock, Special Products and much more.

## **Bitumen**

Bitumen is a common binder used in road construction. It is principally obtained as a residual product in petroleum refineries after higher fractions like gas, petrol, kerosene and diesel, etc., are removed. Indian Standard Institution defines Bitumen as a black or dark brown non-crystalline solid or viscous material having adhesive properties derived from petroleum crude either by natural or by refinery processes. IndianOil produces bitumen from its refineries at Panipat, Mathura, Koyali, Haldia and Chennai and markets it in bulk as well as packed in steel drums. IndianOil also markets modified Bitumen CRMB and Emulsion. CRMB is produced at Panipat, Mathura, Koyali, Haldia and CPCL refineries. IndianOil markets Bitumen Emulsion by the brand name Indemul and it is produced from emulsion plants located in Haldia and Panipat refineries. CRMB and Emulsion are available both in bulk as well as in packed drums.

## **Petrochemicals**

<http://www.iocl.com/NewImages/Thumbnails/PP-Petrochem1.jpg> India is amongst the fastest growing petrochemicals markets in the world. Taking this into consideration and to enhance its downstream integration, IndianOil is focusing on increasing its presence in the domestic petrochemicals sector besides the overseas markets through systematic expansion of customer base and innovative supply logistics. Petrochemicals have been identified as a prime driver of future growth by IndianOil. The Corporation is envisaging an investment of Rs 30, 000 crore in the petrochemicals business in the next few years. These projects will utilise product streams from the existing refineries of IndianOil, thereby achieving better exploitation of the hydrocarbon value chain. Beginning with a low-investment, high-value projects such as Methyl Tertiary Butyl Ether (MTBE) and Butene-1 at Gujarat Refinery, Vadodara, IndianOil has set up a world-scale Linear Alkyl Benzene (LAB) plant at Gujarat Refinery and an integrated Paraxylene/Purified Terephthalic Acid (PX/PTA) plant at Panipat. A Naphtha Cracker complex with downstream polymer units is also in operation at Panipat. [http://www.iocl.com/NewImages/Thumbnails/petrochemicals\\_dis.jpg](http://www.iocl.com/NewImages/Thumbnails/petrochemicals_dis.jpg) These initiatives are designed to catapult IndianOil among the top three petrochemicals players in Southeast Asia in the long term. In order to penetrate the petrochemicals market effectively, a separate Strategic Business Unit (SBU) has been created in IndianOil for marketing of petrochemicals. This SBU has five exclusive sub-groups, classified product wise (LAB, PTA, Polymers) and function wise (Logistics & Exports), in addition to regional/field set-ups to offer reliable customer service. This SBU has already established IndianOil's LAB business both in India and abroad. Today, IndianOil is a major supplier to <https://assignbuster.com/the-history-of-aviation-turbine-fuel-business-essay/>

the key players in the detergent industry, both national and international. Similarly, in PTA business, all major domestic customers are catered to by IndianOil. A robust logistics model has been the key to IndianOil's success story and facilities have been put in place for seamless product dispatches to customers by rail, road and sea.

## **Special Products**

Other than the regular petroleum products like light distillates, middle distillates, heavier products like Furnace Oil, Bitumen, etc., IndianOil refineries also manufacture petroleum products for specific applications. These specific applications could be feed stock for chemical industry, raw material for specific industries and solid fuels. The petroleum products, produced for specific applications are called, 'Petrochemicals and Specialties (P&S) Products'. Every petroleum refinery is not designed to produce P&S products but IndianOil's refineries have been planned to make a large portfolio of P&S products. The indicative list of products from IndianOil's various refineries is as follows:

## **Refinery**

### **P&S Products**

Barauni Carbon Black Feedstock (CBFS), Raw Petroleum Coke (RPC), Sulphur Digboi Paraffin Wax Guwahati Raw Petroleum Coke (RPC) Haldia CBFS, Jute Batching Oil (JBO), Micro Crystalline Wax (MCW), Mineral Turpentine Oil (MTO), Sulphur Koyali LABFS, Mineral Turpentine Oil (MTO), Sulphur, Toluene Mathura Propylene, Sulphur Panipat Benzene, Mineral Turpentine Oil (MTO), Petcoke, Sulphur <http://www.iocl.com/Products/SpecialProduct>



## **PART A**

### **Geographical region**

#### **Geography and Climate of Sri Lanka**

Overall, Sri Lanka has a varied terrain but it mainly consists of flat lands but south-central portion of the country's interior features mountain and step sided river canyons. The flatter regions are the areas where most of Sri Lanka's agriculture takes place, aside from coconut farms along the coast. Sri Lanka's climate is tropical and the southwestern part of the island is the wettest. Most of the rain in the southwest falls from April to June and October to November. The northeastern part of Sri Lanka is drier and most of its rain falls from December to February. Sri Lanka's average yearly temperature is around 86°F to 91°F (28°C to 31°C). An important geographic note about Sri Lanka is its position in the Indian Ocean, which made it vulnerable to one of the world's largest natural disasters. On December, 26, 2004, it was struck by large tsunami that hit 12 Asian countries. Around 38, 000 people in Sri Lanka were killed during this event and much of Sri Lanka's coast was destroyed.

