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IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org
- Increasing industrialisation and economic development drives growth in the capital goods market.
- Turnover of the capital goods industry was estimated at US$ 92 billion in 2019 and is forecast to reach US$ 115.17 billion by 2025.
- Growth in the power industry is expected to drive growth in the electrical equipment industry.
- Electrical equipment market production is forecast to reach Rs. 500,000 crore (US$ 100 billion) by 2022 from Rs. 175,000 crore (US$ 27.3 billion) in 2017-18.
- Index of industrial production (IIP) for electrical equipment industry stood at 105.5 in FY20.
- Engineering R&D (ER&D) revenues are projected to reach US$ 42 billion by FY22F from US$ 36 billion in FY19*.

**Note:** *including product engineering services, F-Forecast,
Source: Dept. of Heavy Industries, India Electrical and Electronics Manufacturer Association, NASSCOM, Business Today*
With infrastructure investment set to go up, demand for construction equipment will rise further.

By 2022F, construction equipment sales are forecast to reach 110,815 units.

Indian telecom equipment market is likely to increase at a rate of 50% by 2020.


Increased production of Central Public Sector Enterprises (CPSEs).

Production by CPSEs under Department of Heavy Industries (DHI) increased to Rs. 39,720.24 crore (US$ 5.68 billion) in FY20 from Rs. 33,526.15 crore (US$ 5.20 billion) in FY18.

---

**Note:** DHI - Dept. of Heavy Industries, A - Actual, T - Target, E - Estimate

**Source:** Booz and Company, Ministry of Heavy Industries and Public Enterprise, DGCIS, Off highway Research
• Capacity creation in sectors such as infrastructure, power, mining, oil and gas, refinery, steel, automotive and consumer durables is driving demand in the engineering sector.
• Rising demand for electrical and construction equipment.
• Comparative advantage vis-a-vis peers in terms of manufacturing costs, market knowledge, technology and creativity leading to higher investment.
• Highly organised sector - dominated by large players employing over 4 million skilled and semi-skilled labour .

Notes: FDI - Foreign Direct Investment, FY - Indian Financial Year (April - March), US$ - US dollar, ^CRISIL Infrastructure Yearbook 2017
Source: Government of India, Ministry of Heavy Industries, Department for Promotion of Industry and Internal Trade(DPIIT), India Electrical and Electronics Manufacturer Association

• Nuclear capacity expansion to provide significant business opportunities in the electrical machinery industry.
• Government has announced to invest Rs. 100 lakh crore (US$ 1.5 trillion) in infrastructure over the next five years
• Infrastructure investment is expected to increase to Rs. 50.2 trillion (US$ 778.90 billion) during FY18-22E^ and will drive demand for capital goods.
• De-licensed engineering sector; 100% FDI permitted.
• Government of India introduced the National Policy on Capital Goods 2016 to treble production of capital goods and employment opportunities in the sector.
• In March 2020, the government approved the ‘Production Incentive Scheme’ (PLI) for large-scale manufacturing of electronics
MARKET OVERVIEW
TWO MAJOR SEGMENTS

Engineering

- Heavy engineering
  - Heavy electrical
  - Heavy engineering and machine tools
- Light engineering
  - Automotive
  - Low technology products
  - High technology products
### HEAVY ENGINEERING - KEY SEGMENTS ... (1/2)

| Machine tools | - This segment churns out basic machinery for all the major industries and determine competitiveness in other sectors such as automobiles, heavy electrical and defence.  
- Nearly 200 machine tool manufacturers are operational in the organised sector along with 400 small-scale units. |
| Textile machinery | - It comprises over 1,446 units involved in churning out machinery and components. Another 600 units manufacture complete machinery.  
- Market size of textile machinery stood at US$ 4.85 billion in 2018 and is expected to reach US$ 5.2 billion by 2021.  
- The industry produced total machinery worth Rs. 6,900 crore (US$ 1,070.60 million) in FY19 including spares and accessories worth Rs. 920 crore (US$ 142.75 million). |
| Cement machinery | - Cement plants based on raw mill grinding, pre-processing and cement grinding process technology (for capacities up to 10,000 TPD) are being manufactured in India.  
- Currently, 100% FDI is allowed under the automatic route.  
- The industry is capable of catering to the domestic demand because of growth in construction in the coming years owing to new Government policies. |
| Material handling equipment | - Material handling equipment have four categories: storage and handling equipment, engineered systems, industrial trucks and bulk material handling.  
- With around 50 units in the organised sector, the material handling equipment industry is engaged in the setting up of coal/ore/ash handling plants and manufacturing associated equipment. |

**Notes:** TPD - Tonnes Per Day, *As per latest data available, F - Forecast  
**Source:** Indian Machine Tool Manufacturers' Association, Textile Machinery Manufacturing Association, Cabinet Committee on Infrastructure report, ITMACH India
### Plastic processing machinery

- There are 11 major and nearly 200 small and medium manufacturers of plastic processing machinery in India.
- Demand for plastic processing machinery is expected to increase from 12,760 in FY20E to 13,740 in FY21P and 14,770 in FY22P.
- Out of the total machinery demand in 2020-21P, injection molding machinery is expected to comprise 10,000 units, extrusion machines to comprise 2,770 units, and blow molding machines to comprise 970 units.
- In 2018-19, market size of all machinery related to plastic industry stood at Rs. 1.2 lakh crore (US$ 17.2 billion).

