



# Engineers' Day

15<sup>th</sup> September 2017

Theme



## Role of Engineers in a Developing India

September 15 is celebrated every year in the country since 1967 as “Engineers’ Day” to commemorate the birthday of the legendary engineer Sir Mokshagundam Visvesvaraya. Sir Visvesvaraya, an eminent Indian engineer and statesman was born in a remote village of Karnataka, the State that is incidentally now the Hi-tech State of the country. Due to his outstanding contribution to the society, Government of India conferred “Bharat Ratna” on this legend in the year 1955. He was also called the precursor of economic planning in India. His learned discourse on economic planning in India, Planned Economy for India and Reconstructing India, was the first available document on the planning effort of the country and it is still held as the parent source matter for economic planners. A theme of national importance is chosen every year by the National Council of the Institution and deliberated at its various State/Local Centres to educate the engineering fraternity in general and the society in particular. This year the 50th Engineers’ Day will be celebrated all over the country and the National Council of the Institution has selected the theme as “Role of Engineers in a Developing India” to mark the occasion. India is still a developing country and its development largely depends upon the robust industrial infrastructure. In the Indian industry scenario, Engineering is by far the largest segment. The nature of engineering industries in India is grossly diversified starting of heavy engineering, light and medium engineering and rural or cottage engineering. India’s engineering industry accounts for 27 per cent of the total factories in the industrial sector and represents 63 per cent of the overall foreign collaborations. It has emerged as the largest contributor to the country’s total merchandise exports. Indian manufacturing engineering industry employs over 4 million skilled and semiskilled workers (direct and indirect). The Indian engineering industry has emerged as a dynamic sector in the country’s industrial economy and has made the country self reliant in key areas. Being the largest foreign exchange earner in the country, the engineering sector gets around 63% of share through foreign collaborations. Meanwhile, exports within the engineering sector have increased by 17% in 2012-13. India has a huge opportunity within engineering services also. The intention is to grow this sub-sector to USD 29 billion by the year 2015, which will easily make up 20% of global market share. The Engineering Process Outsourcing (EPO) market is likely to grow by USD 40 billion by 2020. The total offshore engineering spend is likely to grow to USD 150- 125 billion by 2020 and India, with its talent pool and experience in engineering services, is well suited to realize 25% of this opportunity.

India has a well-developed and diversified industrial machinery capital base capable of manufacturing the entire range of industrial machinery. The industry has also managed to successfully develop advanced manufacturing technology over the years. Among the developing countries, India is a major exporter of heavy and light engineering goods, producing a wide range of items. The bulk of capital goods required for power projects, fertilizer, cement, steel and petrochemical plants and mining equipment are made in India. The country also makes construction machinery, equipment for irrigation projects, diesel engines, tractors, transport vehicles, cotton textile and sugar mill machinery.

The nature of Indian engineering exports is also changing with time. India is fast moving from exporting low-value goods to developing countries to exporting high-value goods to developed countries. With development in associated sectors such as automotive, industrial goods and infrastructure, coupled with a well-developed technical human resources pool, engineering exports are expected to grow high and high. Capital goods now account for 26 per cent of total engineering exports. A key driver for increased engineering exports is the trend towards shifting of global manufacturing bases to low cost countries like India. This trend is expected to boost exports of engineering goods from India over the coming years. Among developing countries, India offers the best combination of low costs, availability and skills and capabilities of manpower for the engineering sector. In terms of availability and skills, India produces over 500 PhDs, 200,000 engineers, 300,000 non-engineering postgraduates and 2,100,000 other graduates each year, thereby ensuring a steady supply of qualified technical manpower for the sector. These huge numbers of qualified engineers are the key factor in developing the country and The Institution of Engineers (India) feels proud to be the largest body of engineers in the country with a dedicated service for the development of the nation since 1920.