#### **Forms of transportation and communication available in that regions**

In 1987 the road network extended 74, 954 kilometers, of which 25, 504 were maintained by the Ministry of Highways and the remainder by local governments (see fig. 10). During 1984 the government embarked on a five-year road maintenance program at an estimated cost of Rs5 billion, to be financed by loans from the World Bank (see Glossary) and the Asian Development Bank, together with a grant from Japan. The total number of

registered motor vehicles in 1986 was about 478, 000. Road haulage is handled by private companies; some businesses also have their own trucking operations. After 1978 container transport became an important mode of freight haulage for exports produced in the investment promotion zones. Intercity haulage is carried out by trucks. Bullock carts remained important in rural and suburban areas in the 1980s. The Ceylon Transport Board had the sole responsibility for providing public passenger road transport from 1957 to 1978. Fares were heavily subsidized, but overcrowding was severe. In 1978 private buses were again allowed to operate, and the Sri Lanka Transport Board and nine regional transport boards replaced the Ceylon Transport Board. The Sri Lanka Transport Board had responsibility for overall transport policy, budgeting, and production planning, whereas the regional boards were responsible for the operation of regular regional and interregional bus services. In 1986 the revenue-cost ratio of the regional boards was 89 percent. Private road transport expanded rapidly in the late 1970s and early 1980s, but as in the state sector, there was some contraction in the mid-1980s as a result of the declining security in the northern and eastern parts of the country. In 1986 the private sector accounted for about half of the passenger-kilometers. Many buses in both the state and private sectors were in poor condition. The island's first railroad line, from Colombo to Kandy, was opened in 1867, and in the 1980s Sri Lanka Railways had 1, 944 kilometers of railroad track. In early 1988, service in Northern and Eastern provinces had been irregular for several years. The network's passenger-kilometers amounted to 1. 9 billion in 1986, about 38 percent less than its total in 1982. Freight services, on the other hand, remained fairly steady in the mid-1980s. The railroads have been

<https://assignbuster.com/the-history-of-aviation-turbine-fuel-business-essay/>

operated at a loss since independence. Three ports can accommodate deep water vessels: Colombo, Trincomalee, and Galle. Colombo was by far the most important. In 1985 it handled nearly 3 million tons of cargo compared with about 600, 000 jointly handled by the other two ports. In 1986 the Ceylon Petroleum Corporation began a project to build a single-point buoy mooring 9. 6 kilometers offshore from Colombo port. When completed, this project will greatly reduce the costs of discharging crude oil to the refinery near Colombo. In 1971 Sri Lanka launched its own merchant fleet. The state-owned Sri Lanka Shipping Corporation purchased its first vessel, a 14, 000-ton freighter, in March 1971. By 1981 the corporation owned eight ships, including a 20, 000 deadweight ton tanker. In 1987 the firm began to replace its aging fleet. Colombo is a stopping place on international air routes between Europe and the Asia-Pacific region. The first stage of a redevelopment plan for the Bandaranaike International Airport at Katunayake was completed in October 1986 with the opening of a new runway, built at a cost of Rs517 million. Some foreign airlines reduced or suspended services in the mid-1980s because of declining traffic due to the security situation. Air Lanka, the nation's flag carrier, was established in 1980, and in early 1988 it connected Sri Lanka with Europe, the Middle East, and South and Southeast Asia. It was 60 percent government owned. In 1987 a presidential commission set up to inquire into the airline's financial affairs accused former members of the airline's board of subordinating the company's development to their private gain. Taking into account the realizable value of its assets and other costs associated with a forced sale, estimated cumulative losses up to the end of the fiscal year 1986 were Rs7. 7 billion, or about Rs1. 3 billion for each year of operation. In early 1988, a <https://assignbuster.com/the-history-of-aviation-turbine-fuel-business-essay/>

foreign airline was reportedly being sought to manage Air Lanka and turn it into a viable enterprise.

## **consumer buying habits**

product use pattern:

### **Changing Patterns**

Sri Lanka developed little industry under British rule, relying instead on the proceeds from agricultural exports to buy manufactured goods from other countries. Most industry during the colonial period involved processing the principal export commodities: tea, rubber, and coconut. Although these sectors remained important, in the 1980s there was a much greater variety of industrial establishments, including a steel mill, an oil refinery, and textile factories. Industrial diversification began in the 1960s with the production of consumer goods for the domestic market. This trend was a consequence of government measures aimed at saving foreign exchange, which made it difficult to import many items that had previously been obtained from overseas. Heavy industries were established in the late 1960s, mostly in the state sector. During the 1970-77 period the state assumed an even greater role in manufacturing, but after the economic reforms of 1977 the government attempted to improve prospects for the private sector. The fastest growing individual sector in the 1980s was textiles, which made up approximately 29 percent of industrial production in 1986. The textiles, clothing, and leather products sector became the largest foreign exchange earner in 1986. Over 80 percent of the manufacturing capacity was concentrated in Western Province, particularly in and around Colombo.