

All India Workshop on **EXCELLENCE IN MANUFACTURING AND THE NEW HORIZON: MAPPING THE PATHWAY**

11 - 13, January, 2018 | NIFFT, Hatia, Ranchi



Organized by



National Institute of Foundry & Forge Technology
Hatia, Ranchi - 834 003

In Association with



The Institution of Engineers (India)
Jharkhand State Centre, Ranchi

Industry Partner



**RAMKRISHNA
FORGINGS
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Theme of the Workshop

During the last two decades global manufacturing activities have experienced a paradigm shift enabled by the various stimulus like innovation, information, simulation, automation, nanotechnology and computer science. This pathway has evolved several novel concepts like smart manufacturing, micro manufacturing, lean manufacturing, cloud manufacturing, sustainable manufacturing, additive manufacturing and so on, to match the critical demands relating to the environment, resource, energy, market volatility etc. From the prehistoric time till today the fundamental principles for shaping of objects have remained unchanged which follow a Top-Down approach (Fig. 1), though the degree of complexity of the products and the processes has increased to an unbelievably high level. It has become increasingly clear that in many situations of complex manufacturing following the nature is the best option. Apart from bringing improvements to the traditional manufacturing processes the scientists and technologists have now begun to develop shaping technologies following what nature does for living objects, i.e. to grow shapes instead of imparting shapes to an existing piece for material which is called the Bottom-Up Approach (Fig. 2). Recently developed generating manufacturing techniques for rapid prototyping are preliminary examples of “Bottom-Up” approach.

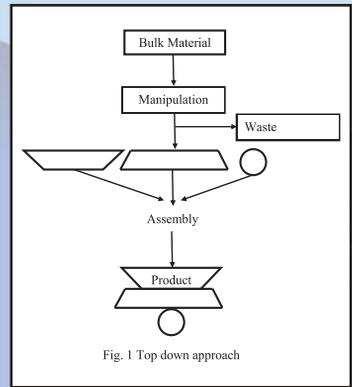
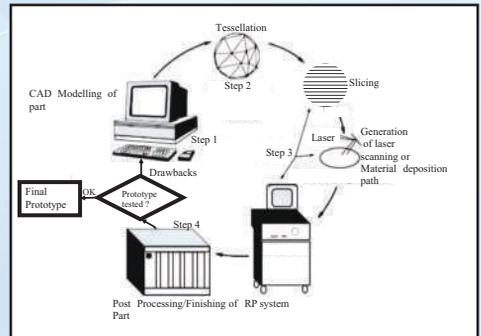


Fig. 1 Top down approach

Apart from the revolutionary changes in manufacturing processes there have been unprecedented transformations in material science and engineering. As manufacturing processes are intimately linked with the materials, major innovations in process technology are essential to reap the benefit of the new inventions. Indian manufacturing sector is all set to take the leadership in the emerging scenario to make the country an economic superpower in the not - too - distant future. The call of the time is to map the pathway towards positioning India as a place to innovate, design, develop and manufacture innovative products as envisaged in launching the 'Make in India' program. However, a bold initiative is still awaited in enabling the manufacturing education and research in the country with the aim to provide the country with a new generation of human resource, competent in the areas of all major developments in the field including advanced areas of science, relevant to the futuristic issues of manufacturing. Apart from having expertise in the area of globally competitive manufacturing, the future generation of manufacturing engineers and technologists must be experts in the relevant areas of applied science also. In the new paradigm, the manufacturing sector is looking forward to a new brand of professionals equipped with the desired flexibility and adoptability in the multi-skill environment.



The workshop aims to discuss the principal attribute of futuristic manufacturing and to map the trajectory for the transformation of traditional manufacturing engineering framework to the next generation manufacturing excellence.

Areas to be covered:

- Design for Manufacturing
- Mechanical Micro-manufacturing
- Smart manufacturing
- Lean Manufacturing
- Manufacturing Management and Economics

- Futuristic primary manufacturing processes
- Nanoscience in Manufacturing
- Additive Manufacturing
- Cloud Manufacturing

About the Organisers

ABOUT NIFFT

In consonance with the general guidelines of UNESCO (1962) regarding establishment of specialized institutes, National Institute of Foundry and Forge Technology (NIFFT) was created in 1966 under the UNDP program to cater to the need of a large number of technicians. The particular emphasis was on Foundry and Forge technology to meet the demand of trained manpower in the primary metal manufacturing sectors like automobile, heavy engineering, machine and component manufacturing etc. Two carefully designed advanced diploma courses, namely Foundry and Forge technology were offered. Subsequently, two B Tech programs, one in Metallurgical and Materials Engineering and other in Manufacturing Engineering, were introduced to reinforce the core framework of foundry and forging technology.

