

# INTERNATIONAL CONFERENCE ON ADVANCES IN FOUNDRY AND FORMING TECHNOLOGY

@ December 18 & 19 | 2024 IEI Engineer Bhawan, Doranda, Ranchi





Organized By

The Institution of Engineers (India)

Hosted by

Jharkhand State Centre

Under Aegis of Mechanical Engineering Division Board, IEI

**Jointly Organised by** 



Department of Foundry and Forge Technology

National Institute of Advanced Manufacturing Technology, Ranchi

**Knowledge Partner** 



## **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 for sharing professional interest. IEI has membership strength of above 0.8 million. Established in 1920, with its headquarter at 8 Gokhale Road, Kolkata-700020, IEI has served the engineering fraternity close to a century. During this period of time, IEI has been inextricably linked with the history of modern-day engineering.

In 1935, IEI was incorporated by Royal Charter and remains the only professional body in India which has been accorded this honour. Today, its quest for professional excellence has given it a place of pride in almost every prestigious and relevant organization across the globe. It provides a vast array of technical, professional and supporting services to the Government, Industries, Academia and the Engineering fraternity, operating through its 125 Centres located across the country and 6 overseas chapters. Besides, IEI has bilateral agreements with about 31 international bodies and membership of another 8 international bodies of the developed nations across the globe.

Being recognized as a Scientific and Industrial Research Organisation (SIRO) by the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India, IEI promotes the cause of research and development by providing Grant-in-Aid support to undergraduate, post graduate students and PhD Research Scholars of Engineering Institutions and Universities.

IEI has been recognized as Scientific and Industrial Research Organization (SIRO) by the Ministry of Science & Technology, Government of India and besides conducting its' own research, provides Grant-in-Aid to UG/PG/PhD students of Engineering institutes and Universities.

IEI holds the International Professional Engineers (IntPE) Register for India under the global International Professional Engineers Alliance (IntPEA). The institution also awards the Professional Engineers (PE) Certification.

IEI in collaboration with Springer regularly publishes peer-reviewed international journal in five series, namely, Series A, Series B, Series C, Series D and Series E covering fifteen engineering disciplines.

# **About Jharkhand State Centre**

The Ranchi Sub-Centre of The Institution of Engineers (India) founded on 23rd July 1961 and over the years, the subcentre was upgraded to Local Centre on 5th August 1983 and elevated to State Centre on 30th March 2001 after the creation of Jharkhand State. This centre was always striven to increase its various activities so as to cater fully the needs of the engineering fraternity at Ranchi. This centre has been actively engaged in articulating various



technical matters, and on the engineer's role in society and as managers. In addition to various technical activities, this centre has been actively associated in organizing cultural programmes by the wives of the members (EWA) to inculcate bond among members and their families. All Statutory Days such as Engineers day, World Water Day, World Telecommunication and Information Society Day, World Environment Day, etc. are celebrated every year with family members.

From a little hut to a campus with a three storied building, two conference halls, each capable of seating 100 people, office, library, guest an auditorium for 300 people, 3 classroom for continuous education has been an impressive journey. This has been possible only due to the

dedicated contributions of esteemed members, State Government, Public Sector Undertakings and Private Sector Organisations.

Jharkhand State Centre has been designated as 'A' category centre by The Institution of Engineers (India) with around 6000 corporate members and 7500 student members. This centre has been adjudged as 'Best Centre' for All Round Performance in the years 2007-08,2008-09, 2010-11, 2015-16,2016-17 and 2017-18 by The Institution of Engineers (India). Jharkhand State Centre has received All India Beat Technician Chapter Award for last four years in a row i.e. 2016-17,2017-18,2018-19 and 2019-20.

For more details please visit: www.ieijscjharkhand.org

#### **About NIAMT, Ranchi**

"Established in 1966 by Govt. of India and UNDP-USESCO, National Institute of Foundry and Forge Technology (NIFFT) is a society for providing quality manpower in manufacturing technology. It is governed by a board of governors with representatives from various sectors. Recently, it renamed itself as National Institute of Advanced Manufacturing Technology (NIAMT). NIAMT is a leading institute for teaching, training, research, consultancy, and information services in manufacturing and related fields. It aims to achieve excellence in technical education and disseminate state-of-the art knowledge and expertise in the field."

## About Dept. of Foundry and Forge Technology

The FFT Department independently came into existence in 1966 at the time of inception of Institute. The departments offered Advanced Diploma Course and M. Tech courses in Foudnry and Forge Technology. In 2022, they merged and started B. Tech course in Production and Industrial Engineering with honours in Foundry and Forge Technology."

## **About Danieli Corus**

Danieli Corus has firm roots in the IJmuiden steel plant, where ironmaking started in 1924 and operations quickly developed towards world benchmark for Blast Furnace Ironmaking and BOF Steelmaking.

In 1977, it was decided to initiate an engineering and contracting company, offering services to the global iron and steel industry. In 1999, 50% of the shares in the company were sold to the Italian equipment manufacturer Danieli & C Officine Meccaniche SpA, with the remaining 50% being transferred in 2015.