### Process plant equipment

- Over 200 manufacturers are engaged in the production of process plant machinery.
- Nearly 65% of the total manufacturers are small and medium enterprises.

### Earth moving, construction and mining equipment

- Currently, 20 large and global manufacturers and 200 small and medium manufacturers operate in the industry.
- The construction equipment industry’s size is estimated to reach US$ 5 billion by FY21 from around US$ 4.3 billion in FY18.

**Note:** Information is as per latest available data, E - Estimated, P-Projected

**Source:** Ministry of Heavy Industries and Public Enterprise Annual Report 2018-19, PLEX Council, Plastindia Foundation
Casting and forging

- India overtook US to become the second largest casting producer globally. Production of castings in India stood at 12.05 MT in FY19.
- Turnover of the Indian forging industry grew nearly 12% y-o-y to Rs. 35,000 crore (US$ 5.43 billion) in FY19.

Medical and surgical equipment

- The medical and surgical equipment industry manufactures a wide range of medical equipment, such as ECG and X-ray scanners.
- The indigenous industry caters to 40% of demand, while the remaining is met through imports.
- Export of medical and scientific instruments reached US$ 36 billion in FY20.

Industrial fasteners

- The fasteners industry in India can be classified into high tensile and mild steel fasteners.
- Mild steel fasteners are primarily manufactured by the unorganised sector, while the high tensile steel segment is dominated by the organised sector.

Source: Ministry of Heavy Industries and Public Enterprise Annual Report, Association of Indian Forging Industry (AIFI), IVG Research
# HEAVY ELECTRICAL - KEY SEGMENTS

<table>
<thead>
<tr>
<th>Segment</th>
<th>Key Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boilers</strong></td>
<td>- As per the latest data available, the Indian boiler industry has the capability to manufacture boilers with supercritical parameters up to 1000 MW unit size.</td>
</tr>
<tr>
<td><strong>Turbines and generator sets</strong></td>
<td>- As per the latest data available, the industry manufactures various turbines in the range of 800-7000 MW per annum and generators ranging from 0.5 KVA to (ones even higher than) 25000 KVA.</td>
</tr>
<tr>
<td><strong>Transformers</strong></td>
<td>- A whole range of power and distribution transformers, including special type of transformers required for furnaces, electric tracts and rectifiers, are manufactured in India. The power transformer and distribution transformer market reached Rs. 6,665 crore (US$ 1.03 billion) and Rs. 7,000 crore (US$ 1.09 billion), respectively, in FY19.</td>
</tr>
<tr>
<td><strong>Switchgear and control gear</strong></td>
<td>- The market size of high voltage switchgear (including panels) and low voltage switchgear (including panels) stood at Rs. 4,793 crore (US$ 679.95 million) and Rs. 19,322 crore (US$ 2.74 billion), respectively, in FY19.</td>
</tr>
</tbody>
</table>

*Notes: MW - Mega Watt, KVA - KiloVolt - Ampere  
Source: Ministry of Heavy Industries and Public Enterprise Annual Report, News Article*
AUTOMOTIVE - KEY SEGMENTS

**Passenger and utility vehicles**
- As of 2019, India was the seventh-largest manufacturer of commercial vehicles worldwide.
- Total production in the automobiles sector reached 26.36 million units in FY20.
- Domestic automobiles sales increased at a CAGR of 1.29% between FY16-FY20 with 21.55 million vehicles being sold in FY20.
- Automobile export reached 4.77 million vehicles in FY20, implying a CAGR of 6.94% during FY16-FY20.

**Auto components**
- The auto components industry has more than 500 companies in the organised sector and about 10,000 entities in the unorganised sector.
- It contributes nearly 2.3% to the country’s GDP.
- The automotive components industry registered a CAGR of 10.06% and reached US$ 56.52 billion in FY19, while export grew at a CAGR of 8.34% during FY14-FY19 to reach US$ 15.17 billion in FY19. The industry turnover is expected to increase to US$ 200 billion by 2026.
- During April-September 2019, export of auto components grew 2.7% to Rs. 51,397 crore (US$ 7.35 billion).

**Agriculture machinery**
- Agricultural tractors dominate the agriculture machinery sector.
- Indian tractor industry is the world’s largest and accounts for one-third of the global production.
- Indian tractors are exported to the Malaysia, Turkey and other countries.
- As the cost of tractors manufactured in India is the least in the world, there is a lot of scope for enhancing export of tractors from the country.

*Source: Ministry of Heavy Industries and Public Enterprise Annual Report, SIAM, Cabinet Committee on Infrastructure report, ACMA*
ROBUST GROWTH IN INDIA’S ENGINEERING EXPORT OVER THE YEARS

- Engineering exports include transport equipment, capital goods, other machinery/equipment and light engineering products such as castings, forgings and fasteners.
- In FY16-FY20, engineering exports from India expanded at a CAGR of 6.68%.
- Engineering exports reached US$ 75.90 billion in FY20 and US$ 33.69 billion in FY21 (as of August 2020).
- Export of engineering goods is expected to reach US$ 200 billion by 2030.

