



INFRASTRUCTURE GROWTH to boost gear and bearing demand in India

- Steelworld Research Team

The slowdown in industrial manufacturing would have a cascading affect on the growth of gear and bearing sectors badly. The engineering industry which is highly dependent upon the growth of manufacturing sector has followed the trend of production and demand of its products in tune with the direction of the economy. Since, India's economic growth has reported a decline to 5.5 per cent in the second quarter of the financial year 2017-18, the entire manufacturing sector including engineering led to gears and bearing is expected to be impacted badly in near term. While the slump in demand takes normally few quarters to settle down and then revamp to see witness a growth, India's gears and bearing may take a couple of years to witness normalcy.

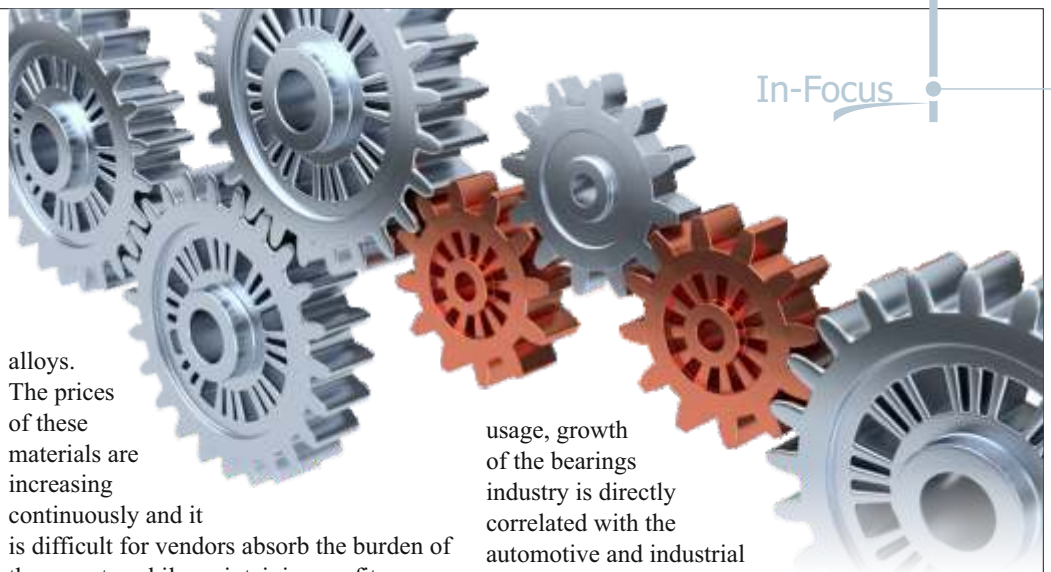
Manufacturing sector

India's manufacturing sector was affected badly first in November 2016 due to demonetization of high value currency notes accounting for around 86 per cent of the currency in circulation. The gears and bearing sectors which deal largely in cash, was reported to have affected badly with

the cash evaporating from the system and huge transformation time from changing to digital. Since, the cash circulation came back into the system after a few months of trouble, by then most players had switched to the electronic and channelized system of payment. This impact was followed by the implementation of the goods and services tax (GST) effective July 1. Here again, shifting from the existing taxation regime of excise, value added tax (VAT) and other systems of levies. Both these mega events have impacted India's manufacturing sector very badly. Meanwhile, industrial manufacturers inhabit a world littered with uneasiness. Global demand for manufactured products is growing at a snail's pace. Output is expected to increase just 3.1 percent in 2016 and 3.4 percent in 2017, according to the International Monetary Fund. Growth is dampened by Brexit concerns and political uncertainties. Foreign trade is at historically low levels, and, although oil prices have recovered a bit recently, they are not rising enough to undo the collapse in drilling and concomitant retraction in the rest of the energy supply chain.

The industry

The switchgear and control gear industry in India is currently estimated at 25,000 crore and growing at an estimated 10 per cent year on year. The switchgear and control gear industry size was estimated at around Rs 15,000 crore in 2013. The industry of late was impacted by the current negative manufacturing environment across the country. With the global growth in its demand remains limited, switchgear and control gear in India poses a slow growth, still keeping higher growth than industrial sector. Low voltage switchgears, which account for more than 55% of the total market, has a higher share of unorganized players and it is anticipated to increase in the coming years. The forward integration of these unorganized players to medium and high voltage segments can lead to an increase in the unorganized market share in these segments too, which is currently dominated by five or six players. Meanwhile, the industry hopes its better future on the government's increased spending on power and infrastructure sectors. increased planned capacity addition in the power



sector and improvement in technology along with government directives to replace old redundant machinery is creating a replacement demand in the switchgear segment. According to reports, India is setting its eye to become the fifth largest producer and consumer of electricity in the world, but according to the 11th five year plan, the country was only able to achieve 69% of the planned capacity of 78,700 MW. In order to overcome this demand and supply deficit, the Indian government has gradually increased the planned capacity addition in the years to come. The rising demand in the power capacity addition is marginally boosting the demand for distribution machinery such as switch gears and control gears.

