

# CORCON

India  
18<sup>th</sup> - 20<sup>th</sup> November **2021**

**18<sup>th</sup> November 2021**

**18<sup>th</sup> November 2021: 10:00 – 11:00 - Conference & Expo Inauguration**

<p><b>11:00 – 11:45</b> <b>(Plenary Talk)</b></p>	<p><b>Pipelines – New Challenges</b> <b>Mr. S Jayachandran</b> <b>Head of Department EPC Pipeline Projects, Reliance Industries Limited</b></p>	<p>Main hall</p>
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<p><b>11:45 - 11:55</b></p>	<p><b>Tea / Bio Break</b></p>
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<p><b>11:55 – 13:35</b></p>	<p><b>Cathodic and Anodic Protection -1</b></p>	<p><b>Hall-A</b></p>
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Paper No.	Paper
<p><b>CAP11</b></p>	<p>Studying The Electrochemical Corrosion Behaviour Inside Coatings In Cathodically Polarised Pipelines –DAC And CP Shielding Rituraj Mishra, Bharat Petroleum Corporation Ltd, Irimpanam, Kochi</p>
<p><b>CAP12</b></p>	<p>CP System Design for Buried Pipeline &amp; Facility Structures Shaikh H Rashid , Himoya Corrosion Technology Pvt. Ltd., Kolkata</p>
<p><b>CAP13</b></p>	<p>Challenges in CP Protection of Station Piping: Case Study &amp; Analysis Manish Mishra, Indian Oil Corporation Limited Noida</p>
<p><b>CAP14</b></p>	<p>A Case Study on ‘AC Interference Reduction Methodology for Pipelines due to EHV Substation’ Navneet Saxena<sup>1</sup>, Manoj Saxena<sup>1</sup>, Kamlesh Bera<sup>2</sup>, Vivek Das<sup>2</sup></p>

	1 Pipeline Management Services Private Limited and 2Reliance Ethane Pipeline Limited
<b>CAP15</b>	Development of CP Analytics for spatio-temporal analysis of Cathodic Protection data for pipeline integrity Deepak Agarwal, Santosh Kumar and Niraj Kumar, Indian Oil Corporation Limited, Noida, India

<b>11:55 – 13:35</b>	<b>Power Plants and Utilities - 1</b>	<b>Hall-B</b>
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<b>Paper No.</b>	<b>Paper</b>
<b>PPU11</b>	Atmospheric Corrosivity Assessment of Power Plants – Some Aspects to be Considered Ashwini K. Sinha, Corrosion and Water Management Consultants, Noida
<b>PPU12</b>	HTHA failures in Fired Boiler water wall tubes operating below Nelson curve Arun Murali Padman and Jayson Anil Pinto, ONGC-MRPL
<b>PPU13</b>	Nodular corrosion of Zr alloys in gas and water – A comparative study Sai Karthik Nouduru <sup>1,2</sup> , M Kiran Kumar <sup>1</sup> , S Roychowdhury <sup>1</sup> and Vivekanand Kain <sup>1,2</sup> , 1Bhabha Atomic Research Centre, Mumbai and 2Homi Bhabha National Institute, Mumbai
<b>PPU14</b>	Battling Corrosion of PV Solar Panel: Need of the Day Dr. Shailee G. Acharya <sup>1</sup> , Mr. Manojkumar V. Sheladiya <sup>2</sup> and Dr. Ghanshyam D. Acharya <sup>3</sup> , 1SVIT, Gujarat, 2 FoET, Gujarat and 3 Atmiya University, Gujarat

<b>11:55 – 13:35</b>	<b>Corrosion Monitoring and Testing - 1</b>	<b>Hall-C</b>
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<b>Paper No.</b>	<b>Paper</b>
<b>CMT11 (Keynote Talk)</b>	<b>Under-Paint Corrosion Sensing Technologies for Defense and Engineering Sectors</b> <b>Dr. B.E. Amita Rani , Sr. Principal Scientist, CSIR-National Aerospace Laboratories, Bengaluru</b>
<b>CMT12</b>	Hot Corrosion behaviour of Inconel 738 superalloy in presence of NaCl, Na <sub>2</sub> SO <sub>4</sub> , V <sub>2</sub> O <sub>5</sub> Arpit R Patil and S T Vagge, College of Engineering Pune, Pune
<b>CMT13</b>	New Approach for Studying Soil Corrosivity Degree to Water Supply Pipelines of Lalitpur Sub-Metropolis (Nepal) K.P. Dahal, S.K. Regmi and J. Bhattarai* , Tribhuvan University, Nepal
<b>CMT14</b>	Microstructural and corrosion property correlation of Cr-Ni, Cr-Mn and Cr-Ni-Mo-Cu based austenitic stainless-steels Surjan Sheik <sup>1</sup> , Atmaramudu Tirumalla <sup>1</sup> , Arun Kumar Gurralla <sup>1</sup> and Raffi Mohammed <sup>1</sup>

National Institute of Technology Andhra Pradesh, Tadepalligudem

11:55 – 13:35

**Corrosion in Petrochemical and Refineries Industries – 1**

**Hall-D**

**Paper No.**

**Paper**

<b>CPR11</b>	UNS N08935 – A new austenitic Stainless Steel Vikram Pandit, Sandvik Materials Technology, Pune
<b>CPR12</b>	Super Duplex Stainless Steel Grade Uns S32750 Tube Failure In Seawater Service Vinay Kumar Prasad, P S N Swaroop, 1Bharat Petroleum Corporation Ltd., Mumbai
<b>CPR13</b>	Corrosion inhibition studies of 1,3,4-oxadiazole moiety on the mild steel surface in Hydrochloric acid solution, electrochemical and theoretical approach Raj Kumar Mehta*, M Yadav, Indian Institute of Technology, Dhanbad
<b>CPR14</b>	Aggressive Ammonium salt corrosion due to stratified flow regime in the REAC inlet system of a Naphtha Hydro treater Arun Murali Padman, Jayson Anil Pinto, Mangalore Refinery and Petrochemicals Ltd, Mangalore
<b>CPR15</b>	Corrosion under insulation(CUI) damages and control methods Prashantha Hegde and K Shiva Kumar, ONGC Mangalore Petrochemicals Ltd., Mangalore