**Notes:** FY- Fiscal Year, ^CAGR is up to FY20, -*- till August 2020

**Source:** Reserve Bank of India, Engineering Export Promotion Council, Engineering Export monitoring report, Ministry of Commerce and Industry Estimates
KEY CATEGORIES OF ENGINEERING EXPORTS

- Engineering export from India can be divided into eight major categories.
  - Out of the eight categories, Iron and Steel and products made from Iron and Steel formed a substantial share (21.32%) of the total engineering export as of FY20.
- Automobiles (19.96%) and Industrial Machinery (17.81%) also contributed a major share to total export.

Source: Engineering Export Promotion Council
## KEY PLAYERS ... (1/2)

<table>
<thead>
<tr>
<th>Company</th>
<th>Revenues* ( FY20)</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larsen and Toubro</td>
<td>Rs 1,41,175.50 crore (US$ 20.03 billion)</td>
<td>Engineering and construction, cement, electrical and electronics</td>
</tr>
<tr>
<td>Bharat Heavy Electricals Ltd</td>
<td>Rs 20,491 crore (US$ 2.91 billion)</td>
<td>Power generation, transmission, transportation</td>
</tr>
<tr>
<td>ABB India Ltd</td>
<td>Rs 1,624.81 crore US$ 230.50 million)</td>
<td>Transformers, switch gears, control gears</td>
</tr>
<tr>
<td>CG Power and Industrial Solutions Ltd.</td>
<td>Rs 5,158.01 crore (US$ 731.71 million)</td>
<td>Power generation and transmission equipment</td>
</tr>
</tbody>
</table>

**Note:** Exchanges rates used are average of the period, provided on page 44, *Consolidated Total Revenue*

**Source:** Company Annual reports, News article, Money control, Bloomberg
# KEY PLAYERS ... (2/2)

<table>
<thead>
<tr>
<th>Company</th>
<th>Revenues* (FY20)</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineers India Ltd</td>
<td>Rs 3,492.07 crore (US$ 495.40 million)</td>
<td>Highways and bridges, mass rapid transport systems construction, specialist materials manufacturing</td>
</tr>
<tr>
<td>Kirloskar Oil Engines Ltd</td>
<td>Rs 3,421.96 crore (US$ 485.45 million)</td>
<td>Engines, engine bearings and valves, grey iron casting</td>
</tr>
<tr>
<td>Cummins India Ltd</td>
<td>Rs 5,062 crore (US$ 718.12 million)</td>
<td>Power generation, construction and mining equipment, fire pumps and cranes, compressors</td>
</tr>
<tr>
<td>Thermax Ltd</td>
<td>Rs 5,731.31 crore (US$ 813.07 million)</td>
<td>Boilers, heaters, air pollution and purification, absorption cooling</td>
</tr>
<tr>
<td>BGR Energy Systems Ltd</td>
<td>Rs 2,734.49 crore (US$ 387.93 million)</td>
<td>Boilers, turbines, generators</td>
</tr>
</tbody>
</table>

*Note: Exchanges rates used are average of the period, provided on page 44, *Consolidated Total Revenue

*Source: Company Annual Report, News article
NOTABLE TRENDS AND STRATEGIES
### NOTABLE TRENDS IN THE INDUSTRY

**Diversification**
- Several companies in the engineering sector have diversified, either geographically (mainly to Middle Eastern countries) or sector-wise.
- BHEL plans to foray into Ukraine.
- Simplex Infra has moved to the Middle East.
- Larsen and Toubro (L&T) has diversified into power equipment manufacturing.
- Thermax entered the power utility segment.

**Shift to value-added products**
- Rising competition is driving domestic players to focus on improving their capabilities, become more quality conscious and upgrade their technology base in line with global requirements.
- More than 2,500 firms in the engineering sector have ISO 9000 accreditation.
- Companies are focusing highly on R&D and product development.
- To enhance competitiveness in India’s capital goods industry, the Department of Heavy Industry approved four Centres of Excellence in textile machinery, machine tools, welding technology and smart pumps.

**Entry of international companies**
- With 100% FDI allowed through the automatic route, major international players such as Cummins, GE, ABB and Alfa Laval have entered the Indian engineering sector due to growth opportunities.
- In June 2019, Joysons Safety Systems (JSS) announced merger of its two joint ventures (JVs) in India into a tri-party JV called as Joyson Anand Abhishek Safety Systems Private Limited (JAASS).

*Notes: BHEL - Bharat Heavy Electricals Ltd  
Source: Sutherland Research, News Sources*
## STRATEGIES ADOPTED

### Leveraging Indian operations
- Bigger companies are currently focusing on process improvement and smaller set of key strategies.
- ABB has set up global R&D centre in Bengaluru and is also aiming at making India as a production hub for markets worldwide due to its labour cost advantage.
- Cummins has also opened a R&D centre in Pune for providing designing and technical abilities worldwide.

### Operational efficiency
- Companies are understanding the need of operations management following the crisis period.
- Good set of operational structure in place helps them target future business opportunities with better precision.
- There is emphasis on human resource management, automation and higher labour productivity.

### Geographical expansion
- Most Indian companies are increasing their global footprint.
- Cheap labour in India is giving them an edge over companies in higher wage economies.
- Besides targeting developed economies across Europe and North America, Indian companies are currently diversifying in the developing markets of Africa, South America and the Middle East.

