Centre of Excellence on Machine Tools Design

The Centre of Excellence on Machine Tools Design (CoEMTD) is one of the newly formed Specialized Facilities at Indian Institute of Technology (BHU) Varanasi established under the aegis of the Ministry of Heavy Industries, Govt. of India's Scheme on Enhancement of Competitiveness in the Indian Capital Goods Sector, Phase-II. The Hon'ble Prime Minister, Shri Narendra Modi, laid the foundation stone of the Centre of Excellence on Machine Tools Design (CoEMTD) worth 45 Crore at IIT (BHU) Varanasi on March 24, 2023. Governor of Uttar Pradesh, Smt. Anandiben Patel and the Chief Minister of Uttar Pradesh, Yogi Adityanath, were present on the occasion.

A MoU was exchanged between IIT (BHU), Varanasi and the Ministry of Heavy Industries (MHI) for setting up a Centre of Excellence (CoE) on Machine Tools Design at IIT (BHU), Varanasi, under the MHI scheme for Enhancement of Competitiveness in Indian Capital Goods Sector Phase II. Prof. Pramod Kumar Jain, Director, IIT (BHU), and Sh. Vijay Mittal, Joint Secretary, MHI, exchanged the MoU in the presence of Dr. Mahendra Nath Pandey, Hon'ble Minister of Heavy Industries, and Sh. Kamran Rizvi, Secretary, Heavy Industries, on 30th December, 2022 in Udyog Bhawan, New Delhi. Under the scheme, a CoE on Machine Tools Design has been sanctioned for the development of three high-end Machine Tool technologies.

MoU exchange between IIT (BHU) and Ministry of Heavy Industries

The CoEMTD is established initially with four objectives: a) setting up a cutting-edge experimental, design and testing facilities for machine tools; b) *Make in India* development of Ram Type Design for Heavy Duty CNC Horizontal Boring & Milling Machine (Floor Type) c) *Make in India* development of CNC Heavy Duty Roll Grinding Machine with Wheel Head Traverse Type, and d) *Make in India* development of Friction and Wear Measurement in Rolling/Sliding Contact.

The CoEMTD is an important step in Make in India design and development with a higher degree of reliability and efficiency for growth in the Capital Goods Sector to make India '*AatmaNirbhar*' or *Self-reliant*, discontinuing foreign procurement and encouraging domestic sourcing by generating an import substitution of around 50 million USD by 2030. Besides providing tangible outcomes such as *Make in India* Technology Development, Technology Transfer, a cutting-edge Research Facility for Machine Tools Design, a contemporary Computation Facility for Simulation and Analysis, a state-of-art Non-Invasive Measurement Facility, Incubation and Start-ups, Skill Development and Technical Education, and Employment Generation, this top-notch facility undoubtedly helps bridging the technical gaps while improving the technological insight of young technocrats involved with the machine tools business, vendors, and customers. Furthermore, it will help to stay abreast of the changing landscapes of the capital goods industries and take a step towards contributing to the GOI's novel vision of making our nation a global manufacturing powerhouse.

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