13:35- 14:00

**Lunch Break**

14:00 - 15:35

**Technical Interactive Forum -1  
Integrity Management of CP Systems**

**Hall-A**

14:00 - 15:35	Power Plants and Utilities – 2	Hall-B
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Paper No.	Paper
<b>PPU21</b> Keynote	<b>Mitigation of stress corrosion cracking in boiling water reactors: noble metal chemical addition</b> Stefan Ritter, Paul Scherrer Institute (PSI) Laboratory for Nuclear Materials, Switzerland
<b>PPU22</b>	Elemental Role of Chromium and Molybdenum Solutes on Corrosion Behaviour of Ni-Cr-Mo Alloys In 1m HCL, H <sub>2</sub> SO <sub>4</sub> and HNO <sub>3</sub> Soul Solutions Malvika Karri, Amit Verma and J. B. Singh, Bhabha Atomic Research Centre, Mumbai
<b>PPU23</b>	The Role of Different Surface Treatments on Air Oxidation Behavior of Modified 9cr-1mo Steel Ch. Jagadeeswara Rao <sup>1,2,*</sup> , M. Archana <sup>1,2</sup> , S. Ningshen <sup>1,2</sup> , 1 Indira Gandhi Centre for Atomic Research, Kalpakkam and 2 Homi Bhabha National Institute University, Mumbai
<b>PPU24</b>	Effect of Microstructural Condition on Hydrogen Embrittlement Susceptibility of EN 24 & A106 GRB Saradhi Gumma <sup>1*</sup> , Prathamesh Bodhankar <sup>2</sup> , Supratik Roychowdhury <sup>1</sup> and Vivekanand Kain <sup>1</sup> 1Bhabha Atomic Research Centre, Mumbai and 2Birla Institute of Technology & Science–Pilani, K. K. Birla Goa Campus, Goa

14:00 - 15:35	Corrosion Monitoring and Testing - 2	Hall-C
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Paper No.	Paper
<b>CMT21</b>	Behaviour Of Steel Beam-To-Column Joints Subjected To Accelerated Corrosion And Cyclic Loads Cinitha.A, CSIR-Structural Engineering Research Centre, Chennai
<b>CMT22</b>	Corrosion studies on GTA welded AISI 202 austenitic stainless-steel butt joints in chloride medium Atmaramudu Tirumallaa, Surjan Sheika, Arun Kumar Gurrallaa and Raffi Mohammeda*
<b>CMT23</b>	Effect of shielding environment on microstructure and corrosion behaviour of 2205 duplex stainless-steel weldments Arun Kumar Gurrallaa, Atmaramudu Tirumallaa, Surjan Sheika and Raffi Mohammeda* National Institute of Technology Andhra Pradesh
<b>CMT24</b>	Studies on effect of tempering temperatures on corrosion behaviour of spring steel grades SUP9 and SUP11A Raghuram Peddinti <sup>1</sup> , Raffi Mohammed <sup>2</sup> , 1RINL – Visakhapatnam Steel Plant, Visakhapatnam 2NIT Andhra Pradesh, Tadepalligudem

<b>14:00 - 15:35</b>	<b>Corrosion in Petrochemical and Refineries Industries -2</b>	<b>Hall-D</b>
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<b>Paper No.</b>	<b>Paper</b>
<b>CPR21</b>	CRU Reformer Effluent Airfin Cooler (05-EA-01) Fouling and Tube-end Thinning Girish Kumar, A. Mojumdar, S. Dihingia, N.K Barua, Indian Oil Corporation Limited, Digboi Refinery, Digboi
<b>CPR22</b>	Corrosion Control and Corrosion Management program for Cooling Water Application in Refinery and Chemical Industries. Ameer Hamza, Fluor Arabia Limited, Al-Khobar, Saudi Arabia and Jignesh Desai, Fluor Daniel India Private Limited, New Delhi
<b>CPR23</b>	Corrosion Control in Sulfolane System Balivada Naga Sravanthi, ONGC Mangalore Petrochemicals Limited, Mangalore
<b>CPR24</b>	Is Corrosion A Natural Process? Is There A Role Of Behavior In Combating Corrosion?- A Case Study P K Tripathi, N Vaartha, Sukant Dev and M P Singh, Indian Oil Corporation Limited, Mathura Refinery, Mathura

<b>15:35 - 15:45</b>	<b>Tea / Coffee</b>	
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<b>15:45 - 17:25</b>	<b>Product Presentation</b>	<b>Hall-A</b>
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15:45 - 17:25	<b>Cathodic and Anodic Protection - 2</b>	Hall-B
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Paper No.	Paper
<b>CAP21</b> (Keynote Talk)	<b>AC Mitigation Criterion and the impact on Cathodic Protection Operations</b> <b>Ted Huck, MATCOR Inc., USA</b>
<b>CAP22</b>	Earthing of Pipelines affected by AC Interference Khushboo Sharma and Vartika Uprety, KB Singh & Associates
<b>CAP23</b>	Showcasing Advantages of Computer Modelling and Simulation in AC Interference Study of pipeline with various case studies Anshul Jain, JEF Techno Solutions Pvt Ltd, Bangalore
<b>CAP24</b>	Assessment of HVDC Interference on Pipelines With Software Modelling and Field Surveys Sachin S Karanth, Jignesh Bhavsar and Kirit Panchal, SARK EPC Projects Pvt. Ltd. Ahmedabad

