

## **PETROCHEMICALS IN INDIA.**

The importance of Petrochemicals is immense. Although we might not realize it but our lives are dependent to quite a large extent on petrochemicals. Petrochemicals are very much a part and parcel of our day to day lives - the carpets that we use to decorate our homes, plastic bottles, clothes that we wear, fertilizers that we use to grow crops, tires paints, pharmaceuticals, cosmetics etc are made up of some kind of petrochemicals.

### **Petrochemical Industry in India**

The petrochemical industry in India has been one of the fastest growing industries in the country. Since the beginning, the Indian petrochemical industry has shown an enviable growth rate. This industry also contributes largely to the economy of the country and the growth and development of manufacturing industry as well. It provides the foundation for manufacturing industries like construction, packaging, pharmaceuticals, agriculture, textiles etc.

The Indian petrochemical industry is a highly concentrated one and is oligopolistic in nature. Even till a few days back, only four major companies viz. Reliance Industries Ltd (RIL), Indian Petrochemicals Corporation Ltd. (IPCL), Gas Authority of India Ltd. (GAIL) and Haldia Petrochemicals Ltd. (HPL) used to dominate the industry to a large extent. The recent amalgamation of IPCL with RIL has made the industry more concentrated further, as they jointly account for over 70% of country's total petrochemical capacity. However, the scene is a bit different for the downstream petrochemical sector, which is highly fragmented in nature with over 40 companies existing in the market.

### **The Characteristics of Indian Petrochemical Industry**

The Petrochemical Industry in India is a cyclical industry. This industry, not only in India but also across the world, is dominated by volatile feedstock prices and sulky demand. India has one of the lowest per capita consumptions of petrochemical products in the world. For example, the per capita consumption of polyester in India lies at 1.4 kg only comparing to 6.6 kg for China and 3.3 kg for the whole world. Similarly, the per capita consumption of polymers is 4 kg in India, whereas the per capita consumption is around 20 kg for the whole world.

### **Facts about Petrochemical Industry in India**

Market size - US\$700 million

Growth Rate - 15 percent

Major Player - Reliance

- According to a research conducted by Tata Strategic Management Group the petrochemical and chemicals sector in India is expected to grow at the rate of 12 to 15 percent in the next five to seven years.
- According to industry experts this is a phenomenal growth rate as compared to current rate of 3 to 4 percent.
- The direct impact of this growth rate would result in investments of around \$12 billion to \$15 billion.
- As per the Petroleum Ministry in India the refining capacity of India will rise from 135 million tons per annum, which is about 2.8 million barrels per day in 2006-07 to 210 to 225 million tons per annum which is about 4.6 million barrels per day by the year 2011-12
- This rapid expansion is already creating huge amounts of surplus. The surplus created is mostly meant for exports.
- Reliance Industries is the leader in the petrochemical sector with a total market share of 70 percent.

### **Growth of Petrochemical Industry**

The petrochemical industry in India came into existence during 1970s. The 1980s and 1990s saw some rapid growths for Indian petrochemical industry. The biggest reason for this growth was the high demand for petrochemicals in India, which grew at an annual rate of 13 to 14% since the late 90s. It also called for rapid expansion of capacity. The BMI forecast of average annual growth in India from 2007-2011 is 14 to 16 percent. However, the industry suffered setbacks during 2008 due to surge in the price of crude oil. It will be tough for Indian petrochemical industry to plug the deficit of 5mn TPA of ethylene and 4mn TPA of polymer by 2012 (according to the predictions of the government).

The Present Scenario Presently India has three gas-based and three naphtha-based cracker complexes with a combined annual capacity of 2.9 MMT of ethylene. Besides this, there are also 4 aromatic complexes with a capacity of 2.9 MMT of Xylenes.

The production of 5.06 MMT polymers during FY09 accounted for around 62% of the total production of key petrochemicals. It also achieved 88.5% capacity utilization. The industry also produced 2.52 MMT of synthetic fibers during FY09 with a 73% of capacity utilization.

### **Key Segments in the Indian Petrochemical industry**

Petrochemical industry is constituted of the following key segments:

- **Polymers:** The demand for polymers witnessed a growth of 13.4 percent during 2007, as compared to a demand growth of 5.6 percent in 2006. According to the prediction of Chemicals and Petrochemicals Manufacturers' Association (CPMA), the demand growth for polymer would further be augmented to over 15% in the coming year.
- **Polyester Intermediates:** The combined production of 5 fiber intermediates (CAN, DMT, Caprolactum, MEG and PTA) was 3,417 KT during 2007. Among those, PTA and MEG accounted for 69% and 27% respectively, while the rest were DMT, Caprolactum and CAN.

**Aromatics (Paraxylene):** The demand for Paraxylene (PX) saw a growth of 18% during 2007. According to the prediction of CPMA, it is expected to grow at the same rate in the coming year as well.

- **Benzene, Toluene, MX and OX:** The demands for Toluene and OX saw a contraction rate of 4% and 10% respectively during 2007. However, Benzene and MX saw a positive growth though.

### **Key Issues and Challenges**

The petrochemical industry in India is faced with numerous hurdles that prevent it from surpassing other Asian countries.

- India's production of ethylene is far lesser than China's. According to experts the condition is going to remain so for at least the next 5-7 years.
- The other important setback for the Indian petrochemical industry is the price of feedstock which is comparatively higher in India as compared to China.
- India also lags behind as far as technological development is concerned.

### **Top Petrochemical Companies in India**

Though the Indian petrochemical industry is highly dominated by only a few players, however, there are a number of petrochemical companies in India, doing their share of business. Some of the top companies can be listed as below:

- Reliance Industries Ltd.
- Haldia Petrochemicals Ltd.
- Indian Oil Corporation
- Gas Authority of India Limited
- National Organic Chemical Industry Ltd.

- Bongaigaon Refinery and Petrochemicals Ltd.
- Manali Petrochemical Limited
- I G Petrochemicals Limited
- The Andhra Petrochemicals Limited
- Tamilnadu Petroproducts Limited

