President's Secretariat

Text of address by the President of India at the Valedictory Function of 32nd Indian Engineering Congress

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1. This is my first visit to Tamil Nadu since being elected as the President of India. And it is appropriate that it has coincided with the valedictory function of the 32nd Indian Engineering Congress, organised by the Institution of Engineers (India). This is a land of engineers as well as social engineers who have contributed to our country. As such I am glad to be here in Chennai.

2. The discipline of engineering combines the excitement of science and technology with the rigour of structure. These attributes are intrinsic to Tamil society. If we go into the impressive history of the Tamil people, we encounter Chola naval and trading ships that were travelling up and down the Indian Ocean a thousand years ago. Even older is the complex of shore monuments in Mamallapuram, built by another great Tamil dynasty – the Pallavas. The landscaping and the intricate drainage system of Mamallapuram are fascinating to this day. All these are samples of a very advanced level of engineering.

3. Earlier in the morning I was honoured to visit the Dr A.P.J. Abdul Kalam Memorial in Rameswaram. Along with the late Shri R. Venkataraman, Dr Kalam is one of two former Presidents, my illustrious predecessors, to have come from Tamil Nadu. He trained as an engineer and became famous as a missile technologist. More than that, he was a proud son of India. Dr Kalam could have earned millions in the West, but he chose to devote his learning and his life to the development of our country. All of us as Indians, and all of you as engineers, must draw inspiration from him.

4. A spirit of inquiry and of evidence-based policy – and an abiding faith in technology and innovation as tools for the welfare of the people – has been a hallmark of public life in modern Tamil Nadu. Right from the days of Rajaji and Periyar, the state has made impressive strides in social reform. Our Green Revolution and self-sufficiency in food owes so much to stalwarts from Tamil Nadu such as the late Shri C. Subramanian and the distinguished scientist Dr M.S. Swaminathan.

5. The journey of reform and of people's welfare continued under Shri C. Annadurai and Shri K. Kamaraj. Shri M.G. Ramachandran, whose birth centenary we are celebrating this year, and Dr J. Jayalalitha took Tamil Nadu even further. And I cannot forget to mention that gifted word-smith and patriarch of our politics, Shri M. Karunanidhi. These distinguished political and social leaders – and I have mentioned only a few – have given Tamil Nadu a rich legacy. The Midday Meal Scheme that originated in Tamil Nadu gave India a model to combat malnutrition and help in the physical and cognitive development of our children. And whether it is in textiles or IT, precision manufacture or automobiles, Tamil Nadu has used engineering to build a solid industrial economy – creating thousands of jobs.

Ladies and Gentlemen

6. The Institution of Engineers (India) is close to a hundred years old. It was founded in 1920 as an institution that would advance the cause of engineering and technology in India. It set the benchmark. Prior to the formation of the All India Council of Technical Education, in 1987, the Institution of Engineers used to regulate engineering and technical education in the country.

7. The Institution of Engineers (India) has also played a crucial role in promoting a culture of R&D. It has encouraged and sponsored even undergraduate engineering students to push the frontiers of their curriculum and of innovation. This has led to the Ministry of Science and Technology conferring the status of a Scientific and Industrial Research Organisation on the Institution of Engineers.

8. Engineers are agents of change. Historically it is engineers who have used the logic of science to achieve practical solutions – whether building dams or bridges, whether designing locomotives or computers. From the earliest metal tools to the integrated circuit, from the 18th century Industrial Revolution to the 21st century Fourth Industrial Revolution – it is engineering that has spoken the language of the future. Today, in exploring the possibilities of Artificial Intelligence and the Internet of Things or in realising our aspirations for Make in India, once more it is to our engineers that we turn.

9. These opportunities are all the more important because human civilisation is at an inflection point. The evolution of technology is changing how we live, work and think. It is also challenging the practice of engineering. Traditional fields of engineering will continue to thrive. After all, we will still need machines tools and power grids, roads and bridges, aircraft and ships. But this traditional practice of engineering will have to both embrace and drive innovation in cutting-edge areas.

10. For example, civil engineers are specialists in materials. They use this knowledge for construction. Yet, this same knowledge of composites and materials will increasingly be deployed for both micro needs – such as creating medical implants for the human body – as well as macro needs – for instance, constructing facilities and maybe even colonies in outer space.

11. Developments across different fields are creating avenues for cross-fertilisation. Disciplines such as food technology, biotechnology, environmental engineering and transportation engineering are expanding the horizons of engineers. And engineers will inevitably intersect with disciplines as far apart as law, geography and political science. Engineers can play a much larger role in solving key challenges facing our country - in food, healthcare and the environment, in providing low-cost and easy-to-build housing, and in enhancing urban infrastructure with minimum disruption.

12. The responsibility that all this places upon you is enormous. Engineers are being called upon to be nation builders in more ways than we can imagine. Again, this is not without precedent. The late M. Visvesvaraya was an administrator, irrigation specialist and town planner of repute. He trained as an engineer and his birthday is commemorated as “Engineer’s Day”. Dr Satish Dhawan, who pioneered India’s space programme and made it relevant to our farmers, was an engineer. India’s much-loved “Milk Man” Verghese Kurien, who led the White Revolution, was an engineer. And the “Metro Man” E. Sreedharan, who built the Konkan Railway and the Delhi Metro in extremely difficult circumstances, also studied engineering.

13. These are just a few examples of engineers who rose beyond the call of their everyday work and contributed to our national life. Their stories tell us what engineers can achieve. May the adventure and the achievement never cease!

14. With those words, I wish all of you the very best for the future.

Thank you

Jai Hind!

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