

*As an industry location for many companies India has become in the meantime as interesting as China. Next to the domestic market, also the export and financial market are well developed. As the largest branch chemistry significantly contributes to the economic growth.*



## Destination India

Over the last decade, India has successfully emerged as one of the fastest developing economies around the globe. India's global ranking in terms of GDP – on a purchasing power parity basis – has shot up from 8th position in 1991 to 4th position in 2001. GDP growth is targeted to grow at an annual average rate of 8% during 2002–2007. The process of economic reforms initiated in 1991 has made the Indian policies focused on attracting capital from abroad and making India a global industrial base. The resultant inflow of foreign direct investment and technology transfers have created an environment for dynamic growth and increased competitiveness of Indian Industry. India has the 3rd largest pool of scientific and technical manpower with excellent engineering and project management skills.

The Indian chemical industry is one of the fastest growing sectors in the economy. It has achieved a growth rate of 8.6% over the last few years. With the size of \$30 billion it accounts for 12.5% of the country's total industrial production and 16.2% of the total exports from the Indian manufacturing sector. Growing at an average rate of 12.5% this industry offers a wide spectrum of opportunities for the investors both from India and abroad. The huge market

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potential, coupled with the existing pool of human resources, and the wide variety of resources in the country make India, indeed, the destination in the new millennium.

The Indian chemical industry ranks 12th by volume in the world production of chemicals. The major segments of the Indian chemical industry include:

### ■ Pharmaceuticals & bulk drugs

Indian pharmaceutical industry ranks 4th in terms of volume and 13th in terms of value.

In 2004, the Indian pharma industry was valued at over \$6 bn and it is growing at an annual rate of 8 to 9%. The Indian market can be divided into bulk drugs segment and formulations. The industry produces about 60,000 finished medicines and roughly 400 bulk drugs, which are used in formulations.

### ■ Agrochemicals

India is the second largest producer of agrochemicals in Asia and is one of the most dynamic generic pesticide manufacturers in the world. Out of 145 pesticides registered in India, 85 of a technical grade are locally produced. India is a global sourcing base for generic agrochemicals.

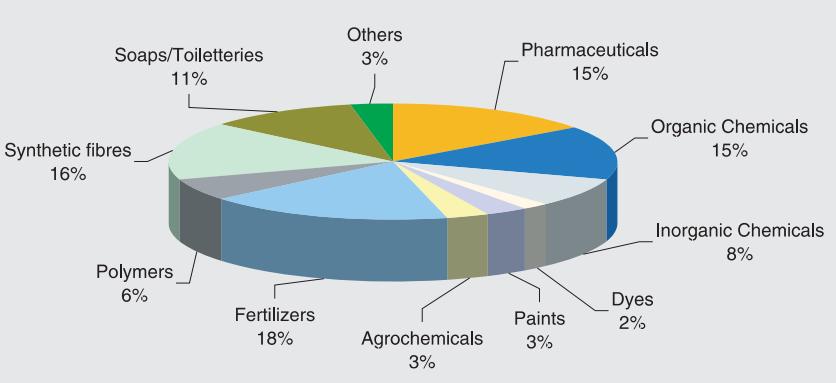
### ■ Petrochemicals and organic chemicals

The petrochemical sector, which mainly comprises polymers, synthetic fibers, fiber intermediates and plastic processing has been growing at about 14% annually. The polymer demand, which was about 3.3 million tons in 2000–2001, is likely to increase to over 7 million tons by 2006–2007. Globally, India ranks 9th in terms of polymer consumption and is expected to be the 3rd largest consumer of polymers after USA and China by 2010. To meet the growing domestic demand, nine global size ethylene crackers of 700 kt each would need to be set up by 2011–2012, over and above the existing capacity of 2.4 million tons.

### ■ Dyes

The Indian dye industry is valued at approximately \$3 bn. India is a major exporter of dyes with exports of about \$1 bn. The per capita consumption is very low (50 gms) as compared to world average (400 gms). The market is highly fragmented with 50 players in the organized sector and 900 unorganized players. The Indian dye industry has undergone a tremendous transformation over the years, starting

### Structure of the Indian Chemical Industry



### Concentration of chemical plants

The Indian chemical industry is highly concentrated in the western region of India, particularly in the states of Gujarat and Maharashtra:

- Jamnagar-Vadodara-Gandhar-Surat Belt (Gujrat)
- Mumbai-Raigad-Patalganga-Nagothane Belt (Maharashtra)
- Chennai Belt (Tamil Nadu)
- Hyderabad Belt (mainly pharmaceuticals) (A.P.)
- Cochin Belt (Kerala)
- Calcutta-Haldia Belt (West Bengal)
- Udaipur & Kota Belt (Rajasthan)

as an intermediate manufacturing industry to a full-fledged industry with export generating potential in the 1990s. India's share of the dye output worldwide presently stands at 5%, with a production capacity of 1,50,000 tons per annum.

#### ■ Specialty chemicals

Specialty chemicals include fine chemicals and performance chemicals. The Indian Fine Chemical Industry is on a growth phase. It has been estimated at \$700 million. It primarily caters to the pharmaceutical industry. The performance chemical industry in India has been estimated at \$3 billion.

#### ■ Inorganic chemicals

The Indian inorganic chemicals industry is small accounting for less than 4.5% of the global market. The industry is characterized by a high degree of fragmentation even across high volume product areas. The industry consists of production of chemicals like sulphuric acid, phosphoric acid, carbon black, titanium dioxide and chloralkali industry that forms a major part of inorganic sector.

### Opportunities

■ A decade of economic reforms has tested the resilience of the Indian chemical industry. Individual enterprises have realized their weaknesses and are gearing up to face the new challenges. Success stories in dyes and agrochemicals have boosted the confidence to take on global competition squarely.

■ Due to its low cost infrastructure, India has potential of growth in exports. According to a report by McKinsey, India's manufactured exports have the potential to rise from \$40 bn last year to \$300 bn by 2015. This defines an investment of \$50 bn in chemical industry alone.

■ India has the capacity for major value addition being close to Middle East. This is a cheap and abundant source for petrochemical feedstock.

■ In certain categories of chemicals India does have advantage for exports (dyes, pharmaceuticals and agrochemicals) by creating strategic alliances with countries like Russia and CIS countries. With the know-how available in the country there is a tremendous potential to grow and increase exports in dyestuff and agrochemical market.

■ Availability and abundance of raw materials for titanium dioxide and agro-based products like castor oil offer an opportunity to generate significant value addition. This, however, would require substituting their exports in raw form by manufacturing higher value derivatives.

■ The major challenges are quest for feedstock and knowledge management. Traditionally naphtha-based crackers have been providing feedstock to the industry. Today, they are being

replaced by new gas-based crackers. India and China will pose a stiff competition to the Middle East due to the vibrant exports and large unexplored reserves of oil and gas. Indian government is acting as a facilitator by setting up LNG terminals and acquiring equity interests in overseas proven oil reserves. This will fuel rapid growth in chemical industry. The government is also engaged in the formulation of a National Policy on Pharmaceuticals and mega-industrial chemical estates.