Coimbatore-based Shanthi Gears is today a part of Murugappa Group one of the leading industrial houses in India. The company with a long history of manufacturing high quality, high precision gears, gearboxes, geared motors and gear assemblies, has come out with a whole range of innovative gearboxes for main hoist applications for capacities beyond 350T. Recently it has developed an Accurate Missile Positioning Gearbox with zero backlash, capable of operating at temperatures ranging from -40 degree to 140 degree Celsius. The company's products designed for arduous applications are also used in traction motors in high speed trains, cement mills, gas turbines, thermal power projects, battle tanks, mining drills and such other critical areas. As a result of India's growing population and increasing income levels, industries such as Oil and Gas, Textile, Food and Beverage, and Pulp and Paper are in the process of expanding and renovating their facilities to meet with the increased needs of the people. These industries all require the same fundamental component - gears. As such, the gear manufacturing in India is flourishing more than ever before, and is set to continue to rise at a compounded annual growth rate of 9.6 percent for the 2012-2016 period so long as gear manufacturers are able to overcome two big challenges.

Gear manufacturers use an array of materials in their products, including stainless steels, hardened steel, cast iron, aluminum, brass, bronze, and other metal

alloys.

The prices of these materials are increasing continuously and it is difficult for vendors absorb the burden of these costs, while maintaining profit margins. Several regional and international gear manufacturers offer almost identical products. The problem is that as we mentioned, profit margins are becoming increasingly narrow which means there's very little room adjust product prices in order to maintain market share in this intensely competitive market. With that, a lot of vendors have hit a roadblock in their efforts to gain market share through differentiation. Vendors in India such as Ashoka Machine Tools and SRS Gears and Sprockets have recently started offering customized industry-specific gears to meet the specific needs of the end-users. They offer various types of gears in all sizes, shapes, designs, and speed ratios according to the specific requirements of industrial applications. This is sure fire way increasing market presence by targeting niche and specialized end-users. Along similar lines, several smaller scale gear manufacturers in India have begun focusing on developing superior-quality gears for various industrial gear manufacturing processes. CAD, CAE, FEA, and CFD can all be applied to help manufacturers create prototypes of best-in-class gears. Naturally, a better gear is going to bring in more revenue than a competitor's subpar product. Meanwhile, the automotive industry for instance, is booming more than ever before and requires-you guessed it-gears. There has also been a huge surge in the outsourcing of other country's manufacturing activities to India, which demands once again, a lot of gears.

Gears and bearings in Steel Industry

Anti-friction gears or bearings find application in automobiles, pumps, gearboxes, heavy earth-moving equipments and industrial sectors. Owing to the vast

usage, growth of the bearings industry is directly correlated with the automotive and industrial sectors. Industrial sector accounts for the largest share (52%) of demand for bearings in the Indian market whereas automotive accounts for 48%. In the sector, the players involved manufacture only 60% of the requisites whereas 40% requirement is catered via imports mostly from Japan, China, Singapore, Sweden, France and Italy. As the infrastructure development unfolds in the future, the Bearing Industry is poised to proportionately stride with the growth. The Indian bearing industry accounts for less than 5% of the world bearing market and currently is a ~15 bn market. The players in the market include international manufacturers such as Timken, SKF and FAG alongside numerous domestic manufacturers such as NEI, NRB, ABC and Tata. Bearings find applications in 52 per cent industrial and 48 per cent automotive.