15:45 - 17:25	<b>Corrosion Monitoring and Testing - 3</b>	Hall-C
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Paper No.	Paper
<b>CMT31</b>	Selection methodology for integrated internal corrosion monitoring techniques – A user perspective Kuldeep Jain, COSASCO, USA
<b>CMT32</b>	Observation, Measurement & Mitigation of Telluric Current on Natural Gas Pipeline Mr. Rukmangad Kondamgire <sup>1</sup> & Mr. Junaid Balluwala <sup>2</sup> 1GSPL India Gasnet Limited (GIGL), Gandhinagar and 2 GSPL India Transco Limited (GITL), Gandhinagar
<b>CMT33</b>	Corrosion Behaviour of Friction Stir Welded and Hard Anodized 7004 Aluminium Alloy Vikrant V. Nimbalkar <sup>1</sup> , Bharat S Padekar <sup>2</sup> and Shanmugasundaram T <sup>3</sup> 1 Defence Institute of Advance Technology, Pune 2 Bharat Forge Ltd., Pune

15:45 - 17:25	Corrosion in Petrochemical and Refineries Industries -3	Hall-D
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Paper No.	Paper
CPR31	Leakage of 1st Stage Condenser of Wax Hydro-finishing Unit (WHFU) Rajendra Gayen, Naveen Kr. Kosalay, Indrajit Singha, Abhijit Mojumdar, Suryyadip Dihingia and Nayan Kumar Barua Indian Oil Corporation Limited, Digboi Refinery, Digboi
CPR32	Failure Analysis Of Naphtha Cracker Unit Boiler Economizer Tube Ram Masodkar, Vipin Gupta, B.K.Muduli, Indian Oil Corporation Ltd., Panipat
CPR33	Wet H <sub>2</sub> S Damage in Recycle Gas Scrubber: A Case Study Prabhakar Chowdhary and Santosh Kumar Mishra, Engineers India Limited, New-Delhi
CPR34	Use of Robotic Inspection for Corrosion Inspection in Oil & Gas Industry Romit Kalra, Petrobot Technologies Pvt Ltd, Jaipur

## 19<sup>th</sup> November 2021

<b>10:00-10:45</b> <b>(Plenary Talk)</b>	<b>Technical Challenges with Transitioning to a Hydrogen-Based Economy</b> <b>Kirk Hamilton, PEng., Senior Engineering Advisor, C-FER Technologies (1999)</b> <b>Inc. , Canada</b>	Main hall
<b>10:45-11:15</b> <b>(Keynote Talk)</b>	<b>High Level DC Interference Assessment</b> <b>Craig Botha, Reignite (Pty) Ltd - CEO, South Africa</b>	
<b>11:15-11:45</b> <b>(Keynote Talk)</b>	<b>Digital Solutions for Corrosion Control</b> <b>Christopher Nghia Do, Group CEO &amp; CTO</b>	

<b>11:45 - 11:55</b>	<b>Tea / Bio Break</b>	
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<b>11:55 - 13:35</b>	<b>Corrosion Control in Water Treatment Utilities</b>	Hall-A
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Paper No.	Paper
<b>CCW11</b> <b>Keynote Talk</b>	<b>Corrosion Control in Water Treatment Utilities</b> <b>Mr. Ajay Popat, President, Ion Exchange (India) Ltd, Mumbai</b>
<b>CCW12</b>	Study of Material Degradation in HWPT With Emphasis on Tri Sodium Phosphate, Asofix & Phosdine III as A Passivating Agent to Avoid Internal Corrosion In Pipeline Amit and R. Shandilya, Heavy Water Plant-Tuticorin
<b>CCW13</b>	Corrosive Tendency Analysis Of Ethylene Glycol In Chiller Units And Its Remedial Measures Amit and R. Shandilya, Heavy Water Plant-Tuticorin
<b>CCW14</b>	Corrosion in Water Treatment Utilities S.Thiruvalluvan, Maintenance Manager, Govt. Of India, DAE, HWP (Baroda)



11:55 - 13:35	<b>Materials and Composites - 1</b>	Hall-B
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Paper No.	Paper
<b>MC11</b>	Comparative Study on Friction, Wear and Corrosion Behavior of Tempered 13Cr Martensitic Stainless Steel in Noncorrosive and Corrosive Environments Neelima Khare1, 2*, Sunil Kumar Bonagani1, P K Limaye1, Vivekanand Kain 1,2 1 Bhabha Atomic Research Centre, Trombay, Mumbai 2 Homi Bhabha National Institute, Anushaktinagar
<b>MC12</b>	Effect of Flux systems on Printed Circuit Board of Switch Ikhlas Chandkoti, Vaibhav Bhavsar, Srishti Bhatt, M. Pustode, S. C. Bali, Centre for Research Engineering and Advanced Technologies (CREAT), Uno Minda Industries Ltd., Pune
<b>MC13</b>	Impact studies of coke making process in building highly corrosive zone for steel asset in service of an integrated steel plant. KHALID, The Tata Pigments Ltd, Jamshedpur
<b>MC14</b>	Effects of Cu/Ni/Cu-Ni on Electrochemical Corrosion Behavior of Automobile Engine Block Al-Si Alloys Dr. Abul Hossain, Sylhet Gas Fields Limited (A company of Petrobangla), Sylhet,
<b>MC15</b>	Metallurgical Trends in High Pressure High Temperature Environments in the Hydrocarbon Industry Rishabh Uniyal, Sudipta Biswas and Suman Kumar Jaruhar Institute of Oil and Gas Production Technology, Oil and Natural Gas Corporation Limited, Panvel

