

# The Indian Forging Industry - An Overview

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The Indian Forging Industry has emerged as a major contributor to the manufacturing sector of the Indian Economy. Briefly, the composition of the Indian forging industry can be categorized into four sectors - large, medium, small and tiny. As is the case world over, a major



portion of this industry is made up of small and medium units/enterprises (SMEs).

Only about 5% is made up by the large enterprises in terms of number. Out of the 330 odd units the large sector

consists of about 9-10 units, the medium and small sectors consists of about 100 units and under the tiny sector, the units functioning are far too many and the number is difficult to estimate.

The industry was previously more labour intensive (it is estimated that this industry provides direct employment to about 38000 people), but now with increasing globalization it is becoming more capital intensive. The total investment in the large and medium sectors is estimated to be around US\$600 million. The small scale units too are increasing their capital investment to keep pace with the increasing demand especially in the global markets as also to broaden the areas of demand for forgings. Many of them are now suppliers to Original Equipment Manufacturers (OEMs) in the automobile sector also, which speaks volumes about efforts at technology and quality upgradation.

## Performance

The year 2004-05 (April-March) was a good year for the Forging industry. The revival which started in October 2002 picked up momentum last year. Overall production of forgings increased by about 20-25% to reach about 8,10,000 tonnes in the year. Capacity utilization also improved considerably from 40-50 percent in earlier years to 75-85 per cent. This was largely due to the revival in demand from the automotive sector and particularly the passenger car segment which recorded an excellent performance in both in the domestic market and exports.

While the automotive industry is the main customer for forgings, the industry's continuous efforts in upgrading technologies and diversifying product range have enabled it to expand its base of customers to foreign markets. The Indian forging industry is increasingly addressing opportunities arising out of the growing trend among global automotive OEMs to outsource components from manufacturers in low-cost countries. As a result, Indian forging industry has been making significant contributions to country's growing exports. The industry's exports recorded a growth of almost 30% in 2004-05 and have reached a level of US\$ 250 million. Technological developments have also contributed to export growth. The industry's major markets are USA, Europe and China. However, only about 30-35 manufacturing units are currently directly engaged in exports. Efforts of AIFI are to attract more manufacturing units to export. This is being done through increased facilitation by way of organizing Training Sessions, Workshops, Trade Fairs I Exhibitions, Buyer-Seller Meets etc. The technology gap is therefore, being sought to be bridged so that companies are prepared to face challenges of global markets.

Inorganic growth is another strategy being used by Indian companies to expand their global footprint and establish a global presence in some of the world's largest

markets. In the past year companies like Bharat Forge (India's Number 1 forging company) acquired Can Dan Peddinghaus, the second largest forging company in Germany and more recently Federal Forge Inc. USA. The CDP acquisition has made Bharat Forge the second largest forging company in the world. Sundaram Fasteners Ltd. (SFL), acquired the forging unit of Dana Corp. UK. This has given SFL a firm foothold in the UK and in other countries of Europe. Amtek Auto Ltd has acquired the entire equity stake of the GWK Group while EL Forge acquired controlling interest in Shakespear Forgings in UK. We expect Indian companies to continue to aggressively pursue inorganic growth opportunities in future.

On the domestic front too many Indian forging companies (most of whom are AIFI members) have posted excellent results in 2004-05. Many large and medium forging companies also took important initiatives in capacity expansion modernization, cost rationalization etc. Notwithstanding this, the industry had also to contend with its share of problems. It had to bear the brunt of acute shortages and steep and frequent increases in the cost of major inputs like forging quality steel. For a major part of the year, the industry has grappled with this issue and has been negotiating with suppliers to arrive at mutual understandings.

User industries have, to some extent and selectively, increased prices but this has not been uniform nor entirely adequate to compensate for the higher costs of manufacturing inputs.

In addition, increasing cost of other inputs like petroleum products, power, implementation of stringent environment pollution norms etc., are challenges that the industry had to face.

### Major challenges / key issues

Major challenges on domestic and export fronts that the forging industry is facing are as follows.

#### Domestic

- Volatile international and domestic prices of forging quality steel
- Inefficient economies of scale.
- Compliance with stringent environment norms.
- Inadequate backward/forward linkages.
- Difficulties associated with consolidation of capacities.

#### Exports

- Impact of the volatile Foreign exchange rates.
- Reluctance of the overseas buyers to compensate for the steel price increases in India which were around 1 to 1.5 times more than international prices.
- Inadequate investment in technology upgradation.
- Inadequate R&D and training for coping with the demands of the export market.
- Inadequate testing and validation facilities for smaller forging companies.
- Inadequate overseas marketing support facilities.
- Cost competitiveness adversely affected due to constant cost escalation.

