

**Report of 6th INTERNATIONAL CONGRESS (IC-2024)
along with concurrent events
Young Professionals' International Conference (YPIC-2024)
and WELDEXPO 2024**

INTERNATIONAL CONGRESS (IC-2024)

Day-1: 22nd January 2024

The **6th International Congress IC 2024** was held during **22nd to 24th of January 2024**, at the **Bangalore International Exhibition Centre (BIEC)**.

On 22nd of January 2024, the beginning of IC-2024 was done with the National Anthem. After the welcome address by Mr. T. Ravi Kumar, Chairman of the IC-2024 Preparatory Committee, lighting of the lamp by the dignitaries with Invocation was done as per the tradition. After the presidential address by Mr. Deepak V. Acharya, President, The Indian Institute of Welding (IIW-India), Mr. Robert E. Shaw Jr., Vice President, International Institute of Welding (IIW), formally inaugurated the event.

Dr. P. Veeramuthuvel, Project Director of Chandrayaan-3, ISRO, was the Chief Guest of the event and with an inspiring speech he stressed on the intricacies on the various stages of development and planning of Chandrayaan-3 and the highest level of achievement by India. The audience was mesmerized having him with them. Mr. Nilesh Shah, Vice President of Jindal Steel & Power Limited, addressed the gathering as the Guest of Honour. Special Guest Mr. Anil V. Parab, Whole Time Director & Sr. Executive Vice President, L&T Limited., released the Souvenir of IC-2024 along with the special issue of Indian Welding Journal. Dr. Luca Costa, CEO, IIW, and Mr. R. Srinivasan, Chairman, International Advisory Committee, IC-2024, delivered their speech informing about the importance of the event. Finally, Mr. R. Shiva Kumar, Convenor of the IC-2024 Preparatory Committee, proposed the Vote of thanks to end the inaugural session.

IIW-India award ceremony was also conducted during the inaugural session, which was administered by Mr. Rituraj Bose, Hony. Secretary General, IIW-India. On this occasion, IIW-India conferred the 'IIW-India Excellence Award for Services to the Institute' to Mr. Subhendu Chaudhuri, Director, ANB-India and to Mr. R. Srinivasan, Past President, IIW-India & Vice President, International Institute of Welding, for excellence in sharing and dissemination of knowledge in welding science and technology and their active associations with the Institute. Also, 'IIW-India Excellence Award for International Relations'

conferred to Dr. Luca Costa, for excellence in sharing and dissemination of knowledge in welding science and technology globally, through active technological statesmanship. Further, IIW-India was honoured to present its 'Lifetime Achievement Award 2023' to Mr. Ranajoy Banerjee, Hony. Secretary (1987-1989), IIW-India, CEO of ANB-India & Scheme Manager of ANBCC-India, in recognition of his selfless devotion and dedicated contribution to the welding industry as well as to the institute and having the expertise in the field of welding science and technology for more than 50 years. Minati Bhattacharjee Memorial award for the Best Performing Branch was bagged by the Baroda Branch of the Institute.

Many awards were handed over thereafter to the presenter of best papers in different fields during the previous National Welding Seminar and National Welding Meet of the institute, along with Best PhD and M.Tech thesis awards. Apart from these, awards for different National Skill Competitions and Best Students' Chapter Awards also were handed over to the winners and Runners-up. The award ceremony showed the support of the institute to the achievers and to bring the young professionals and others towards the welding fraternity.

After the Hi-Tea, three Award lectures were delivered as follows, which was Chaired by Mr. Deepak V. Acharya, President, IIW-India:

- a) Jaegar Lecture of IIW was delivered by Mr. Anil V. Parab, Whole time Director & Senior Executive Vice President, Larsen & Toubro Limited., on the topic 'A perspective on Sustainable and Green Welding'.
- b) Keith Hartley Memorial Lecture of IIW-India was delivered by Prof. Santanu Das of Kalyani Govt. Engineering College, on 'Exploring Appropriate TIG Welding Condition for Joining Austenitic Stainless Steel Flats towards its Application in Advanced Ultra Super Critical Boiler'.
- c) Prof. Placid Rodriguez Memorial Lecture was delivered by Prof. Vishvesh Badheka of Pandit Deendayal Energy University, on 'Overview of Recent Advances in Fusion and Solid-State Welding'.

After the lunch, one Plenary Session and one Panel Discussion has been organized and the Speakers were invited from

various Industries, Institutes and the Government Bodies. Also, the felicitations were given to the sponsors and supporters of the event.