The current market size of the global bearings industry stands at whopping \$3 trillion, as per data released by Industry experts. With the Indian economy undergoing rapid industrialization, the industry has doubled in the last five years and has registered annual gains well above the global average of ~35%. With increased infrastructure and industrialization, at least, this trend should continue for next five years. India is among the fastest growing markets for bearings. Close to 40% of the total demand is fulfilled through imports with the balance being met by indigenous products. As the Indian infrastructure develops and the industry modernizes, we can see tremendous opportunities opening up for the bearings industry. In the near future, customers will look for better and cleaner technologies, hence necessitating aftermarket services including maintenance

of equipment, reliability monitoring, remanufacturing so as to keep their equipment running efficiently and for long. Moreover, the Indian economy which is driven largely by the domestic demand was not only spared of the worst of the downturn but also very well placed to make the most of the upturn. As the government increases its thrust on the infrastructure build, the economic growth will accelerate.

Original manufacturer and replacement demand to drive growth Demand arising out of the bearings industry can be bifurcated in two categories catering to two diverse markets, viz, original equipment manufacturers (OEM) market' and 'replacement market'. The OEM market for bearing represents the demand arising out of the original vehicle and industrial manufacturers. This market is characterized by requirements of high quality, stringent delivery norms and lower margins. Replacement Demand is the after-sale demand where as a part of the maintenance bearings suffering premature failures due to wear and tear or manufacturing defects need replacement The size of replacement market is reliant on equipment density and frequency of maintenance. Replacement market accounts for 40% of total demand for the bearing industry. The margins in this market are relatively higher as compared to the OEM market.

Eight core sectors which include coal, electricity, cement, steel, crude oil and petroleum refinery products identified by the government comprises around 37.9% of the IIP, hence enjoys a major say in the performance of the IIP and translates into deriving value for the bearings industry. In the past one year, segments such as

coal, refineries, fertilisers, cement and electricity have outperformed the Indian core industry growth. All the aforementioned sectors widely involve bearings application. Power, with over 30% share in infrastructure investment, is one of the key areas of investment hence propels growth in the demand of the bearings. In coal mining bearings find usage in the shovels, draglines, haul trucks, loaders, crushing, screening and material handling. With coal industry paving its way toward growth after the central government uplifted the mining ban in Goa and Karnataka and proposed fresh coal block allocations, the bearings industry as allied components is sure to progress. The bearings industry is extremely capital intensive and is largely dependent on varied industries. Bearings find extensive applications across power, railways, material handling equipment, defence, machine tools, mining, etc. Hence, it performs in conjunction with the performance of the Index of Industrial production. Incremental demand from the railways to boost growth Indian railways too employ bearings extensively which are used in wheel axles, drive units, traction motors, etc. Railways are a crucial expanse of investment in the ongoing Twelfth Plan period. The arenas anticipated for private investment during the planned period comprise of Elevated Rail Corridor in Mumbai, fragments of the DFC, revamping of existing stations, power generation/ energy saving projects and freight terminals. The rolling stock addition is projected to incline ~70% by the end of the Twelfth Five Year Plan over the Eleventh Five Year Plan. We believe

that such an incremental outlay would be a key carter for bearings prerequisites from the railway segment.

Major growth drivers

India is currently the seventh-largest automobile producer in the world with an average annual production of 20.3

million vehicles, and is on the way to become the fourth largest automotive market by volume, by 2015. With the increasing growth in demand on the back of rising income, expanding middle class and a young population base, in addition to a large pool of skilled manpower and growing technology, will propel India to be among the world's top five auto-producers by 2015. Going ahead, with the revival in the domestic market (which are already showing initial signs of revival) and higher export sales, the projections for bearings industry appear promising. The government recently launched "Make in India" campaign to make India a manufacturing hub. As the "Make in India" plot grows, the road ahead for the automobile industry remains encouraging. The Make in India story will definitely be crusaded by the automobile and manufacturing sector as it accounts for over ~30% of the entire IIP in India thereby affecting the requirements for bearings. Thus, we believe that the following policies will catalyse the demand. The Indian Bearings Industry is well poised to achieve strong growth in coming years owing to rising domestic demand in the auto sector and in Industrial applications. Given the government of India's focus on the manufacturing sector, Indian Bearings Industry is expected to grow in the coming years. The government has already made clear its continuing focus on infrastructure from Power and Oil & Gas, Roads, Ports and Airports. As per the planning commission's estimates, the government has planned substantial investment in the 12th Five Year Plan aggregating USD 1 tn. This infrastructure spending will lead to growth in the manufacturing sector, which in turn will have a positive impact on bearings industry.

Outlook

As per the Auto Components Manufacturers Association (ACMA), the Indian friction components industry is likely to grow to US\$ 110 billion by 2020 capturing the domestic market share of around US\$ 80 billion. The share of the auto components industry in the country's GDP is likely to increase to 3.60% by 2020.