11:55 - 13:35	<b>Microbial Corrosion and Inhibitors - 1</b>	Hall-C
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Paper No.	Paper
<b>MCI11</b>	Synthesis, Characterization, and Anti-Corrosive Application of Biocompatible Choline Formate Ionic Liquid M. Mobin, R. Aslam, Aligarh Muslim University, Aligarh
<b>MCI12</b>	Novel methods for superhydrophobic surface modification of titanium for improved self-cleaning and antibiofouling properties S.C. Vanithakumari,* A. Ravi Shankar and John Philip, Indira Gandhi Centre for Atomic Research, Kalpakkam and Homi Bhabha National Institute, Kalpakkam

<b>MCI13</b>	Effect of organic corrosion inhibitor sealed oxide layer on the corrosion behaviour of aluminum alloy 2024-T3 Prakashaiah B G1 Bhavana Rikhari 2 and Amitha Rani B E2, 1 Atria Institute of Technology, Bangalore and 2 CSIR- National Aerospace Laboratories, Bangalore
<b>MCI14</b>	A Review on Microbially Induced Corrosion in Subsea Pipelines: Consequences and Mitigation Strategies C. A. Shefeena1 and C. B. Sudheer2 , Dept. of Ship Technology, CUSAT, Kerala
<b>MCI15</b>	Inhibition of corrosion of mild steel pipeline carrying simulated oil well water by an Aqueous Extract of Chrysanthemum indicum flower K. Kavitha1,2, H. Benita sherine2, S. Rajendran3,4 and Abdulhameed Al-Hashem5, 1 National College (Autonomous), Tiruchirappalli 2Periyar E.V.R. College (Autonomous), Tiruchirappalli, 3St. Antony's College of Arts and Sciences for Women, Dindigul 4 PondicherryUniversty, Puducherry, 5Kuwait Institute for Scientific Research, Kuwait.

<b>11:55 - 13:35</b>	<b>Corrosion in Oil and Gas</b>	Hall-D
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<b>Paper No.</b>	<b>Paper</b>
<b>COG11</b>	Failure Analysis of Shell Part of Fuel Gas Heater at Offshore Platform - A Case Study Bipin Kumar, Jeetendra Gupta, Sangeeta Rani Prasad, I. A Ahmed & Dinesh Kumar Oil and Natural Gas Corporation Ltd., Navi Mumbai
<b>COG12</b>	Premature Failures Of an Underground 8" Well Fluid Line: A Case Study Jeetendra Gupta, S K Velusshami, Anita Sharma, Oil and Natural Gas Corporation Ltd. , Navi Mumbai
<b>COG13</b>	Failure analysis of steam reformer outlet subheader weld joint failure Mastram Hathesh, Ashish Dane and Deepak Chandramore, Bharat Oman Refineries Limited, Bina
<b>COG14</b>	Failure Analysis of Tubing: A Case Study Suraj Makkar, Jeetendra Gupta, S K Velusshami, Anita Sharma and Maushumi K Talukdar Oil and Natural Gas Corporation Ltd. , Navi Mumbai
<b>COG15</b>	Corrosion Inhibition Effect of Synthesized Organic Compounds on mild Steel in Hydrochloric Acid Sujata Kumari Gupta*, Mahendra Yadav, Indian institute of technology (ISM) Dhanbad, Jharkhand

13:35- 14:00	<b>Lunch Break</b>
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14:00 - 15:35	<b>Technical Interactive Forum -2</b> <b>Delivering Performance through Optimum Coating Specifications</b>	Hall-A
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14:00 - 15:35	<b>Materials and Composites - 2</b>	Hall-B
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Paper No.	Paper
<b>MC21</b>	Failure Analysis of Coil tubing in onshore Oil and gas field- A case study S.K.Velusshami, Asis Isor, Jeetendra Gupta, Suraj Makkar & Maushumi K.Talukdar Institute of Engineering and Ocean Technology, Oil and Natural Gas Corporation Ltd. Navi Mumbai
<b>MC22</b>	Development of Asset Integrity Optimization & Management System Paresh Haribhakti and Vemuri P Sastry, TCR Advanced Engineering Pvt. Ltd, Vadodara
<b>MC23</b>	Criticality of pH value and its measuring methods on the corrosion mechanism in earth termination system Arunima Shukla, Vikas Almadi, Devesh Jaiswal, Sunil Saini, DEHN INDIA Pvt. Ltd., Gurugram
<b>MC24</b>	Investigation of General and Electrochemical Corrosion Behavior of Duplex 2205 Stainless Steel under Different Concentrations of Sodium Chloride and Varying pH Turin Datta <sup>1,2</sup> , Soumyabrata Basak <sup>1,3</sup> , Kisor Kumar Sahu <sup>1</sup> <sup>1</sup> Indian Institute of Technology Bhubaneswar, Arugul, <sup>2</sup> Indian Institute of Technology Kharagpur, Kharagpur, <sup>3</sup> University of Ulsan, Ulsan
<b>MC25</b>	Real World Versus Testing – How To Protect Parts Better Keith Donaldson <sup>1</sup> and John Franey <sup>2</sup> <sup>1</sup> Engineered Materials, Inc. Buffalo Grove, IL USA and <sup>2</sup> Sigma Consulting, Branchburg, NJ, USA

14:00 - 15:35	<b>Microbial Corrosion and Inhibitors – 2</b>	Hall-C
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Paper No.	Paper
<b>MCI21</b>	Graphene oxide-Silica-Polydimethylsiloxane coating on carbon steels for microbial corrosion and biofouling control B. Anandkumar*, Geetisubhra Jena and John Philip Indira Gandhi Centre for Atomic Research, Kalpakkam