Throughout more than 30 years in the steel industry, Danieli Corus has worked with leading steel producers on all continents. We are committed to our clients' performance and embrace their targets as our own. Based on our leading technologies for Blast Furnace Ironmaking and BOF Steelmaking we bring steel producers around the world the highest operational as well as economic benefits at maximum sustainability.





#### Themes and Sub-themes

In an era of globalization, the dynamics of production and manufacturing are undergoing a significant transformation. The complexities associated with transformation leads us to explore and understand the evolving paradigm. Foundry and forming industries are one of the main contributors of metallic components for various industries, from automotive to medicine, from aerospace to the energy sector. For manufacturing a component, understanding of various interlinked field are required. Hence this conference is not limited to foundry and forming and will act as a single place to address various issues. ICAFFT 2024 is meticulously designed to bring together renowned academicians, honored researchers from distinguished institutions, industry leaders and practitioners as well as doctoral students.

#### Papers are called in the following tracks, but not limited to:

- Advanced Foundry Processes and Technologies:
- Advanced Forming Processes and Technologies:
- Advanced Materials and technologies
- Simulation and Modelling:
- Industry 4.0 and Smart Manufacturing:
- Environmental Sustainability and Emission control
- Quality Control and Inspection Techniques:
- Innovations in Tooling and Equipment:
- Advancements in Heat Treatment
- Advances in Furnace Control, Energy Optimization and Maintenance
- · Mechanization, automation, robotics and digitization
- Education and Training in Foundry, Forming and allied advanced Manufacturing

# **Call for Papers**

All interested participants are requested to contribute technical/ research papers and case studies detailing concept, innovation, idea or practical experiences for oral as well as poster presentation. Each paper should begin with a synopsis of about 200 words and preferably within 3000 words excluding figures, tables and references. A brief bio-data (not more than half a page, affixing a photo) of the author(s) should accompany the paper.



Abstraction Submission starts Manuscript Submission Ends Early Bird Registration Registration Deadline Conference Dates 01<sup>st</sup> June 2024 05<sup>th</sup> December 2024 5<sup>th</sup> August 2024 12<sup>st</sup> December 2024 18-19<sup>th</sup> December 2024

#### **Publication**

Peer-reviewed and selected papers will be published in SCI or SCOPUS indexed journals and conference proceedings after careful review, Authors must submit their original and unpublished research work not under consideration for publication elsewhere. Authors must check plagiarism before submitting their work.

## **Tentative List**

Journal of The Institution of Engineers (India): Series D Journal of The Institution of Engineers (India): Series C International Journal of Metalcasting Lecture Notes in Mechanical Engineering

# Registration

The registration fee for the Seminar will cover participation in Technical Sessions, Seminar Proceedings, Printed materials, Seminar kit, Lunch, Tea/coffee, Seminar Banquet, etc

Category of Delegate	National Delegate	International Delegate	
Delegates from Academia/Institutes	Rs. 8000 + 18% GST	US\$ 250	
Delegates from Industries	Rs. 9000 + 18% GST	US\$ 300	
Research Scholars and Students	Rs. 7500 + 18% GST	US\$ 200	
Conference Participation without Publication and KIT	Rs. 2000 + 18% GST	US\$ 150	
Accompanying person/co-authors	Rs. 4000 + 18% GST	US\$ 180	

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#### **Account Details**

"The Institution of Engineers (I), JSC", payable at Ranchi

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Bank's Name: Union Bank of India

Branch: Shyamali Colony, Doranda, Ranchi

IFSC Code: UBIN0548014

by A/C Payee Cheque/Demand Draft/Net Banking

## **About Ranchi**

Ranchi is the capital of state of Jharkhand, which is endowed with rich iron ore and coal deposits. With its rich mineral resources and industrial base, Ranchi is rapidly developing into an important industrial sector in India. The city is surrounded by thick forests and beautiful natural waterfalls and still unspoilt by modern commercialism. Ranchi is located in eastern part of India, around 400 km from Kolkata. It has very pleasant and cold climate throughout the year and the temperature in November may vary between +21°C and +26°C

#### Travel

Domestic airlines operate between Ranchi and other major cities of India such as New Delhi, Mumbai, Kolkata, Bengaluru, Hyderabad, Raipur, Bhubneshwar and Patna. Ranchi is also well connected by rail and road with all major cities of the country, namely Bengaluru, Bhubaneshwar, Chennai, Hyderabad, Jamshedpur, Jaipur, Kolkata, Mumbai, Nagpur, Patna, Raipur, New Delhi, Vishakhapatnam, etc.

#### **Accomodation**

Ranchi offers a wide range of accommodation to suit every budget. Both economy and luxury class hotels are located within 5 km from the directly or through Seminar Venue. Delegates are requested to book the accommodation in advance to get preferred choice.

## **International Advisory Committee**

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# Advances in Foundry and Forming Technology

**December 18 - 19, 2024, Ranchi** 

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Dea	ar Sir,						
The following persons may please be registered as delegates for participation in the above seminar to be held at Ranchi							
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