### Skill improvement
- Many companies are collaborating with institutions for developing skilled manpower for the highly technical engineering sector.
- In July 2020, Ministry of Skill Development and Entrepreneurship (MSDE) launched ‘Aatmanirbhar Skilled Employee Employer Mapping (ASEEM)’ portal to help skilled individuals find sustainable livelihood opportunities.

### PSU stake sale
- In April 2019, the Government of India fetched Rs. 480 crore (US$ 68.68 million) by selling 12.12% of its stake in Rail Vikas Nigam Ltd (RVNL).
- In July 2020, government announced that it is working on completing the stake sale process of ~23 public sector companies whose divestment has already been cleared by the cabinet.

Source: KPMG Report on Engineering sector
GROWTH DRIVERS
GROWTH DRIVERS FOR THE INDIAN ENGINEERING SECTOR

Growth drivers

Demand-side drivers

- Capacity addition for power generation
- Increase in infrastructure spending
- Rise in export, which touched US$ 76.28 billion in FY20

Policy

- De-licensing
- Reduction in tariff and customs
- Supportive Government policies leading to higher investments

Investment

- Increasing FDI inflows
- Higher M&A
- Easy credit facilities for manufacturing companies

For updated information, please visit www.ibef.org
India’s energy requirement is expected to grow from 1,290.02 in FY20 to 1,566 BU in FY22 and further to 2,047 BU in FY27.

The growing energy requirement will require enhancement of installed power capacity. As per the National Electricity Plan 2018, the total installed power capacity is projected to increase from 356.10 GW in FY19 to 479.42 GW in FY22P.

The increase in installed power capacity is expected to boost demand for power generation and transmission equipment.

Notes: BU- Billion Unit, GW- Giga Watt, P - Projected; Conventional sources includes Thermal, Nuclear and Hydro Power; Renewable sources includes Small Hydro, Wind, Solar and Bio-Power
Source: CEA, Ministry of Power Annual Report, National Electricity Plan 2018
Government has planned an investment of Rs. 100 lakh crore (US$ 1.43 trillion) in the infrastructure sector over the next five years.

As per Economic Survey 2018-19, India needs to spend US$ 200 billion on infrastructure to be a US$ 10 trillion economy by 2032.

Government of India has also renewed its focus on development of infrastructure of the country.

With development of infrastructure, demand for construction equipment and other machinery is expected to rise significantly.

India needs investment worth Rs. 235 trillion (US$ 3.36 trillion) in infrastructure in the next decade (2020-29).


Note: RE - Revised Estimates, E - Estimated
Source: Office of the Economic Adviser, CRISIL Infrastructure Yearbook 2018
India has one of the largest road networks (5.48 million kms) comprising expressways, national, state highways, districts and village roads. Demand for related machinery in building roads has increased significantly due to large-scale public and private investment in roads. Government of India allocated over Rs. 80,250 crore (US$ 12.01 billion) for upgradation of 125,000 kms of rural roads under phase-III of the Pradhan Mantri Gram Sadak Yojana. The Infrastructure Supporting Industries Index (part of the wider Index of Industrial Production) comprises eight core industries, including coal, crude oil, natural gas, petroleum refinery products, fertilisers, steel, cement and electricity. This index rose to 131.2 in FY19, implying a growth rate of 4.38% in the year.

Note: *- till February 2020
Source: National Highway Authority of India, Ministry of Road Transport and Highways
STRONG POLICY SUPPORT CRUCIAL FOR THE SECTOR…(1/2)

| De-licensing                                      | ▪ The engineering industry has been de-licensed and 100% FDI has been permitted in the sector.  
|                                                   | ▪ Foreign technology agreements are allowed under the automatic route.  
| Tariffs and custom duties                        | ▪ The Government has eliminated tariff protection on capital goods.  
|                                                   | ▪ It has reduced custom duties on a range of engineering equipment.  
| Focus on power generation and infrastructure      | ▪ Governmental infrastructure projects such as Golden Quadrilateral and the North-South and East-West corridors fuelled growth in the engineering sector.  
| Special Economic Zones (SEZs)                     | ▪ The Government approved a significant number of SEZs across the country for the engineering sector.  
|                                                   | ▪ Delhi Mumbai Industrial Corridor (DMIC) is being developed across 7 states and is expected to bolster the sector.  
| Make in India                                     | ▪ Under the Make in India initiative, the central Government approved the policy giving preference to domestically produced steel and iron products for Government procurement in May 2017.  

Notes: GW - Giga Watt  
Source: DHI Annual Report, Ministry of Power Annual Report, Make in India
### Loan portals for MSMEs
- Government has proposed granting of loans up to Rs. 1 crore (US$ 0.15 million) for MSMEs within 59 minutes through a committed online portal. Under the Interest Subvention Scheme for MSMEs, Rs. 350 crore (US$ 52.50 million) has been allocated for FY20.
- In July 2020, Minister for Micro, Small and Medium Enterprise (MSMEs), Mr. Nitin Gadkari launched www.restartindia.in, a mentoring platform primarily aimed at aiding MSMEs to restart businesses across the country.

### Cut in excise duty to aid the auto industry
- A cut in excise duty on chassis for ambulance is being reduced from 24% to 12.5%. Short-term crop loans to farmers at 7% per annum and additional subvention of 3% for prompt paying farmers so that they can take tractors.

