

About The Electrochemical Society of India

The Electrochemical Society of India, ECSI has been in existence at the IISc Campus for 70 years. It is a Professional Society to provide a platform for discussions in the area of Electrochemistry, Corrosion, Batteries, Coatings, Electroplating and Forming, and other electrochemical science and technology areas. A significant activity of ECSI is the publication of the Journal of the Electrochemical Society of India (JECSI), which is presently completing 69 years of continuous publication. The Society has a collection of over 3000 books in various fields of Electrochemical Science and Technology. Members may visit the library and make use of the books. Annual Technical Meetings organized by the Society during the month of July every year have been very popular among the electrochemical community. A special feature of these meetings is the encouragement given to students and teachers. Membership is open to Individuals and Institutions in different categories: Individual, Industrial, Corporate, Life Members, Donor, Patron and Student. Those desirous of becoming members may write to the

Hon. General Secretary for further details.

The Society awards the following in recognition of merit in the area of Electrochemical Science and Technology:

1. **S.K. Seshadri Memorial MASCOT National Award in the area of Corrosion**
2. **N. M. Sampat National Award in the area of Surface treatment and Metal Finishing**

ECSI organizes the following special lectures every year to honor persons connected with the Society.

1. **Prof. T. L. Rama Char Memorial Lecture**
2. **Prof. B. S. Seshadri Memorial Lecture**
3. **Dr. S. Krishnamurthy Memorial Lecture**
4. **Prof. S. M. Mayanna Endowment Lecture**

**Three-day Training Program
Mode: Virtual Online**

Industrial Corrosion and Its Control

December 16 -18, 2021



**Organized by
The Electrochemical Society of India**

**Indian Institute of Science
Campus, Bengaluru - 560012**

**Course Director: Prof. V.S. Raja
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Co-Convener: Mr. Rajeev Dikshit
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Importance of the course

Corrosion is one of the major problems affecting productivity, safety, environment and profitability of wide range of industries. The cost due to corrosion is about 3.5% GNP for a Nation. To combat corrosion, understanding the metallurgical and electrochemical aspects of corrosion of industrial components in relation to industrial processes, fabrication, operation and maintenance is essential. This course will highlight these complexities and suggest various remedial measures. The faculty involved have a long standing experience to address all corrosion related problems of Industries

Course Content

Day-1

- **Various Forms of Corrosion**

Corrosion failures of materials occur through different mechanisms and hence the protection measures are different. A thorough discussion of different types of corrosion failures will be carried out as this forms the basis of materials selection and failure analysis

- **Corrosion Testing and Online Monitoring**

NACE and ASTM standards for materials evaluation against corrosion and online monitoring will be covered.

- **Protective Coatings**

Surface preparation, metallic coatings, paint coatings and high temperature coatings and Thermal Barrier Coatings.

Day-2

- **Materials Selection Criteria for Corrosion Control**

Various types of alloys, relative performance of these materials and cost implications will be addressed in this talk.

- **Equipment Design, Fabrication Issues for Corrosion Control**

Localized corrosion depends on equipment design. Better design corrosion from corrosion perspective will be highlighted.

- **Internal Corrosion of Pipelines**

Factors affecting corrosion of oil pipelines, types of corrosion, monitoring and remedial measures.

Day-3

- **Hydrogen Damage**

Industries face hydrogen blistering, hydrogen embrittlement and decarburization problems due to the influence of Hydrogen. The response

of various steels to different environmental conditions and Industries will be discussed.

NACE standard for material selection and Evaluation will be addressed.

- **Cathodic Protection**

Cathodic protection principles involved in underground pipelines and tanks and cooling water system will be discussed.

- **Failure Analysis of Real-Life Situations**

Failure analysis methodology and case studies

- **Open Session** (Bring your problem slide for a discussion-Needs advance intimation to plan the session)

Who can attend?

- Senior executives
- Project Managers
- Maintenance Engineers
- Process Engineers
- Consultants
- Researchers from Laboratories
- Students and Faculty from Colleges and Universities

Benefits to be accrued

The participants are expected to gain:

- Good understanding of the Industrial Corrosion Processes

- A thorough exposure to materials of construction and clarity in materials selection criteria
- Clear ideas on corrosion protection measures
- Corrosion testing and on-line monitoring procedures
- Ability to analyze corrosion failures
- Receive handouts provided by the experts
- Certificate of participation

Faculty

Leading experts given below from academia and industries will share their expertise

- Prof. VS. Raja, IIT Bombay
- Dr. K. Elayaperumal, Consultant
- Prof. S. Parida, IIT Bombay
- Mr. Xavier Pereira, Kansai Nerolac Paints
- Dr. Anil Bhardwaj, Formerly with ONGC
- Dr. J.N Balaraju, NAL, Bengaluru
- Dr. S T Aruna, NAL, Bengaluru

Registration

Fees:

Students	INR : 750
Govt. Organizations/R & D Labs /National Laboratories/PSUs	INR : 2,000
Industries	INR : 3,000
Company registration: Up to 4 delegates	INR : 10,000
Teachers/ ECSI Members	INR : 1,500

- For registration, please follow the link as below:

https://docs.google.com/forms/d/e/1FAIpQLSdXo8jHq0admT-EUrVr3hxlA-pWNQoa_fN09_FT-6G3hxGvhA/viewform?usp=pp_url

Registration fee is payable by Online or Google Pay favoring:

The Electrochemical Society of India, Bengaluru

Bank Details: Canara Bank | A/c. No: 068310100 1616 | IFSC Code: CNRB0000683
Branch: IISc Bengaluru

Google Pay No. 9686466499

For Queries:

The Hon. Gen. Secretary

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