<b>MCI22</b>	Imidazolium based Ionic Liquid as an Eco-Friendly Corrosion Inhibitor for Mild Steel in 0.5 M H <sub>2</sub> SO <sub>4</sub> Medium: Electrochemical and Surface Morphological Studies Anita Kumari a, Raj Kishore Sharmaa, Gurmeet Singh* a,b a University of Delhi, Delhi and b Pondicherry University, Puducherry
<b>MCI23</b>	Corrosion inhibition of mild steel using ZrO <sub>2</sub> -Gly nanocomposite in hydrochloric acid solution Ruby Aslam, Mohammad Mobin, Mosarrat Parveen and M. Shoeb, Aligarh Muslim University, Aligarh
<b>MCI24</b>	Application of plant extract synthesised silver nanocomposite as corrosion inhibitor on Mild Steel in 1 M HCl Irfan Ahmad, Mohammad Mobin*, Aligarh Muslim University, Aligarh
<b>MCI25</b>	Imidazolium based environmentally benign corrosion inhibitor for mild steel in 1M HCl solution Jiyaul Haquea, Vandana Srivastavaa, Mumtaz A. Quraishib, a IIT, Banaras Hindu University, Varanasi and bKing Fahd University of Petroleum and Minerals, Saudi Arabia.
<b>MCI26</b>	An investigation of benzimidazole derivative as corrosion inhibitor for mild steel in 15% HCl solutions. Mohammad Salman <sup>1</sup> , Jiyaul Haque <sup>1</sup> , Vandana Srivastava <sup>1</sup> , M. A. Quraishi <sup>2</sup> <sup>1</sup> Indian Institute of Technology, Banaras Hindu University, Varanasi and <sup>2</sup> King Fahd University of Petroleum and Minerals, Saudi Arabia.

<b>14:00 - 15:35</b>	<b>Corrosion in Chemical and Fertilizer Industries</b>	Hall-D
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<b>Paper No.</b>	<b>Paper</b>
<b>CFI11</b>	Corrosion behavior of alternate materials for usage in nitric acid over commonly used 304L stainless steel in reprocessing plants Amrita Mahanti Ghosal, Kamlesh Chandra, Vivekanand Kain, Bhabha Atomic Research Centre, Mumbai
<b>CFI12</b>	Different types of corrosion encountered in fertilizer industries. S.D.Jambekar, A.B.Joshi, P.B.Vaishnav, GSFC, Vadodara
<b>CFI13</b>	Study of boiler tube failure in Sulphuric acid heat recovery system Vikram Pandit and Sudhindra Hathwar, Sandvik Materials Technology, Pune
<b>CFI14</b>	Hydrogen Grooving in H <sub>2</sub> SO <sub>4</sub> Storage Tank Ketan Amin and Priteshkumar M. Patel, GNFC Ltd., Bharuch
<b>CFI15</b>	Failure Analysis of LT nozzle of Water Knockout Drum Ketan Amin, Chintan Mulchandani and Hussain Vasadwala, GNFC Ltd., Bharuch

15:35 - 15:45	<b>Tea / Coffee</b>
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15:45 - 17:25	<b>Product Presentation</b>	<b>Hall-A</b>
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15:45 - 17:25	<b>Coatings, Linings and Thermal Insulation - 1</b>	Hall-A
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**Paper No.**

**Paper**

<b>CLT11</b>	Thermal Spray Coating Replacing The Traditional Hot Dipped Galvanizing Process in Present Industrial Scenario Urvesh Vala <sup>1</sup> and Indravadan B. Dave <sup>2</sup> , 1L&T Chiyoda Limited, Vadodara, India 2 Government Engineering College, Gandhinagar
<b>CLT12</b>	Reduce Opex and Capex in Refining Process Unit Fired Heaters and Heat Exchangers Using Tubacoat Technology Sanjay Lodha, Global Business Director- Tubacoat, Tubacex Spain
<b>CLT13</b>	Effect of Gold Layer on Galvanic Corrosion of Electric Contacts in Printed Circuit Board of Steering Switch Vaibhav Bhavsar, Ikhlas Chandkoti, S. C. Bali, Centre for Research Engineering and Advanced Technologies (CREAT), Uno Minda Industries Ltd., Pune
<b>CLT14</b>	Fluoropolymer Coatings and Linings for Offshore, Oil Gas & Chemical Equipment's - Meeting the Needs Under Harsh Conditions - From the Applicator's View" Kirtan R. Dhami, Blinex Filter Coat Pvt Ltd, Mumbai

15:45 - 17:25	<b>Direct Assessment Methodology Application</b>	Hall-C
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Paper No.	Paper
<b>DAM11</b> Keynote	<b>High Resolution Indirect Aboveground Survey for Non-Cathodically Protected Pipeline Network – Case Study</b> <b>Prankush M. Bujarbaruah Deputy General Manager, Oil India Limited</b>
<b>DAM12</b> Keynote	<b>A. K. Tewari, Ex Executive Director, IOCL</b>
<b>DAM13</b>	Complex Plant Piping inside Refinery Inspected for Cathodic Protection (CP) and External Coating Anomalies using Advanced Indirect Survey Technologies – A Case Study Praveer Narayan, Allied Engineers, New Delhi

15:45 - 17:25	<b>Biomaterials Corrosion</b>	Hall-D
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Paper No.	Paper
<b>BMC11</b>	Corrosion Evaluation Of Nanohydroxyapatite – Graphene Oxide Biocomposite Coatings K.Aruna <sup>1</sup> , R. Vignesh <sup>1</sup> , K.M.Veerabadran <sup>2</sup> and T.M.Sridhar <sup>3</sup> University of Madras, Chennai and Anna University, Chennai
<b>BMC12</b>	Fabrication of Biomimic Nanostructured Titanium for Biomedical Application Sushmi Shree G and Rajendran N, Anna University, Chennai
<b>BMC13</b>	Corrosion Behavior of SS316L in Artificial Blood Plasma in Presence of CRF Syrup and Apple cider vinegar Ajila. A, Loyola College, Chennai
<b>BMC14</b>	PEDOT/TNTA hybrid composite: A promising biomaterial for orthopaedic application V. Sudhisha, N. Rajendran, Anna University, Chennai
<b>BMC15</b>	Extrusion Coatings of Biopolymer in oil and gas pipeline industries Applications P. Kombaiah, GAIL (India) Ltd., A.P
<b>BMC16</b>	Sustainable Biocomposite Coating of Samarium Substituted Hydroxyapatite/Polypyrrole/Wrightia tinctoria Fibre on Ti Alloy for Orthopedic Applications R. Ramachandran <sup>1</sup> , L. Kavitha <sup>2</sup> and D. Gopi <sup>1</sup> , <sup>1</sup> Periyar University, Salem and <sup>2</sup> Central University of Tamil Nadu, Thiruvarur