### Investment on building internal and external infrastructure in Smart Cities
- The Government has planned to build 100 smart cities by allocating US$ 8.29 billion. The plan would need more PPP’s for better and fast execution.
- In Union Budget 2020-21, the Government announced 5 new smart cities, which would be developed on the pattern of Gandhinagar’s Gujarat International Finance Tec-City (GIFT).

### Higher allocation to the defence sector
- Allocation to the defence sector was raised to Rs. 305,296 crore (US$ 45.79 billion) in Union Budget 2019-2020. Make in India policy is being carefully pursued to achieve self-sufficiency in the defence equipment sector including air-craft.

### Budgetary support
- In Union Budget 2019-20, the Government announced to invest Rs. 10,000,000 crore (US$ 1.5 trillion) in infrastructure over the next five years.

**Notes:**
Capex - Capital Expenditure, JNNURM - Jawaharlal Nehru National Urban Renewal Mission
Source: Union Budget FY14, Union Budget 2018-19 and 2019-20
### SPECIAL ECONOMIC ZONES (SEZs) TO PROMOTE EXPORTS ... (1/3)

<table>
<thead>
<tr>
<th>Developer</th>
<th>Location</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh Industrial Infrastructure Corporation Limited (APIIC)</td>
<td>Ranga Reddy, Andhra Pradesh</td>
<td>Aerospace and precision engineering</td>
</tr>
<tr>
<td>Deccan Infrastructure and Land Holdings Ltd</td>
<td>Nalgonda, Andhra Pradesh</td>
<td>Light engineering</td>
</tr>
<tr>
<td>M/s Essar Hazira SEZ</td>
<td>Hazira, Gujarat</td>
<td>Engineering</td>
</tr>
<tr>
<td>Gujarat Industrial Development Corporation Ltd (GIDC)</td>
<td>Gandhinagar, Gujarat</td>
<td>Electronic products</td>
</tr>
<tr>
<td>N.G. Realty Pvt Ltd</td>
<td>Ahmedabad, Gujarat</td>
<td>Engineering</td>
</tr>
<tr>
<td>M/s Synefra Engineering and Construction Ltd</td>
<td>Vadodara, Gujarat</td>
<td>High-tech engineering and related products</td>
</tr>
<tr>
<td>E. Complex Pvt Ltd</td>
<td>Amreli, Gujarat</td>
<td>Engineering</td>
</tr>
<tr>
<td>Dishman Infrastructure Ltd</td>
<td>Ahmedabad, Gujarat</td>
<td>Engineering</td>
</tr>
<tr>
<td>Ansal Properties and Infrastructure Ltd</td>
<td>Sonepat, Haryana</td>
<td>Engineering</td>
</tr>
<tr>
<td>Raheja Haryana SEZ Developers Pvt Ltd</td>
<td>Gurgaon, Haryana</td>
<td>Engineering</td>
</tr>
<tr>
<td>Ansal Kamdhenu Engineering SEZ Ltd</td>
<td>Sonepat, Haryana</td>
<td>Engineering</td>
</tr>
<tr>
<td>Karnataka Industrial Areas Development Board</td>
<td>Shivamogga, Karnataka</td>
<td>Engineering</td>
</tr>
<tr>
<td>Suzlon Infrastructure Ltd</td>
<td>Mangaluru, Karnataka</td>
<td>Port-based for high-tech engineering products</td>
</tr>
</tbody>
</table>

*Source: SEZ India*
### SPECIAL ECONOMIC ZONES (SEZs) TO PROMOTE EXPORTS ... (2/3)

<table>
<thead>
<tr>
<th>Developer</th>
<th>Location</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quest Machining and Manufacturing Pvt Ltd</td>
<td>Belagavi, Karnataka</td>
<td>Auto, aerospace and industrial engineering</td>
</tr>
<tr>
<td>Viraj Profiles Ltd</td>
<td>Thane, Maharashtra</td>
<td>Stainless steel engineering products</td>
</tr>
<tr>
<td>Navi Mumbai SEZ Pvt Ltd</td>
<td>Navi Mumbai, Maharashtra</td>
<td>Light engineering</td>
</tr>
<tr>
<td>Maharashtra Industrial Development Corporation (MIDC)</td>
<td>Satara, Maharashtra</td>
<td>Engineering</td>
</tr>
<tr>
<td>Township Developers India Pvt Ltd</td>
<td>Pune, Maharashtra</td>
<td>Engineering</td>
</tr>
<tr>
<td>Maharashtra Industrial Development Corporation (MIDC)</td>
<td>Aurangabad, Maharashtra</td>
<td>Engineering and Electronics</td>
</tr>
<tr>
<td>Orissa Industrial Infrastructure Development Corporation (IDCO)</td>
<td>Jajpur, Orissa</td>
<td>Metallurgical engineering</td>
</tr>
<tr>
<td>Vividha Infrastructure Pvt Ltd</td>
<td>Patiala, Punjab</td>
<td>Engineering</td>
</tr>
<tr>
<td>Mahindra Worldcity (Jaipur) Ltd</td>
<td>Jaipur, Rajasthan</td>
<td>Light engineering</td>
</tr>
<tr>
<td>New Chennai Township Pvt Ltd</td>
<td>Kanchipuram, Tamil Nadu</td>
<td>Engineering</td>
</tr>
<tr>
<td>Perundurai Engineering SEZ by SIPCOT</td>
<td>Erode, Tamil Nadu</td>
<td>Engineering</td>
</tr>
<tr>
<td>Uttar Pradesh State Industrial Development Corporation (UPSIDC)</td>
<td>Kanpur, Uttar Pradesh</td>
<td>Engineering</td>
</tr>
</tbody>
</table>

