

# ENGINEERING SECTOR INDIA



## Engineering Sector - INDIA

### Overview

The Engineering industry in India has seen unprecedented growth in past 3 years due to increased investments in infrastructure development and industrial production. The industry can be broadly divided into heavy engineering and light engineering segments. The heavy engineering segment forms the majority of the engineering sector in India. The total engineering goods production was approximately USD 45 billion in FY 2008 and has been growing by over 20% year on year for last three years.

### Drivers

The key drivers of growth in this industry are given below:

- **Increased investment in infrastructure:** India is in the midst of a massive overhaul in infrastructure, with large investments required to maintain its targeted GDP growth of 9% and above. The strong investment and consumption demand has driven the industrial growth to more than 10 % over last three years. The key driver of the impending growth of the sector is the expected surge in infrastructure spending to USD 23 billion by FY2009 from USD11 billion currently. The growth should largely be driven by power, accounting for 41% of the total investment, followed by roads, oil & gas, and smaller sectors like ports and airports. This will drive growth in the engineering sector.
- **Emergence of India as a manufacturing hub:** India is being preferred by global manufacturing companies as an outsourcing destination due to its lower labour cost and better engineering and designing capabilities. Exports of engineering goods and services from India have reached about USD 20 billion in the year 2005-06 and registered a robust growth of about 25%.
- **New capacity additions:** There has been a tremendous growth in demand from domestic as well as overseas markets and the economy is experiencing high capacity utilization across sectors. This has triggered capacity additions across industries. This is captured in the USD 35 billion of capacity expansion that was under implementation as

of January 2007. With approximately 50% of the capital expenditure going into plant and machinery; it augurs well for the engineering industry.

### **Engineering Sector Opportunities**

A few key growth segments in the Engineering industry and opportunities are discussed below:

#### **Machine tools**

The machine tool industry mainly comprises manufacturers of metal cutting and metal forming tools. They can also be classified into conventional and CNC machine tools. Machine tool demand largely depends on growth in capital goods sectors, especially in the automobile and textile industry. The rising fortunes of these sectors are driving the demand for machine tools. In keeping with users preference towards higher productivity, superior precision and accuracy, as well as low-cost manufacturing solutions, CNC machine tools comprised the bulk of the manufacture from the Indian stable. This segment achieved a 70% share in the total metalworking machine tools. The size of the machine tool market is expected to be USD 500 million and is growing by over 20% y-o-y. CNC machines are experience a turnover growth of 50% over the past 3 years.

| <b>Year</b> | <b>Production (US\$)</b> | <b>Exports (US\$)</b> | <b>Imports (US\$)</b> |
|-------------|--------------------------|-----------------------|-----------------------|
| 2006-07     | 409 mln                  | 17 mln                | 1108 mln              |
| 2007-08     | 452 mln                  | 35 mln                | 1426 mln              |

#### **Fluid-moving equipment (Compressors, pumps, motors etc.)**

Compressors find application across various manufacturing industries such as air conditioning and refrigeration industry (ACR), petrochemicals, refining, fertilizers, natural gas and oil exploration. The demand for compressors is likely to rise in coming years, driven primarily by growth in the high-value screw air pumps segment.

The Indian pump industry has a turnover of USD 7.5 million and is expected to grow by 7.9% p.a. There are more than 500 manufacturers of pumps in the country who together produce more than 1.2 million pumps every year. The industry meets 95 per cent of the domestic demand. The Indian pump industry is characterized by the coexistence of large number of SSI units, some large manufacturers like Kirloskar as well as plenty of foreign manufacturers. The greatest demand for pumps originates from moving water from waterways & sources to residential & industrial users. The key demand drivers are agriculture, industrial sector, construction and urban infrastructure.

### **Boilers**

BHEL (Bharat Heavy Electricals Limited) is the largest manufacturer of boilers in India. They account for two-third of the market share. The range available is from 30MW to 500MW capacity based on using coal, lignite, oil and natural gas or a combination of fuels. The figures representing this sector are as follows:

| <b>Year</b> | <b>Production (US\$)</b> | <b>Exports (US\$)</b> | <b>Imports (US\$)</b> |
|-------------|--------------------------|-----------------------|-----------------------|
| 2007-08     | 1960 mln                 | 132 mln               | 201 mln               |
| 2008-09     | 2418 mln                 | 136 mln               | 208 mln               |

*Source: DGCIS*

### **Textile Machinery sector**

There are 700 units engaged in the manufacture of textile machinery in India. Out of these 250 are manufacturing complete textile machinery. Some statistical data for the textile machinery sector is as follows:

| <b>Year</b> | <b>Production (US\$)</b> | <b>Exports (US\$)</b> | <b>Imports (US\$)</b> |
|-------------|--------------------------|-----------------------|-----------------------|
| 2006-07     | 666 mln                  | 119 mln               | 2247 mln              |
| 2007-08     | 713 mln                  | 134 mln               | 1732 mln              |

*Source: DGCIS*

## Bearings

Bearings, used in sectors like automobiles, railways, heavy engineering and power generation, are broadly classified into ball bearings and roller bearings. The latter are further classified as taper, spherical, cylindrical and needle bearings. This sector is highly organized and capital intensive in nature, hence the entry barriers are very high. About 62% of the demand for bearings comes from the automobile sector. Original equipment manufacturers (OEMs) claim 60% and replacement demand 40% share.