19:30 - 20:30	<b>Corrosion Awareness Award - 2021 Ceremony</b>
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20:30 - 21:30	<b>Dinner</b>
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## 20<sup>th</sup> November 2021

<b>10:00-10:45</b> <b>(Plenary Talk)</b>	<b>Significance of Corrosion Management in Process Safety</b> <b>K V Seshadri</b>	Main Hall
<b>10:45-11:15</b> <b>(Keynote Talk)</b>	<b>Hydrogen Embrittlement Of Ss 316l Instrument Tubing In A Hydroprocessing Unit</b> <b>Rajaram Chidambaram</b> <b>AP Region Materials Lead, ExxonMobil Asia Pacific Pte Ltd., Singapore</b>	
<b>11:15-11:45</b> <b>(Keynote Talk)</b>	<b>Smart AI Caliper Tool – A Technological Breakthrough in Pipeline Inspection</b> <b>Rajdeep Dutta, Corporate Director of Planning &amp; Asset Management</b> <b>LIN SCAN advanced Pipeline and Tanks Services (PIPECARE Group), U.A.E.</b>	

11:45 - 11:55	<b>Tea / Bio Break</b>	
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11:55 - 13:35	<b>Coatings, Linings and Thermal Insulation - 2</b>	Hall-A
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Paper No.	Paper
<b>CLT21</b>	Tape Coatings- –what are the differences in manufacturing technologies and which impact do they have on the material properties ? Luc Perrad, DENSO GmbH, Leverkusen, Germany
<b>CLT22</b>	Consequences of Elevated Temperature on Long Term 'Cathodic Disbondment' Test of 3LPE Coated Pipe: A Report Prajakta Joge, Sudip Maji, Mehul Patel, Amit Dharva, Gujarat Industrial Research & Development Agency (GIRDA), Vadodara
<b>CLT23</b>	CUI: Next Generation Coating Technologies Shekhar Tambe, S.G Ghurye and Shrikant M. Naik Asian Paints Ltd., Navi Mumbai-400703
<b>CLT24</b>	Coating Applications Challenges Zinc Coatings and Low Potlife Coatings. Denzil Dcosta, Graco India Pvt Ltd – Gurgaon
<b>CLT25</b>	Cold sprayed Al-Al <sub>2</sub> O <sub>3</sub> composite coating on AA 2024 (T3) with improved corrosion protection RPS Chakradhar, Principal Scientist, CSIR -National Aerospace Laboratories

<b>11:55 - 13:35</b>	<b>Internal Corrosion in Pipelines</b>	<b>Hall-B</b>
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<b>Paper No.</b>	<b>Paper</b>
<b>ICP11</b>	Synergistic combination of organic dispersant and corrosion inhibitor to mitigate Pipeline Under Deposit Corrosion G. Yogitha <sup>1</sup> , Sarat Shanmukh <sup>1</sup> , Jennifer Sargent <sup>2</sup> and Sathees Kesavan <sup>1</sup> 1SUEZ Water Technologies & Solutions, Bengaluru and 2SUEZ Water Technologies & Solutions, Canada
<b>ICP12</b>	Risk-Based Internal Corrosion Control Joseph Itodo Emmanuel, Adnoc Onshore, Abu Dhabi, United Arab Emirates
<b>ICP13</b>	Corrosion inhibiting potential of Cefpodoxime-an antibiotic on mild steel in sulphuric acid Sheetal <sup>1#</sup> , Sanjeeve Thakur <sup>1</sup> , Ashish Kumar Singh <sup>2*</sup> 1Subhas University of Technology, New Delhi 2 Bharati Vidyapeeth's College of Engineering, New Delhi
<b>ICP14</b>	Internal corrosion in internally coated pipeline Santosh Kumar, Deepak Agarwal, and Niraj Kumar, Indian Oil Corporation Limited, Noida
<b>ICP15</b>	Examination of Soil Corrosivity Parameters for Underground Metallic Pipelines in Batasedanda-Tansen Buspark - Parvas Roadway Areas Madhab Gautam and Srijana Aryal, Tribhuvan Multiple Campus, Palpa, Nepal
<b>ICP16</b>	Premature Failure of Subsea Well fluid line in Indian western offshore - A Case Study Asis Isor*, Bipin Kumar, S K Velusshami, Suraj Makkar, Srimoyee Khan & P K Borghate Institute of Engineering & Ocean Technology, ONGC, Navi Mumbai

<b>11:55 - 13:35</b>	<b>Corrosion in RCC Structures - 1</b>	<b>Hall-C</b>
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<b>Paper No.</b>	<b>Paper</b>
<b>RCC11</b>	Corrosion Deterioration of RC Structures-Field Experiences Bhaskar Sangoju, CSIR-Structural Engineering Research Centre, Chennai
<b>RCC12</b>	Eco-friendly Corrosion Inhibition of Steel Reinforced Concrete by Aqueous Extract of Phyllanthus Emblica Anujay Rawat <sup>1, 2</sup> , S. R. Karade <sup>1, 2</sup> and P. C. Thapliyal <sup>1, 2</sup> 1Academy of Scientific & Innovative Research (AcSIR), Ghaziabad 2CSIR - Central Building Research Institute (CSIR-CBRI), Roorkee