Plenary Session – 1 : National Welding Capability

This session was Chaired by Mr. R. Srinivasan, Chairman of International Advisory Committee, IC-2024. The speakers and the discussions were as follows:

- > Mr. Deepak V. Acharya, CEO, Inox India Ltd., delivered the Keynote Speech on 'Assisting India in Building-up its National Welding Capability (NWC) and Progressing the UN Sustainable Development Goals (SDGs)', which is co-authored by Mr. Chris Smallbone, Past President, IIW and Chair, IIW TG-SDG.
- > Mr. Rituraj Bose, Hony. Secretary General, IIW-India, delivered a presentation on 'Role of IIW-India towards Nation Building', featuring different activities of IIW-India and its support to the welding fraternity.
- > Dr. K. Socrates, Joint Director & Head Development, MSME, Karnataka Region addressed the gathering informing about the 'Skill Development Initiatives and various Schemes by the Indian Government'.
- > Dr. Shaju K. Albert, Chairman, MTD-11, Bureau of Indian Standards, delivered presentation on Newly released Standard on 'Qualification and Certification of Welding Inspection Personnel'.
- > Dr. Luca Costa, CEO, IIW, presented the 'Role of International Institute of Welding supporting the Member Societies and for the Countries for their New Welding Capabilities'.
- > Finally, the summing up of the session was done by Mr. R. Srinivasan, along with a lively discussion with the interaction of audience.

Panel Discussion on 'Welding - Road Ahead'

This Panel discussion on 'Welding – Road Ahead' was moderated by Mr. V. V. Kamath, MD, Fronius India Pvt. Ltd. The Panelists were:

- > Dr. Murugaiyan A, Associate Professor, IIT Madras
- > Mr. Mahendra Patil, National Head, Robot Sales, Fanuc India Ltd.
- > Mr. Ravi Kumar Palli, Marketing Director, ESAB Asia Pacific
- > Mr. Yogesh Kumar, COO, Difacto Robotics & Automation

Day-1 was attended by 390 delegates, which included Guests, Authors and Awardees from various Industries, Industrial Associations, Academic Institutions, Research Organizations, Public Sector units, etc.

In the evening, a cultural programme was staged on different dance forms of India, and, also with the engagement of the audience for different ice-breaking activities. The eventful day finally ended with a Gala dinner.

Day-2 : 23rd January 2024

Keynote Speech

Day-2 started with the Keynote Speech by Mr. Robert E. Shaw Jr., on 'Managing to Achieve Sustainable and Green Welding', which showed the way forward to save our environment.

Plenary Session – 2 : By American Welding Society

After the Keynote Speech, there was Plenary Session 2 by the American Welding Society (AWS), followed by interactions with the audience. The Session was Chaired by Mr. Richard Arn, Vice President, AWS.

Lectures delivered in the session were as follows:

- > Mr. Viji Kuruvilla delivered a speech on the topic 'Steel Fabricator's Role on Sustainability'.
- > Dr. Murali Tumuluru delivered a speech on the topic 'Advanced Steel Grades and New Joining Technologies for Automobiles of Tomorrow'.
- > Mr. Ramesh Shankaran delivered a speech on the 'AWS Educational Resources and Solutions'.

Parallel Technical Sessions

After completion of the Plenary Session – 2, there were 4 parallel Technical Sessions, which were framed and managed by Mr. Dileep V. Kulkarni, Chairman of the Technical Committee, IC-2024. The different topics of the parallel Sessions were as follows:

- > Fabrication, Automation and Productivity
- > Performance of Weld Deposits and Joints
- > Arc Welding Processes
- > Health, Safety and Environment
- > Weldability and Filler Metal Development
- > Additive Manufacturing
- > Resistance Welding, Solid State Welding and Allied Processes

- > Simulation, Modelling, AI & ML
- > Power Beam Processes

ANBCC-India Workshop

One particular session of Day-2 was dedicated to the invited audience, those who are interested in Company Certification in accordance with ISO 3834. This Session was Chaired by Mr. Deepak V. Acharya, President, IIW- India. The detail of the Workshop is hereunder:

- > Welcome Address by Mr. Deepak V. Acharya, President, IIW-India.
- > Introduction to the IIW certification scheme for companies (ISO 3834) and relationship with the product standards used in the main markets (EU & USA) by Dr. Luca Costa, CEO, IIW.
- > Services delivered by IIW India for Welding Quality Certification for the Indian fabrication industry by Mr. Ranajoy Banerjee, Scheme Manager, ANBCC-India.
- > Feedback by Inox India Ltd. with respect to ISO:3834 certification through ANBCC-India by Mr. Pratik Gandhi.
- > Feedback by Plasser (India) Pvt. Ltd. with respect to ISO:3834 certification through ANBCC-India by Mr. Chintan Gohil.
- > Open House discussions and clarification on queries by the expert panel.
- > Vote of Thanks by Dr. Mahadev Shome, Deputy Scheme Manager, ANBCC-India

Day-2 Ended with the gathering of knowledge and information by the audience for the topic of their interest. Thereafter, the 335th Council Meeting of the Indian Institute of Welding was conducted with the presence of Office Bearers, Council Members, Branch Representatives and Invitees, to call it a day.