## Material Handling Systems

The equipment manufactured includes crushing and screening equipment, coal/ore/ash handling plants and associated equipment such as conveyor systems, stackers, re-claimers, ship loaders/unloaders, wagon tippers and feeders etc. These equipments cater to the needs of the core industries such as Cement, Power, Port, Mining, Fertilizers and Iron & Steel plants. These also include equipment and components used for handling materials inside manufacturing plants, warehouses, mines, mineral ores etc. The material handling equipments will gain from robust demand from steel, power, mineral and other infrastructure industries. The estimated demand for material handling is expected to be **USD 30 billion over 2007-2014**. The steel industry would contribute close to 52% while power will contribute 23% to the demand for these equipments.

| Year    | Exports (US\$) | Imports (US\$) |
|---------|----------------|----------------|
| 2006-07 | 30 mln         | 369 mln        |
| 2007-08 | 47 mln         | 370 mln        |

*Source DGCI S*

## Transmission and Distribution (T&D) Hardware

Increase in per capita consumption of electricity from 606 KWH to 932 KWH by 2012, will mean new power plants to be set up leading to corresponding investment in transmission and distribution. By 2012 the transmission network is expected to be around 60,000-circuit kilometers. This impending growth in power generation, privatization of distribution, and government initiative to create a national

distribution grid is leading to increase in T&D expenditure. Investment in interregional transmission capacity will help sustain demand for T&D equipment manufacturers. Some of the equipments that will see huge demand are transformers, energy meters, and industrial switches. For every 1MW of new capacity that comes up, seven transformers are used across generation transmission and distribution segments. This would mean potential demand for approximately 630,000 transformers assuming 90,000 MW are added by 2012. The demand supply gap in transformers is estimated at 24,000 and 32,000 transformers in FY07 and FY08 respectively.

### **Engineering Design**

India is emerging as a global design hub as a number of MNCs (multi national companies) are increasingly outsourcing industrial and engineering design tasks to the country. Design outsourcing contracts are sweeping into diverse industrial sectors like semiconductors, aerospace, automotive, farming equipment, power generation, and consumer electronics among others. With almost every global carmaker showing up on Indian roads, international car designers are also lining-up in the country as they find it is at least 50 per cent cheaper to design cars in India. Engineering Services Outsourcing (ESO) includes product design, research and development and other technical services across sectors like automotive, aerospace, hi-tech/telecom, utilities and construction/industrial machinery. This industry has already been showing robust growth rates. Export of engineering products and services have grown from about USD 3.1 billion in FY05 to USD 4 billion in FY06 and further to USD 4.9 billion during FY07. In fact, export of engineering design services alone is estimated to account about USD 1.4 billion.

### **Auto Components**

The total global auto components trade amounts to USD 185 billion of which India's share is 0.4 per cent. The auto component sector generated sales of about USD 18 billion in fiscal year 2007-08, including USD 3.3 billion worth of exports. Industry sales will swell to USD 40 billion by 2016 with USD 20 billion coming from exports. Steered by India's sophisticated engineering skills, established production lines, a thriving domestic automobile industry, and

competitive costs, global auto majors are rapidly ramping up the value of components they source from India. However, the auto components sector in India is highly fragmented and has small production volumes. This factor, coupled with rising wages and appreciating rupee, has meant lower profit margins for the industry.

**The most important area in this segment is the component industry. Some of the important indicators are:**

| Year    | Turnover (US\$) | Investments (US\$) | Imports (US\$) | Exports (US\$) |
|---------|-----------------|--------------------|----------------|----------------|
| 2007-08 | 18 bln          | 8 bln              | 5 bln          | 3.3 bln        |
| 2008-09 | 19 bln          | 7.6 bln            | 6.5 bln        | 3.5 bln        |

*Source: DGIC*

### **Private Equity/M&A Activity**

An indicative list of SME deals concluded in the engineering sector in 2007 is given below.

According to Venture Intelligence estimates, the engineering sector attracted private equity investments of more than USD 850 million in year to date and accounted for 9% of the total private equity flow into the country for the same period.

### **Areas where Italian companies have opportunities**

1. **Power sector (Hydro, Thermal & Nuclear):** Technical know-how agreements and setting-up of productions facilities in India. Various options available depending upon the nature of technology and alliance most suitable for India.
2. **Other sectors** that also have opportunities in Engineering sector in form of various commercial tie-ups are in : Cement Machinery, Dairy Machinery, Electrical furnaces, Metallurgical Industry, Oil-field equipment, Printing Machinery, Pulp and paper machinery, Rubber machinery, Switchgear and Control gears, Sugar machinery and Transformers.