<b>RCC13</b>	Service life extension of a coastal bridge by quarter century Dr. Deepak K. Kamde and Dr. Radhakrishna G. Pillai, IIT Madras, Mr. Sankar V and Ms. Juby Kerala Highway Research Institute, Dr. Jayachandran K., NIT Calicut, Zameel D. V., Radhe Structorepair Pvt. Ltd., Ahmedabad, Mr. Dhruvesh Shah, Vector Corrosion Technologies
<b>RCC14</b>	Molecular Dynamic Simulation of Corrosion Inhibitors and It's Efficacy Towards Reinforced Concrete Structure Smrithy Subash, Dr. Sumedha Maharana, Dr.Yamini Sudha Sistala Shiv Nadar University Dept. of Civil Engineering
<b>RCC15</b>	Sacrificial anode cathodic protection for corrosion control in reinforced concrete slabs V. Roopa <sup>1</sup> , M.S. Haji Sheik Mohammed <sup>1</sup> and Radhakrishna G. Pillai <sup>2</sup> 1 B.S. Abdur Rahman Crescent Institute of Science and Technology 2 Indian Institute of Technology, Madras.
<b>RCC16</b>	Influence of surface area, corrosion level of steel, and the resistivity of concrete in designing sacrificial anodes for cathodic protection of existing structures Aswathy Ann Mathew, Jayachandran Karuppanasamy National Institute of Technology Calicut, Kozhikode
<b>RCC17</b>	Performance of Galvanized Reinforcement Exposed to Aggressive Environments in Laboratory Conditions - A Critical Review C. Hemalatha and M.S. Haji Sheik Mohammed, B.S. Abdur Rahman Crescent Institute of Science & Technology, Chennai

<b>11:55 - 13:35</b>	<b>Corrosion in Industries and Young Student &amp; Scientist Forum</b>	Hall-D
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<b>Paper No.</b>	<b>Paper</b>
<b>CII11</b>	Evaluation of Heat Treatment to Evade Stress Corrosion Cracking in Aa5083 In Marine Environment Sai Kiran Mangalampalli <sup>1</sup> , Prashant Nikalje <sup>1</sup> and Deepashri Nage <sup>2</sup> 1Larsen & Toubro Defence Limited, Pune and 2Larsen & Toubro Defence Limited, Mumbai, India
<b>CII12</b>	Study the Corrosion of Calciferous Animals in Rivers Water Dr. Rajesh Kumar Singh, Associate Professor Department of Chemistry, Jagdam College, J P University, Chapra- 841301 India
<b>CII13</b>	Corrosion behavior of newly developed high toughness multiphase steels, consisting of varying fractions of bainite, intercritical ferrite, retained austenite and pearlite Neetu, S. Sangal and K. Mondal, Indian Institute of Technology Kanpur, UP

<b>CII14</b>	Investigating the effect of graphene oxide functionalization with ionic liquid for corrosion inhibition of mild steel in acid solution Huda, Mohammad Mobin*, Ruby Aslam, Aligarh Muslim university, Aligarh
<b>CII15</b>	Corrosion Behaviour of Annealed and Heat Treated - Aged 6061 Aluminium Alloy Mrudul S Parasnis <sup>1</sup> , Sandeep N Bhosale <sup>2</sup> , Bharat S Padekar <sup>2</sup> <sup>1</sup> College of Engineering, Pune and <sup>2</sup> Bharat Forge Ltd., Pune
<b>CII16</b>	Novel hybrid sacrificial anodes based on high phosphorus pig iron and Zn for the cathodic protection of steel Nisheeth Kr. Prasad <sup>1</sup> , A.S. Pathak <sup>2</sup> , S. Kundu <sup>2</sup> and K. Mondal <sup>1</sup> <sup>1</sup> Indian Institute of Technology Kanpur, UP and <sup>2</sup> Tata Steel Limited, Jamshedpur,

<b>13:35- 14:00</b>	<b>Lunch Break</b>
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<b>14:00 - 15:35</b>	<b>Technical Interactive Forum - 3</b> <b>Corrosion Control in City Gas Distribution</b>	<b>Hall-A</b>
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<b>14:00 - 15:35</b>	<b>Coatings, Linings and Thermal Insulation - 3</b>	<b>Hall-B</b>
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**Paper No.**

**Paper**

<b>CLT31</b>	An Experimental Study on Influence of Surface Preparation on Adhesion of Phenolic Epoxy Coating under Insulation with Modified Corrosion Testing Rampradesh Natarajan, Chennai Petroleum Corporation Limited, Chennai
<b>CLT32</b>	Corrosion rate map and deposition concentration map at coastal area in Japan Teruhisa TATSUOKA <sup>1</sup> , Hiromitsu IJICHI <sup>1</sup> , Keiichi YOSHINO <sup>1</sup> , Nobuhiro KISHIGAKI <sup>1</sup> , Tomoaki KAWAMURA <sup>2</sup> , Tomoaki OSONO <sup>2</sup> , Youichi TSUCHIDA <sup>2</sup> , Motoyuki YAMAZAKI <sup>2</sup> , Tomonori SHIRAISHI <sup>2</sup> <sup>1</sup> Tokyo Electric Power Company Holdings, Inc., TEPCO Research Institute, Japan <sup>2</sup> Tokyo Electric Power Company Power Grid, Inc., Transmission Department, Japan
<b>CLT33</b>	Investigations on use of Inhibitor Loaded Halloysite Nanotubes And Polyelectrolyte Multi-Layered Layer-By-Layer As Self-Healing Materials For Corrosion Protection Coatings on Mild Steel Aarti Gautam <sup>1,2#</sup> , K.V. Gobi <sup>2</sup> and R. Subasri <sup>1</sup> <sup>1</sup> International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad <sup>2</sup> National Institute of Technology, Warangal