**Source:** SEZ India
SPECIAL ECONOMIC ZONES (SEZs) TO PROMOTE EXPORTS ... (3/3)

<table>
<thead>
<tr>
<th>Developer</th>
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</tr>
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<tbody>
<tr>
<td>Aspen Infrastructures Ltd</td>
<td>Vadodara, Gujarat</td>
<td>High-tech Engineering products and related Services</td>
</tr>
<tr>
<td>Aspen Infrastructures Ltd</td>
<td>Karnataka</td>
<td>High-tech Engineering products and related Services</td>
</tr>
<tr>
<td>Quest SEZ Development Private Ltd</td>
<td>Belagavi, Karnataka</td>
<td>Precision Engineering Product</td>
</tr>
<tr>
<td>Khed Economic Infrastructure Limited (Bharat Forge Ltd)</td>
<td>Pune, Maharashtra</td>
<td>Engineering and Electronics</td>
</tr>
<tr>
<td>State Industries Promotion Corporation of Tamil Nadu</td>
<td>Vellore, Tamil Nadu</td>
<td>Engineering</td>
</tr>
<tr>
<td>State Industries Promotion Corporation of Tamil Nadu</td>
<td>Erode, Tamil Nadu</td>
<td>Engineering</td>
</tr>
<tr>
<td>Aspen Infrastructures Ltd</td>
<td>Coimbatore District, Tamil Nadu</td>
<td>High-tech Engineering products and related Services</td>
</tr>
</tbody>
</table>

Source: SEZ India
INFLOW OF FOREIGN INVESTMENT; RISE IN M&A ACTIVITY ... (1/2)

- According to The United Nations Conference on Trade and Development (UNCTAD), India ranked among the top 10 recipients of Foreign Direct Investment (FDI) in 2019, attracting US$ 49 billion in inflows, a 16% increase from the previous year, driving FDI growth in South Asia.

- FDI inflow into miscellaneous mechanical and engineering sector stood at US$ 3.64 billion during April 2000-March 2020.

- The Government’s increasing focus on attracting foreign investors in manufacturing and infrastructure is likely to boost FDI in the sector.

- In June 2020, L&T (Larsen & Toubro) Hydrocarbon Engineering, L&T’s hydrocarbon arm, signed a memorandum of understanding (MoU) with US-based engineering company KBR for construction of modular process plants for refinery and petrochemicals projects.

Source: Department for Promotion of Industry and Internal Trade(DPIIT), News Article
## INFLOW OF FOREIGN INVESTMENTS; RISE IN M&A ACTIVITY ... (2/2)

**M&A deals**

<table>
<thead>
<tr>
<th>Acquirer</th>
<th>Target</th>
<th>Type</th>
<th>Acquisition date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siemens India</td>
<td>C&amp;S Electric</td>
<td>Acquisition</td>
<td>January 2020</td>
</tr>
<tr>
<td>Shinryo Corporation</td>
<td>Suvidha Engineers India</td>
<td>Acquisition</td>
<td>October 2018</td>
</tr>
<tr>
<td>Schneider Electric and Temasek</td>
<td>Larsen &amp; Toubro’s Electrical &amp; Automation business</td>
<td>Acquisition</td>
<td>May 2018</td>
</tr>
<tr>
<td>Adani Transmission</td>
<td>Reliance Infrastructure (Mumbai Power business)</td>
<td>Acquisition</td>
<td>March 2018</td>
</tr>
<tr>
<td>Axiscades</td>
<td>Mistral Solutions</td>
<td>Acquisition</td>
<td>November 2017</td>
</tr>
<tr>
<td>ABB Group</td>
<td>GE Industrial Solutions</td>
<td>Acquisition</td>
<td>September 2017</td>
</tr>
<tr>
<td>Hero Electronix</td>
<td>Spectrum Integrated Technologies and Lynxemi Pvt Ltd</td>
<td>Acquisition</td>
<td>August 2017</td>
</tr>
<tr>
<td>Warburg Pincus</td>
<td>Tata Technologies Ltd.</td>
<td>Minority Stake</td>
<td>June 2017</td>
</tr>
<tr>
<td>Havells India</td>
<td>Lloyd Electricals - consumer durables unit</td>
<td>Acquisition</td>
<td>February 2017</td>
</tr>
<tr>
<td>Birla Corp. Ltd</td>
<td>Reliance Cement Company Pvt. Ltd.</td>
<td>Acquisition</td>
<td>July 2016</td>
</tr>
<tr>
<td>Fairfax India Holdings Corp. and</td>
<td>Bangalore International Airport Ltd.</td>
<td>Minority stake</td>
<td>March 2016</td>
</tr>
<tr>
<td>Fairfax Financial Holdings Ltd</td>
<td>Hires Performance company</td>
<td>Acquisition</td>
<td>March 2016</td>
</tr>
<tr>
<td>Royal Enfield</td>
<td>Rohit Ferro-Tech</td>
<td>Acquisition</td>
<td>May 2015</td>
</tr>
<tr>
<td>Balasore Alloys Ltd - Ispat Group</td>
<td>Pipavav Defence and Offshore Engineering</td>
<td>Majority stake</td>
<td>March 2015</td>
</tr>
<tr>
<td>Reliance Infrastructure</td>
<td>SAI Consulting Engineers</td>
<td>Majority stake</td>
<td>December 2014</td>
</tr>
<tr>
<td>Systra S.A</td>
<td>Caterpillar Global Mining LLC</td>
<td>Acquisition</td>
<td>February 2014</td>
</tr>
<tr>
<td>Tractors India Pvt Ltd</td>
<td>3Cap Technologies GmbH</td>
<td>Acquisition</td>
<td>January 2013</td>
</tr>
</tbody>
</table>