Day-3 : 24th January 2024

Parallel Technical Sessions

Continuing from Day-2, there were 3 parallel Technical Sessions on Day-3, apart from the Young Professionals' International Conference for the full day. The different topics of the parallel Sessions were as follows:

- > Fabrication, Automation and Productivity
- > Performance of Weld Deposits and Joints
- > Arc Welding Processes
- > Weldability and Filler Metal Development
- > Resistance Welding, Solid State Welding and Allied Processes

- > Repair and Reclamation
- > Dissimilar Metal Welding

YOUNG PROFESSIONALS' INTERNATIONAL CONFERENCE (YPIC)

On the Day-3, Young Professionals' International Conference was organised for the whole day, alongside the parallel Technical Sessions. Dr. Luca Costa, CEO of IIW, chaired the inaugural session of the conference.

Inaugural Keynote Address was delivered by Dr. Kittichai Sojiphan, Chairman of Working Group – Young Professionals, IIW, where he has informed about the opportunities of the Young Professionals to be associated with the International Institute of Welding. Next was the invited talk by Mr. Ernest D. Levert Sr., Past President, AWS and Past Chairman of Working Group – Young Professionals, IIW, who delivered speech on 'Welding of the International Space Station Thermal Control Units - KEEPING COOL IN SPACE'. Other Invited talks were delivered by Dr. Renu N. Gupta, Head, Project Management & Welding Engineering, L&T Limited., Heavy Engineering IC, on 'Opportunities for Young Welding Professionals in Heavy Engineering' and by Prof. Sunil Pandey, LNMIIT Jaipur, on 'Moving on the Highway of Innovative Research in Welding'. Apart from the above, several interesting papers on research work were presented by the Young Professionals within the age of 35 years.

VALEDICTORY SESSION

At the end of Day-3, a Valedictory Session was conducted before ending the 6th International Congress. Out of 135 abstracts accepted, 122 papers were scheduled for presentation, out of which 103 papers were presented in 23 sessions, which is 76.3% of accepted abstracts. Also, there were 8 invited talks by the eminent speakers. The valedictory session revealed that the quality of the papers were of high standards, and the overall event was a grand success.

During the Valedictory Session, the award for Best Presented Paper was declared in favour of Dr. Manikandan Manoharan, Associate Professor (Senior), VIT – Vellore Campus, for his paper 'A Comparative Evaluation on the Microstructure and Mechanical Properties of MDN 250 Grade Maraging Steel Joined by Gas Metal Arc Welding and Gas Tungsten Arc Welding Techniques'. Other awards will be declared after review of all the technical papers by an expert panel under the Chairmanship of Mr. Dileep V. Kulkarni, Chairman, Technical Committee, IIW-India, and all the awards will be handed over during the next National Welding Seminar of the Institute.

WELDEXPO 2024

For the first time, WELDEXPO was organised concurrently with IMTEX Forming Exhibition of IMTMA (Indian Machine Tools Manufacturers' Association), in Association with IIW-India, between 19th to 23rd January 2024. This specific welding related exhibition was conducted at the same venue of the International Congress, i.e., at Bangalore International Exhibition Centre. The overall response from the welding related organisations was overwhelming and the Exhibitors were very happy on the footfall of the show. Around 1676 sqm area was occupied by WELDEXPO and total footfall was around 45,000 for overall IMTEX Forming Exhibition.

CONCLUSION

Every person, those who have attended the International Congress, was very happy because of the well organised event along with the hospitality and returned home with the unforgettable memories. IIW-India will take the responsibility to support the welding fraternity in future too, like the earlier years.

NOTE FOR THE AUTHORS

There is an opportunity for the authors to publish their papers, presented in IC-2024, in a special issue of peer reviewed journal "Welding International", a Taylor Francis publication. This initiative is being coordinated by Prof. Vishvesh Badheka, Chairman of the Young Professional and Student Activity, IIW-India.