#### Future outlook

Economic indicators suggest that a global economic recovery is in the offing. The US economy grew by 3.1% in 2003, surpassing all the other major developed economies. US economic growth in 2004 is expected to be in the region of 4.5% to 5%. The Japanese economy that had been in a state of stagnation for the past six years, registered growth of 2.7% in 2003. China continued on its blistering growth path, recording GDP growth of 9% in 2003. The Chinese economy is expected to continue to grow at a high level in 2004. Economic growth in Europe, though more sedate is expected to be satisfactory in 2004. As regards the Indian economy, the country recorded GDP growth of 8.2% in 2003-04. This makes India the

second fastest growing economy in the world. This is undoubtedly a strong platform for the Govt. to launch the next



phase of reforms (which in all probability it will) through which past gains made by the Indian economy can be consolidated upon and the economy placed on a path of consistent high growth.

The future looks encouraging for the forging industry in terms of the expected surge in global demand. As a result of liberalisation, more MNCs have entered the domestic automobile market. This has opened up more business opportunities for the forging industry.

The following table would give a fair idea of the future estimated demand (both domestic and global) for the auto component industry (of which the forging industry is an important segment).

#### Key highlights

- Estimated demand for the auto component industry by 2015 (Rs. in crore)
- Size of Global Auto Component Industry US\$ 1.2 trillion.
- Current global purchases of components US\$ 45 billion by international vehicle manufacturers
- Estimated export of Auto components from US\$ 225 billion
- Estimated share of exports from the Indian auto 10% component industry out of (3) above
- Targetted exports of auto component industry US\$ 20 billion

industry in absolute terms by 2015

- Current exports of Indian auto component industry US\$ 1 billion
- Current estimated exports of Indian forging industry (15% of country's auto component exports) US\$ 250 million
- Projected exports of Forging industry by 2015 US\$ 3 billion (15% of auto component exports)

Today, the passenger car segment has emerged as an important customer for the Indian forging industry. The flow of orders is only a fraction of the industry's investment in this specific area. It is expected that the future and well-being will depend mainly on the steady growth of the automotive industry. The current year is not showing signs of an economic recovery in many other sectors of the economy. The recovery, particularly in the automobile industry (user industry for the forging industry) has been stronger than expected, but in the next year it is felt it may not grow to a great extent.

#### **User industry segment Cars and utility vehicles**

In 2003-04, sales of cars and utility vehicles increased by 28% and 25%, respectively, on the back of the excise cut, the reduction in interest rates and new model launches. However, in 2004-05, sales are likely to move up by 10%-12%, as price reductions are unlikely, new model launches would be few and interest rates would be stable. The operating margins for the industry are expected to remain stable, as higher input costs are likely to offset the increase in volumes and reduction in overhead costs.

#### **Commercial vehicles**

In 2003-04, commercial vehicles sales increased by 38%. The goods and passenger vehicles segments grew by 42% and 20% respectively. Improved infrastructure, robust economic growth, low finance costs, and shift towards road freight

were the main growth drivers. However, in 2004-05, demand growth is likely to slow down to 12%-15%, due to the rise in diesel prices and the completion of fleet renewal by large transport operators.

#### **Two wheeler**

Two-wheeler sales grew by 11.4% in 2003-04. Continued increase in household income, a slew of new model launches, and the greater availability of low-cost finance, will result in a 10%-11% growth in 2004-05. Motorcycle sales grew a sedate 13.7% in 2003-04 (Y-o-Y) after the stupendous growth of 30% (Y-o-Y) last year. The segment will grow 12%-13% in 2004-05. Scooter sales are likely to grow by



4%-5%, while moped sales are expected to stagnate or decline marginally.

#### **Tractors**

The industry has been witnessing declining sales over the 4 years (1999-2000 to 2002-2003), on account of high inventory levels, poor monsoons and lower farm incomes. An increase of 11% in sales in 2003-04 to 190,000 units from 170,000 units in 2002-03 ended the recessionary conditions in the industry. Good monsoons, strong inventory-correction measures and aggressive financing led to turnaround during the last fiscal. The doubling of agricultural credit in three years accelerated completion of irrigation projects, provision of farm insurance, expansion of water harvesting and various irrigation schemes have outlined as thrust areas coupled with

total exemption from excise duty would boost demand during current fiscal. Tractor demand will grow at 5%-6% annually over 5 years.

#### **Input segment Steel**

\*Average international prices are expected to be higher in 2004-05 (on the back of demand recovery from the US and shortage of inputs, leading to high raw material costs). Domestic demand-supply balance is expected to remain favourable and operating rates are expected to be over 90%. The profit margins of steel manufacturers are expected to remain stable at current levels, as higher average domestic steel prices would neutralise the increase in the input costs of iron ore, scrap, coke and coal.