**Note:** *Acquired by its German subsidiary - Geometric Europe GmbH*

**Source:** Grant Thornton, Thomson Banker, VC circle, News Article
OPPORTUNITIES
### Defence sector
- Allocation to the defence sector was raised to US$ 65.37 billion under Union Budget 2020-21. In addition, Make in India policy is being carefully pursued to achieve greater self-sufficiency in the area of defence equipment including aircrafts.
- Government initiatives, such as allowing private sector participation, have been reinforced by opening the sector to 100% FDI (49 percent through automatic route), and its offset policy is expected to enhance private sector (including SME) participation.
- Ministry of Defence has eased its procurement norms, making it easier for Indian companies and start-ups to offer equipment and other products to the Indian armed forces.

### Civil nuclear sector
- India’s nuclear power installed capacity was 6.78 GW in August 2020, and ~3,300 MW of nuclear capacity is expected to be commissioned by 2022.
- It represents business opportunity worth US$ 312 million for the manufacturing industry.

### Auto components
- Domestic auto component production is projected to grow 10-12% annually till FY23 to Rs. 5,223 billion (US$ 81.04 billion).*
- In auto components sector, 100% FDI is allowed under the automatic route.
- The Government announced Rs. 150,000 (US$ 2,250) income tax deduction on interest paid on loans for purchase of electric vehicles in the Union Budget 2019-20.

**Notes:** GW - Giga Watt, SME - Small and Medium Enterprises, CY - Calendar Year, *As per CRISIL Research
**Source:** Sutherland Research, Crisil, News Source
GROWTH OPPORTUNITIES IN THE ENGINEERING SECTOR … (2/2)

Power transmission and distribution (T&D)
- T&D expenditure is set to increase on growth in power generation and privatisation of distribution.
- In June 2019, the government launched US$ 5 billion of transmission-line tenders in phases to reach 175 GW target by 2022.

Material handling equipment
- The material handling equipment sector is expected to gain from robust demand from steel, power, mineral and other infrastructure industries.
- The ‘Make in India’ initiative and government's focus on ease of doing business is likely to present several opportunities in material handling equipment sector.
- The Indian market for material handling equipment accounted for ~13% share of the country's construction equipment industry in 2019.

Machine tools
- Demand for machine tools from the capital goods sector (especially automobile and textile industries) is projected to remain high.
- Considering the industry's demand for higher productivity, superior precision, accuracy and low-cost manufacturing solutions, Computer Numerically Controlled (CNC) machine tools are set to be in greater demand.

Note: CKM - Circuit Kilometres
Source: Sutherland Research
India’s electrical equipment industry has witnessed significant growth in the last few years.

Major electrical equipment’s’ manufactured include electric power equipment and parts, electric wires and cables, boilers and parts and transmission line towers and parts.

**Note:** T&D - Transmission and Distribution, BTG - Boilers, Turbine, Generator

**Source:** Indian Electrical and Electronics Manufacturers Association, Department of Heavy Industries, DGCIS
India’s electrical equipment industry witnessed a record seven-year high growth of 12.8% in FY19 on the back of increase in Government spending on rural and household electrification schemes and program to improve power distribution.

The generation equipment (BTG) segment is projected to grow to US$ 25 billion by FY22.

Production of generation equipment (boilers, turbines and generators) in India is estimated to be around US$ 5.7 billion by 2022.

Demand for generation equipment is projected to rise to US$ 25.1 billion in FY22 from US$ 3.3 billion in FY16.


Note: BTG - Boiler, Transmission and Generation, ^CAGR is up to FY19
Source: Indian Electrical and Electronics Manufacturers Association
GROWTH POTENTIAL IN THE CONSTRUCTION EQUIPMENT INDUSTRY

- India’s Earthmoving and Construction Equipment (ECE) industry has enjoyed strong growth over the last seven years due to rapid economic development.
- The organised construction sector in India (for example, roads, urban infrastructure) accounts for approximately 55% of the ECE industry. Mining, irrigation and other infrastructure segments (power, railways) account for the remaining.
- Earthmoving sector is continuing to make headways and command a share of 56.2%, followed by concrete equipment and material handling equipment.
- Construction equipment industry stood at US$ 4.3 billion in value with recorded sales of 98,204 units in 2018. Sales are forecast to increase to 110,815 in 2022*.