<b>CLT34</b>	Corrosion Studies on Biofilm Inhibiting Hydrophobic Nanocomposite Coatings on Stainless Steel 420 Substrates Used in Surgical Instruments Ramay Patra <sup>1,2#</sup> , Aarti Gautam <sup>1,2</sup> , K.R.C. Soma Raju <sup>1</sup> , K.V. Gobi <sup>2</sup> , R. Subasri <sup>1*</sup> 1 International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad 2 National Institute of Technology, Warangal – 506 004
<b>CLT35</b>	Corrosion protective and self-healing hybrid silica sol-gel sealed porous anodized Mg AZ31 alloy for aggressive environments K. Pradeep Premkumar and R. Subasri <sup>#</sup> , International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad

<b>14:00 - 15:35</b>	<b>Corrosion in RCC Structures - 2</b>	Hall-C
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<b>Paper No.</b>	<b>Paper</b>
<b>RCC21</b>	Effect of an innovative accelerated carbonation technique on the performance of rebar in natural zeolite-contained concrete. Akshay Ramesh Bura and B. Kondraivendhan, Sardar Vallabhbhai National Institute of Technology, Surat
<b>RCC22</b>	Corrosion Mitigation Using Sacrificial Anodes System For Chloride Contaminated Reinforced Concrete Structures & Case Study Dhruvesh Shah, Vector Corrosion Technologies Limited
<b>RCC23</b>	Corrosion of Plastically Strained Reinforcing Steel Bars Prasanna Kumar Behera <sup>1</sup> , Sudhir Misra <sup>2</sup> , K. Mondal <sup>2</sup> 1 Indian Institute of Technology Tirupati, Tirupati and 2 Indian Institute of Technology Kanpur, Kanpur
<b>RCC24</b>	Study on Strength and Transport Properties of Sodium Nitrite based Inhibitor admixed OPC concrete S. Shafeer Ahamed, R. Sridhar and M.S. Haji Sheik Mohammed B.S. Abdur Rahman Crescent Institute of Science & Technology, Chennai
<b>RCC25</b>	Use of Nanomaterials for Corrosion Protection of Reinforced Concrete Structures – In-depth Review Divya Rachel Rooby, Jayachandran Karuppanasamy, National Institute of Technology Calicut, Kerala
<b>RCC26</b>	Detection of corrosion initiation in steel rebar embedded in concrete: a review on various test methods Dilrabin Kootumpurath <sup>1</sup> , Jayachandran Karuppanasamy <sup>2</sup> National Institute of Technology Calicut, Kerala

<b>15:35 - 15:45</b>	<b>Tea / Coffee</b>
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	<b>Plenary Talks</b>	
<b>15:45 - 16:30</b> <b>(Plenary Talk)</b>	<b>Advances Controlling Corrosion in Concrete Structures</b> <b>Prof. Carmen Andrade, International Centre for Numerical Methods in Engineering (CIMNE), Barcelona, Spain</b>	Main hall

<b>16:30 - 15:25</b>	<b>Valedictory Function</b>	
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## Poster Presentation

Paper No.

<b>PP1</b>	Corrosion combating ability of expired Cefmenoxime in acid solution Ashish Kumar Singh <sup>1#*</sup> , Sheetal <sup>2</sup> , Sanjeeve Thakur <sup>2</sup> , Balaram Pani <sup>3</sup> 1 Bharati Vidyapeeth's College of Engineering, New Delhi 2 Netaji Subhas University of Technology, New Delhi 3University of Delhi, New Delhi
<b>PP2</b>	Corrosion resistance of laser remelted Al <sub>2</sub> O <sub>3</sub> coatings in molten sodium coolant for FBR core catcher applications Paulson Varghese <sup>1, 2</sup> , E. Vetrivendan <sup>1, 2</sup> , B. R. Vaishnavi Krupa <sup>1, 2</sup> , Prabhat Kumar Shukla <sup>1, 2</sup> , E. Hemant Rao <sup>1, 2</sup> , S. Ningshen <sup>1, 2, *</sup> 1Indira Gandhi Centre for Atomic Research, Kalpakkam and 2Homi Bhabha National Institute, Mumbai
<b>PP3</b>	Steam Oxidation of CVD Synthesized Pyrolytic Graphite at different Pyrolysis Temperature for High Temperature Application Rongali Hareesha, <sup>b</sup> E. Vetrivendana, <sup>b</sup> Ravikumar Solea, and S. Ningshena, <sup>b,*</sup> a Indira Gandhi Centre for Atomic Research Center, Kalpakkam b Homi Bhabha National Institute, Mumbai
<b>PP4</b>	Electrochemical and microstructural characterization of corrosion in prestressed concrete systems exposed to chlorides – Mechanisms and application Dyana Joseline and Radhakrishna G. Pillai, Indian Institute of Technology Madras, Chennai
<b>PP5</b>	Corrosion behaviour and bioactivity of anodized Mg alloy for orthopaedic applications M. Kalaiyaran and N. Rajendran, Anna University, Chennai
<b>PP6</b>	Bio-inspired polydopamine incorporated titania nanotube arrays for biomedical applications P. Agilan and N. Rajendran, Anna University, Chennai

<b>PP7</b>	Effect of electrochemical behavior and Bio-mineralization of titania nanotubular structure on titanium for orthopedic application. P.Cheranmadevi and N.Rajendran, Anna University, Chennai
<b>PP8</b>	Corrosion Behaviour Of Ni-Ti Alloy In Artificial Saliva In The Presence Of Vitamin-C At Various Body Temperatures D.Delinta, Loyola College, Chennai