

You are encouraged to submit your paper on the following topics:

### **SYMPOSIA TOPICS**

- **Cathodic and Anodic Protection**
- **Coatings, Linings and Thermal Insulation**
- **Corrosion in Chemical and Fertilizer Industries**
- **Corrosion in Petrochemical and Refineries Industries**
- **Corrosion in RCC Structures**
- **Corrosion Monitoring and Testing**
- **Internal Corrosion in Pipelines**
- **Marine Corrosion and Offshore**
- **Materials and Composites**
- **Microbial Corrosion and Inhibitors**
- **Power Plants and Utilities**
- **Corrosion Control in Water Treatment Utilities**
- **Direct Assessment Methodology Application**
- **Young Student Scientist Forum**
- **Corrosion in Defence Equipment & Facilities**
- **Corrosion in Oil and Gas**
- **Corrosion in Automobiles and Transportation Industries**
- **Equipment's and New Technology**

## **TECHNICAL SYMPOSIA SCOPE**

**TRACK**

**1**

### **CORROSION IN PETROCHEMICAL AND REFINERIES INDUSTRIES**

Issues and challenges associated with corrosion control in petrochemical industries. Specific topics of interest may include mitigation of corrosion and fouling, case studies of material performance and new materials for corrosion control, mechanisms of corrosion, life assessment, predictive modeling, laboratory research, and development and application of new technologies in these industries. Issues and challenges associated with corrosion control in the refineries. Specific topics of interest may include mitigation of corrosion and fouling, case studies of material performance and new materials for corrosion control, mechanisms of corrosion, life assessment, predictive modeling, laboratory research, and development and application of new technologies. Issues and challenges associated with corrosion control in refineries: different forms of corrosion and specific mechanism, specific corrosive environments in refineries, corrosion control methods based on design, modification of environment, cathodic and anodic protection, coatings, applying corrosion prevention to design process in refineries.



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2**

## **CATHODIC AND ANODIC PROTECTION**

Issues and challenges associated with the application of cathodic protection systems for protection against corrosion of metallic surfaces of pipelines/structures in contact with soil/water/electrolyte. Specific topics of interest for CP design/engineering, construction, monitoring and maintenance may include development and application of new materials, technologies and techniques, case studies and AC/DC interference detection and mitigation. CP of tanks, bullets and plant piping, as well as CP for cross country pipelines, city gas distribution pipelines, municipal water and sewage pipelines and in-shore and off-shore structures will also be covered.

## **COATINGS, LININGS AND THERMAL INSULATION**

Issues and challenges associated with Coatings & Linings for various industries where these are used to protect or decorate the system. Specific topics of interest may cover pipelines, offshore steel structures, concrete coatings, transport vehicles, power & petrochemical plants, inspection & study of coatings including design & failure analysis, material selection, new developments, implementation, case studies and development and application of new technologies related to coatings & linings. This symposium also includes case studies, monitoring methods and preventive (and regulatory) steps against corrosion under insulation.



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## **INTERNAL CORROSION IN PIPELINES**

Topics specific to internal corrosion of pipelines: corrosion resistant materials, corrosion inhibitors, internal coatings, assessment of corrosion through software modeling & simulation studies, protection against microbiologically influenced corrosion, recent advances in pigging technology, maintenance practices, failure case studies, corrosion monitoring, preventive and control techniques. The symposium invites the participation of scientists, inventors of new technology, product developers, managers, engineers, scientists and students involved in managing internal corrosion.

## **YOUNG STUDENT SCIENTIST FORUM**

Papers by students on any symposia topic covered in this conference. The aim is to encourage presentation of work carried out by students in the field of corrosion and its control. To encourage Research Scholars and Students a unique session "YOUNG SCIENTIST FORUM" has been designed.



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**TRACK  
6**

## **CORROSION MONITORING AND TESTING**

Corrosion monitoring and testing is the primary step to identify the causes of failure of components, plants and equipments, which in some cases can be catastrophic. Monitoring and testing using different techniques help one to establish defects in materials right from the manufacturing stage to those that get created during operation/service stage. Early detection and sizing of corrosion degradation helps to assess the extent of damage, find out the root cause, take preventive actions and as a long term strategy integrate these into preventive maintenance schedules and plant safety management. This symposium covers all the monitoring and testing techniques e.g. non-destructive tests, online monitoring techniques and sensors and probes. Research & development on these techniques, case studies related to establishment of corrosion damage and/or its prediction, material selection and training of personnel for specific skill sets, remaining life assessment. Plant experiences related to corrosion monitoring and testing are welcome.

## **CORROSION IN RCC STRUCTURES**

Issues and challenges associated with corrosion control of reinforced cement concrete (RCC) structures. Technical papers related to research and industrial applications are invited on the causes of corrosion in RCC structures as well as its mitigation. Specific topics of interest may include mechanism of initiation and propagation of corrosion in reinforcement embedded in concrete, biocorrosion, corrosion resistant concrete mix, admixtures to enhance corrosion resistant properties of concrete, protective reinforcement coating, surface painting of structures, other corrosion control measures for RCC structures, corrosion based predictive modelling, case studies and emerging techniques.