The call for “Make In India” with the aim to create independent capability in manufacturing technology, with highest standard, has triggered the process of upgrade of NIFFT to the Centre of Excellence in manufacturing technology with judicious synergy of computational science and manufacturing technology.

At the eve of its Golden Jubilee year, NIFFT reaffirms its commitment to the nation.

ABOUT THE INSTITUTION OF ENGINEERS (INDIA)

The Institution of Engineers (India) or IEI is the largest multidisciplinary professional body that encompasses 15 engineering disciplines and gives engineers a global platform from which to share professional interest. IEI has membership strength of over 0.8 million. Established in 1920, with its headquarters at 8 Gokhale Road, Kolkata - 700020, IEI has served the engineering fraternity for over nine decades. In this period of time it has been inextricably linked with the history of modern-day engineering.

IEI conducts Section A & B Examination in different Engineering disciplines, the successful completion of which is officially recognized as equivalent to a Degree in appropriate field of Engineering of recognized Universities of India by the Ministry of Human Resources Development, Govt of India. Every year as many as 90000 candidates appear for these exams. For details, please visit www.ieindia.org

ABOUT IEI, JSC

EI, Jharkhand State Center (JSC) is a vibrant center among all the state centers of IEI and has received Best State Center Award for the years 2007-08, 2008-09, 2010-11 & 2015-16. IEIJSC makes members aware of the latest technologies & engineering and aims towards enhancing Skills of Engineering Fraternity by organizing various National Conventions, National Seminar/ Conference/ Workshops, Various Technical Activities, Technical Paper Meetings.

For details please see the website : www.ieijsc.org

Registration

Registration of delegates shall be made well in advance by remitting the registration fees (per delegate) as indicated below along with duly filled in registration form.

Sl. No	Category	Indian
1	Sponsored Delegate (Organisational)	₹ 5,000
2	Delegates from Educational Institutions	₹ 3,000
3	Members of the Institution of Engineers (India) (Individual)	₹ 1,500

Eminent Speakers

Prof. Amitabha Gosh, INSA Chair Professor
Prof. Arvind kumar, IIT Kanpur
Prof. Amresh Chakrabarti, IISc Bangalore
Prof. P.M. Pandey, IIT Delhi
Prof. Debjit Roy, IIM Ahmadabad
Dr. D. Bhattacharya, TATA Steel

Prof. M. Rahman, NUS Singapore
Prof. Neeraj Sinha, IIT Kanpur
Prof. Subhas Joshi, IIT Bombay
Prof. M.K. Tiwari, IIT Kharagpur
Prof. I. Manna, IIT Kharagpur
Prof. Murlidharan, CGCRI

Payment

All payment should be made through Bank Draft/A/c/RTGS/NEFT Payee Cheque drawn in favour of

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Organizing Committee

Chairman : Dr. Vijay Toppo, Head Department of Manufacturing Engineering, NIFFT
Org. Secretary : Dr. Anoop Kumar Sood, Associate Prof., Dept. of Manufacturing Engineering, NIFFT
Convenor : Dr. Sambit Parida, Assistant Prof., Dept. of Manufacturing Engineering, NIFFT
Chairman : Er. Sanjay Sen, IEI, JSC
Hony. Secy. : Er. Manda Rajananda Kumar, IEI, JSC
ICC, Chairman : Er. A. K. Saxena, Chairman, ICC
Members : Er. K. K. Sinha

About Ranchi

Situated 416km west of Kolkata and at an altitude of 640m above sea level, Ranchi is well connected by air, rail and road to all parts of the country. Ranchi is famous for its moderate climate, surrounded by forests, hills and number of water falls. The maximum and minimum temperatures in the month of January are likely to be about 8°C and 20°C respectively.

Contact

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