



# RATIG-25

Enabling Indian Industries in TIG Welding

# One day Theme meeting on Recent Advances in TIG Welding

## Fostering Innovations for Superior Performance at Lower Cost

10 January 2025

Convention Centre RRCAT, Indore (MP), India



TIG welding has been the most used joining process in modern process, pharmaceutical, food, defense and nuclear industries due to its superb hygiene and excellent soundness of weld metal with a practicality of deployment in many types of ground situations. It has also been the most widely used joining process in the construction of mega-science projects like gravitational wave observatory and large particle accelerators. TIG welding has been at the forefront of innovations to improve penetration, productivity and quality of joints of stainless steels, titanium alloys and aluminium alloys which must be disseminated and deployed to enable industries in making intelligent choices. This theme meeting will discuss these technologies and chalk out the path of further development and deployment. A key feature of the theme meeting will be a long engaging Q&A session after each technical talk in which not only the speaker will respond but all the other learned speakers will also participate.

### Keynote Address



**Jishnu Dwivedi, Director TDSG, RRCAT Indore**  
**TIG welding application in mega science projects**

This address to the august gathering will elucidate TIG welding challenges anticipated in the construction of mega-science projects. It will arouse keen interest in bracing up to the challenges.

### Technical Talks



**Dr. M Vasudevan, Associate Director, MMG, IGCAR Kalpakkam**  
**Real time monitoring and control of depth of penetration during TIG welding using AI**

The talk will present artificial intelligence controlled TIG welding technology for real time monitoring, prediction and control of depth of penetration for in-situ and remote welding applications.



**Abhay Kumar, Head DMTD, RRCAT Indore**  
**Sustainability aspects of TIG welding of austenitic stainless steels**

The talk will present sustainability aspects in TIG based joining process. A few time tested and some recent additions in high penetration TIG welding of austenitic stainless steels will be discussed.



**Jimmy Dutt, Godrej & Boyce, Mumbai**  
**TIG welding of titanium alloys: Execution, Challenges and Precautions**

The talk will be about various industrial execution challenges and its precautionary measures in TIG welding of titanium.



**Prof. Supriyo Ganguly, Cranfield University, UK**  
**Impact of thermal energy on microstructure and integrity of a TIG welded structure**

The talk will discuss thermal degradation and mechanism of residual stress formation and mitigation techniques currently deployed to redistribute harmful tensile residual stress state.



**Vasuki Harnahalli, Godrej & Boyce, Mumbai**  
**Distortion control in TIG welding**

The talk will present some recent advances in visualization and planning for controlling distortion in TIG welded industrial structures and pressure equipment.



**Prof. Supriyo Ganguly, Cranfield University, UK**  
**Plasma arc, an improved variant of TIG welding for advanced applications**

Structure and magnetic characteristics of a non-consumable arc will be discussed to explain how the plasma process is engineered to overcome most of the limitations of conventional TIG welding.



**Dr. Ishina Choudhary, Insight Alchemy, Indore**  
**Kaizen for personal improvement for success at the workplace.**

The talk will highlight how kaizen principles can be applied for achieving personal growth in the workplace environment.

### Patron

**Unmesh D. Malshe, Director, RRCAT**

### Organizing Committee

#### Chairman

Jishnu Dwivedi, Director, TDSG, RRCAT

#### Technical Adviser

Dr. M Vasudevan, AD, MMG, IGCAR

#### Convener

Abhay Kumar, Head, DMTD, RRCAT

#### Secretary

Dr. P Ganesh, DMTD, RRCAT

#### Treasurer

Pankaj Bhargava, DMTD, RRCAT

#### Members

Sobhan Chaudhary, DMTD, RRCAT  
Ashutosh Pratap Singh, DMTD, RRCAT  
Brahmanand Sisodia, DMTD, RRCAT  
Arvind Singh Padiyar, DMTD, RRCAT  
Arnav Chakraworty, DMTD, RRCAT  
Abhimanyu Bhardwaj, DMTD, RRCAT

### Office bearers of ISPA

Vijendra Prasad, President ISPA  
Dr. Vikas Kumar Jain, Secretary ISPA  
A.C. Holikatti, Treasurer ISPA

### Contact Us:

**Dr. P. Ganesh, Secretary RATIG-25**  
Phone No: 07312488385, +919827631359  
**Pankaj Bhargava, Treasurer RATIG-25**  
Phone No: 07312442294, +919826220138  
Email Id: ratig25@rrcat.gov.in

**Registration Starts : 15/10/2024**

**Registration Closes: 30/11/2024**

#### Registration Fee

2500/- (INR) - (Industry & Govt. Organization)  
1000/- (INR) - (Faculty & Research Scholars)  
500/- (INR) - (PG & UG Students)

**Note: Waiver of Rupees 500 /- in registration fee for ISPA members.**

#### Account Details for Fee Payment

**A/c No: 43430752327, IFS code: SBIN0008484**  
**Bank: State Bank of India, Branch: Sukhniwas**

For more details please visit : [https://www.rrcat.gov.in/symposiums/conf/ratig\\_25.html](https://www.rrcat.gov.in/symposiums/conf/ratig_25.html)