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## **CORROSION IN CHEMICAL AND FERTILIZER INDUSTRIES**

This symposium is seeking technical papers on addressing the issues and challenges associated with corrosion control in the chemical and fertilizer industries. A paper may be of a research or industrial nature. Specific topics of interest may include mitigation of corrosion and fouling, case histories of materials performance and new materials for corrosion control, successes, failures (or failure analysis), mechanisms of corrosion, life assessment, predictive modeling, laboratory research, or development and application of new technologies in the above industries. Corrosion in urea manufacturing plants, use and passivation technologies of stainless steel for corrosion mitigation, optimizing inspection programs, and other related topics will also be addressed.



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## **CORROSION IN DEFENCE EQUIPMENT & FACILITIES**

Issues and challenges related to development of high performance corrosion resistant materials / coatings for various components in defence sector in order to improve their long-term reliability in service. Specific topics include materials development to combat various types of corrosion encountered by defence equipments and machineries based on their functional requirement, corrosion control strategies, design changes to mitigate corrosion and other advanced methods to mitigate corrosion of defence equipments for longer durability and improved performance in service.

## **DIRECT ASSESSMENT METHODOLOGY APPLICATION**

The application of the 4-step Direct Assessment (DA) process as a code-compliant pipeline integrity validation technique. Referencing the existing NACE International DA standards for external corrosion (ECDA), stress corrosion cracking (SCCDA) and internal corrosion (ICDA) for dry gas, wet gas, liquid petroleum and multiphase product pipelines. Symposia invite papers related to case studies, methodology, standards, benefits and limitation, improvements for above ground surveys, in the ditch non destructive examinations, internal corrosion predictive modeling for liquid and solid hold up, corrosion rate modeling, terrain modeling and newer technologies related to DA. Application related for onshore, offshore, piggable and non-piggable pipelines.



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## **MICROBIAL CORROSION AND INHIBITORS**

Fundamental and applied aspects of microbial corrosion and use of inhibitors to control corrosion. Topics may cover diagnosis of microbiologically influenced corrosion (MIC), detection, measurement, monitoring techniques; material behaviour under bio-films, MIC control strategies including biocides, microbial corrosion inhibitors, bio-electrochemical techniques, case studies on MIC, corrosion failures; futuristic trends and new tools for detection and control. Corrosion inhibition implied under this symposium covers behaviour of organic, inorganic and newly termed green inhibitor compounds and also polymeric compounds intended for industrial corrosion preventive applications. Papers may also include effects on mechano-corrosion behaviour of materials under the influence of corrosion inhibitors.



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## **MATERIALS AND COMPOSITES**

Unpublished work related to corrosion resistant materials and composites (both metals and non-metals). Studies related to mechanisms of corrosion of materials, new materials development and its application, design of new techniques for combating corrosion are invited for presentation. Corrosion and degradation of composites will be also covered in this symposium.

## **CORROSION IN OIL AND GAS**

Issues and challenges associated with corrosion and its control in the oil and gas production. Most oil and gas production includes co-produced water makes corrosion a pervasive issue across the industry. Age and presence of corrosive materials such as carbon dioxide (CO<sub>2</sub>) and hydrogen sulfide (H<sub>2</sub>S) exacerbate the problem. Oilfield corrosion can be divided into corrosion due to oxygen, "sweet" corrosion, and "sour" corrosion. Specific topics of interest may include mitigation of corrosion and fouling, case studies of material performance and new materials for corrosion control, mechanisms of corrosion, life assessment, predictive modelling, laboratory research, and development and application of new technologies in oil and gas production.



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## **CORROSION CONTROL IN WATER TREATMENT UTILITIES**

This symposium contains technical papers associated with the following areas of interest—mitigation of corrosion and fouling, best practices, new chemistries/new equipment for corrosion and fouling control, failures/failure analysis, chemical cleaning, and core histories/studies—all associated with water from pretreatment to the end use and discharge (i.e., waste water).

## **MARINE CORROSION AND OFFSHORE**

Material degradation due to corrosion under adverse operating and environmental conditions, bio-fouling, life assessment and asset integrity management, CP of underwater portion of offshore platform jackets including its rehabilitation and maintenance. The symposium invites the participation of scientists, inventors of new technology, product developers, managers, engineers, scientists and students involved in managing corrosion for marine and offshore applications.



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## TRACK 16

### CORROSION IN AUTOMOBILES AND TRANSPORTATION

Corrosion issues and its challenges become major problem in Automobiles and transportation industry. Many of the coatings used to prevent or slow corrosion can have specific vulnerabilities. The transportation category includes vehicles and equipment, such as motor vehicles, aircraft, rail cars, and HAZMAT transport. It also includes vehicles and equipment used to transport people and products (i.e., automobiles, ships, aircraft, etc.)

### POWER PLANTS AND UTILITIES

Experiences with corrosion and corrosion control in power plants (thermal and nuclear) and in various utilities for these plants as also those for captive power plants. Aspects related to material selection, case studies related to failures, implementation of measures to avoid corrosion, water chemistry measures, corrosion monitoring and modelling are covered. Papers related to research on specific issues for these plants as well as those for development of corrosion resistant materials are included.

## TRACK 17

## TRACK 18

### BIOMATERIALS CORROSION

The development of new biocompatible materials and refinement of existing materials composition/ processing techniques are expected to broaden the diversity of applications of biomaterials in the coming years. The progress in biomaterials research clearly requires an improved understanding in multiple disciplines as well as the development of new design methodologies in order to obtain better corrosion resistance in the biological medium. It is strongly believe that CORCON will serve as a vibrant platform to deliberate on various themes and fruitful interactions that would emerge during the conference would certainly enrich the knowledge.

Visit website  
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and submit your abstract online!

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