**Expected unit sales by 2021**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2022*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backhoe loaders</td>
<td>21,192</td>
<td>29,847</td>
<td>32,728</td>
<td>45,000</td>
<td>45,000</td>
</tr>
<tr>
<td>Crawler excavators</td>
<td>11,013</td>
<td>16,491</td>
<td>20,062</td>
<td>24,000</td>
<td>34,000</td>
</tr>
<tr>
<td>Mobile compressors</td>
<td>3,542</td>
<td>4,678</td>
<td>5,108</td>
<td>5,200</td>
<td>5,500</td>
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<tr>
<td>Mobile cranes</td>
<td>4,863</td>
<td>5,492</td>
<td>7,749</td>
<td>11,000</td>
<td>11,000</td>
</tr>
<tr>
<td>Compaction equipment</td>
<td>2,771</td>
<td>3,865</td>
<td>4,765</td>
<td>5,500</td>
<td>5,000</td>
</tr>
<tr>
<td>Wheeled loaders</td>
<td>2,097</td>
<td>2,206</td>
<td>2,781</td>
<td>3,300</td>
<td>3,500</td>
</tr>
<tr>
<td>Crawler dozers</td>
<td>391</td>
<td>435</td>
<td>534</td>
<td>450</td>
<td>600</td>
</tr>
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*Forecast
Source: NBM and CW
KEY INDUSTRY ORGANISATIONS
### KEY INDUSTRY ORGANISATIONS

<table>
<thead>
<tr>
<th>Agency</th>
<th>Contact Information</th>
</tr>
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</table>
| National Automotive Testing and R&D Infrastructure Project (NATRiP) | NBCC Place, South Tower, 3rd Floor, Bhishma Pitamah Marg, Pragati Vihar, Lodhi Road, New Delhi - 110003  
Tel: + 91-11-49215555  
Fax: +91-11-24369333  
E-mail: team@natrip.in  
Website: https://www.natrip.in/ |
| The Automotive Research Association of India | Survey No 102, Vetal Hill, Off Paud Road, Kothrud, Pune - 411 038  
P.B. No 832, Pune - 411 004  
Tel. No: +91-020-30231111  
Fax No: +91-020-25434190  
Email Id: info@araiindia.com  
Website: https://www.araiindia.com/ |
| Fluid Control Research Institute | Kanjikode West, Palakkad - 678623.  
Phone: 91-491-2566120/2566206  
Fax: 0491-2566326  
E-mail: fcri@fcriindia.com, customercare@fcriindia.com  
Website: http://www.fcriindia.com/ |
| Engineering Export Promotion Council (EEPC) | ‘Vaniya Bhawan’, 1st Floor  
International Trade Facilitation Centre  
1/1, Wood Street  
Kolkata, West Bengal-700016  
Phone: 91-33-22890651, 22890652  
Fax: 91-33-22890654  
E-mail: eepcto@eepcindia.net  
Website: www.eepcindia.org |
USEFUL INFORMATION
GLOSSARY

- BTG: Boilers, Turbines, Generators
- BHEL: Bharat Heavy Electricals Limited
- MHI: Mitsubishi heavy industries
- DHI: Department of Heavy industries
- BHEL: Bharat Heavy Electricals Ltd
- ICEMA: Indian Construction Equipment Manufacturer’s Association
- HAL: Hindustan Aeronautics Limited
- IEEMA: Indian Electrical and Electronics Manufacturers Association
- EEPC: Engineering Export Promotion Council
- TPD: Tonnes Per Day
- NHAI: National Highway Authority of India
- MORTH: Ministry of Road Transport and Highways
- CEA: Central Electrical Authority
- HVDC: High Voltage Direct Current
- US$: US Dollar
- Rs: Indian Rupee
- FY: Indian Financial Year (April to March)
- Wherever applicable, numbers have been rounded off to two decimals
## EXCHANGE RATES

### Exchange Rates (Fiscal Year)

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<thead>
<tr>
<th>Year</th>
<th>Rs. Equivalent of one US$</th>
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<tbody>
<tr>
<td>2004-05</td>
<td>44.95</td>
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<td>2005-06</td>
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<td>2007-08</td>
<td>40.24</td>
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<td>2008-09</td>
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<td>2009-10</td>
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<td>2010-11</td>
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<td>2011-12</td>
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<td>2012-13</td>
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<td>2013-14</td>
<td>60.50</td>
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<td>2014-15</td>
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<tr>
<td>2015-16</td>
<td>65.46</td>
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<tr>
<td>2016-17</td>
<td>67.09</td>
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<tr>
<td>2017-18</td>
<td>64.45</td>
</tr>
<tr>
<td>2018-19</td>
<td>69.89</td>
</tr>
<tr>
<td>2019-20</td>
<td>70.49</td>
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</table>

### Exchange Rates (Calendar Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>Rs. Equivalent of one US$</th>
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</thead>
<tbody>
<tr>
<td>2005</td>
<td>44.11</td>
</tr>
<tr>
<td>2006</td>
<td>45.33</td>
</tr>
<tr>
<td>2007</td>
<td>41.29</td>
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<td>2008</td>
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<td>2009</td>
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<td>2010</td>
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<td>2011</td>
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<td>2012</td>
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<td>2013</td>
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<tr>
<td>2014</td>
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<tr>
<td>2015</td>
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<tr>
<td>2018</td>
<td>68.36</td>
</tr>
<tr>
<td>2019</td>
<td>69.89</td>
</tr>
</tbody>
</table>

*Source: Reserve Bank of India, Average for the year*
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