#### **Non-ferrous metals**

Demand from China and the recovery in the global economy has led to an increase in non-ferrous metal prices. The average international prices of non-ferrous metals are expected to be 12%-15% higher in 2004-05, in comparison with the previous year. Better price realisations will neutralise higher input costs, thus increasing the profit margins of non-ferrous metal producers.

#### **Power**

The Electricity Act 2003 will help transform the power sector over the medium- to long-term. However, following the uncertainty after a call for a review of the Act and the likely extension of the implementation of the unbundling of SEBs by a year, the Act may not have a major impact in the near term. It is believed that the current financial health and poor creditworthiness of the SEBs, which clocked losses of over Rs 330 billion in 2002-03, are the major obstacles in the transformation of the sector.

#### **Oil & Gas**

In 2003-04, while marketing

margins were hit by the non-revision of retail petrol and diesel prices in the fourth quarter and rising under-recovery on LPG and kerosene, domestic refining margins boosted industry profitability. Industry profitability is expected to improve in 2004-05, following expectations of firm refining margins (\$5.5/bbl) and steady demand growth for petroleum products (3.1). However, average marketing margins on retail auto fuels are expected to fall from Rs 1,500/kl in 2003-04 to Rs 1,400/kl. in 2004-05.

### The auto component sector

The Auto component sector growth can also be visualised fairly accurately by the fact that Auto components has been designated as a "Thrust Sector" by the Govt. of India under the EXIM Policy. The Dept. of Commerce is to promote export of auto components through a specific sectoral strategy. The size of the global auto component industry is US\$ 1.2 trillion with most of it located in high cost countries.

Global purchases of components by international vehicle manufacturers are currently estimated to be US\$ 45 billion. However, what is important for us is the increasing role of outsourcing in an integrated global economy. Critically, outsourcing of automobile components that have relatively high engineering and design content from suppliers in low cost countries like India, is gaining fast momentum. It is estimated that in the next 10 years exports of auto components from low cost countries will reach US\$ 225 billion. It is believed that it would be realistic for the Indian auto component industry to aspire to capture about 10% share of this opportunity. This translates into an export target of US\$ 20 billion by 2015 out of which the share of the forging industry could be about US\$ 3 billion. Going by the current trends in the domestic automotive industry, it is expected that the indigenous demand for auto components will also reach US\$ 20 billion in the next 10 years.

To meet the combined demand from domestic and international customers the industry will have to make incremental investment of US\$ 15 billion at least that will generate additional direct employment of 7.50,000 and indirect employment of 1.8 million resp. by 2015. Industry experts say that there is no doubt that the Indian auto component industry (and by sequel the forging industry) is poised to achieve a position in the top slot in the world and will be in all probability a major driver of growth and employment in the domestic economy. Considering the recovery, particularly in the first half of the financial year (which saw substantial growth in the forging industry too) i.e domestic demand increasing by about 15% over the previous year and exports by over 25%, the above estimates look challenging yet achievable.

### Indian Forging Industry - 2004-2005 (Statistics)

**Number of units 330**

**Investment**

**US \$600 million approx**

**Employment 38,000**

**Capacity**

One million metric tonnes/year\*

Production (in '000 tonnes)	Exports (million US\$)
1996 - 1997 - 476	1996 - 1997 - 50
1997 - 1998 - 465	1997 - 1998 - 55
1998 - 1999 - 441	1998 - 1999 - 61
1999 - 2000 - 497	1999 - 2000 - 80
2000 - 2001 - 435	2000 - 2001 - 90
2001 - 2002 - 382	2001 - 2002 - 110
2002 - 2003 - 440	2002 - 2003 - 145
2003 - 2004 - 600	2003 - 2004 - 178
2004 - 2005 - 810 **	2004 - 2005 - 250**

### Equipment installed

Close Die Hammers (upto 16 T),

Presses (upto 16,000 T),

Upsetters (upto 20 cms)

Open Die Presses (upto 3000 T)

Production range

Close Die Forgings (upto 600 kg.)

Open Die Forgings (upto 13,000 kg. )

Upset Forgings (Upto 260 mm dia.)

Ring rolling (upto 3 mtr. )

Disc & Tube Sheets (upto 3 T SP)

### Capability

Closed Forging, Open Forging, Upset Forging, Cold Forging, Roll Forging, Warm Forging, Ring Rolling, Machining, Shell Forging, Axial Close Die Forging

### Material handled

Alloy Steel, Carbon Steel, Stainless Steel, Special Steel, Aluminium, Non-ferrous, Titanium, Super Alloy

\* Excluding captive and tiny units

\*\* Closely estimated

Courtesy: Indiaforging.org