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Title: SPECIAL REPORT

CORCON-2022:

28th International Corrosion Conference & Exhibition

Corrosion	Sealants	Pigments		Construction Chemicals	Alkyds
Additives	Adhesives	Grinding Media	Binders	Titanium dioxide	Inks
Amino	Glass	Designer Finishes	Photo-Initiators	Base Coat	DIY
M&A	Adhesives	Emulsions	Can	Oligomers	Powders
Polyurethanes	Can	White Cement	Photo-Initiators	Varnish	Grinding
UV-Cured	Coalescents	E-Beam	Dispersing	Marine	Metal
Rheology		Epoxy	Automotive	Paint Stripping	
Surface Preparation		Paints	Driers	Clear Coat	MTO
Biocides	Thickeners	Resins	Decorative	Acrylics	Lacquer
Coil Carbon Black	Metallics	Facades	Oil and Gas	Adhesion	Top Coat
Plastics		Silicones	Adhesion	Ovens	Tinting
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CORCON-2022: 28th International Corrosion Conference & Exhibition

IT was a blend of work and leisure, spread on the outskirts of the Udaipur, also known as the City of Lakes in the princely state of Rajasthan. CORCON 2022 was a joyous celebration with a happy feeling as the corrosion fraternity met once again in an atmosphere of camaraderie after a long gap of over two years.

This year CORCON 2022 was held September 19 – 22 set against a breathtakingly picturesque backdrop of the Aravalli Hills, at The Ananta Udaipur. Mr Sanjaya Singhal, Chairman, Secure Meters Ltd. was the chief guest on the occasion.



Lighting of the ceremonial lamp



K. B. Singh

“CORCON 2022, in its physical format is being held after a gap of two years and in these two years, there has been many global level upheavals which have changed the world and is pushing the human race to look for newer materials, alternative sources of energies, reduce carbon emissions, decarbonize economies, etc,” said Mr K. B. Singh, Chairman, AMPP India Chapter. “India is going through a phase

which is exciting for all of us. The next 25 years, we are going to see a lot of transformation especially in the energy sector with huge growth in multi technologies in oil and gas, offshore and onshore infrastructure.”

Prof Amir Eliezer, AMPP Board of Directors, Vice Chair 2022, who was the Guest of Honour at the event, emphasized that the merger of NACE and SSPC has brought in many more opportunities. He exhorted more persons from India to take part and get



Prof Amir Eliezer

involved in the activities of AMPP by making it a more global organization from the American-centric it is now.

“CORCON, the annual conference and expo on corrosion science and engineering held in India, is one of the largest events of its kind in Asia,” said Mr Sumeet Kataria, Chairman, CORCON 2022. “This event offers a powerful platform for information sharing, knowledge acquisition, identifying business opportunities, and networking in the field of corrosion. IMF in its revised estimates has mentioned that India is heading to be a USD5 trillion economy by 2026-27. The future of the corrosion industry is very bright, we are looking at all-round development, with new trends, the Internet of Things (IOT), remote stations, artificial devices, artificial intelligence, etc.”



Sumeet Kataria



The Award Winners

“The future of the corrosion control industry is very bright. The industry is witnessing all round change. We are today in an era of sector-specific knowledge expertise. All of us need to remain familiar and well-versed with the latest scientific and technological developments in this field.”

A total of 757 professionals attended CORCON-2022 and this conference retains its credit as one of the largest events of its kind in Asia. It is a powerful platform for information sharing and knowledge-acquisition, identifying the business opportunities, and networking in the field of corrosion. CORCON 2022 was held with the support of Indian Industry, Corrosion professionals and Academia, who had all gathered



Souvenir release by dignitaries

The Exhibition



for about 3-4 days to share and exchange their ideas, knowledge, case studies to make the India or world a safe place to stay by preventing and mitigating corrosion. The conference included three plenary talks (see Table 1), 13 keynote lectures, and more than 200 contributory oral and poster presentations in 16 Technical Symposia. The details of the keynote and Technical Interactive Forums (TIFs) are given in the Table 2 and Table 3, respectively. The exclusive Young Scientist Forum for students and young researchers/professionals was also conducted. In addition, there was an expo, where exhibitors and sponsors showcased their latest lines of products and services concerning corrosion and its control/mitigation. Following is a brief summary of technical events.

Table 1: Plenary sessions

No.	PLENARY SESSIONS	Presenters
1	The Correlation Between Corrosion and the Future of Medical Health Implants	Amir Eliezer Vice Chair - 2022, AMPP
2	Challenges in the Cathodic Protection of Concrete Structures	Liao Haixue President, Canada Structural Engineers Association, Canada
3	New Generation Steels and Materials with Superior Corrosion Resistance	Debashis Bhattacharjee Vice President, Technology & New Material Business, TATA STEEL Ltd.

Table 2: Keynote sessions and speakers

No.	KEYNOTE SESSIONS	Presenters
1	Pipeline Corrosion Integrity Management	Ashish Khera, Allied Engineers, New Delhi
2	Non-Phosphorous Naphthenic Acid Corrosion Inhibitor	Marcelo Cordoba, Senior Technical Sales Advisor, Halliburton, USA
3	Operators' perspective on Direct Assessment (DA) as an Integrity Assessment Tool	Shri A K Tewari, Ex ED, IOCL
4	Water – Elixir of Life – Managing it with care it deserves	Mr. Ajay Popat, Ion Exchange (India) Ltd., Mumbai
5	Fire-side Corrosion and Steam Oxidation of Advanced Ultra Supercritical Power Plant Materials	Dr. S. Ningshen, Indira Gandhi Centre for Atomic Research, Kalpakkam
6	Critical Aspects of Failures due to Marine Corrosion and its Management	Nausha Asrar and Ali Bigath Ali AlSahari Desalination Tech.Research Institute, SWCC, Saudi Arabia
7	Coating System Performance Analysis & Assurance	Partha Sanyal, Jotun India Pvt Ltd
8	Graphene industrial applications towards Corrosion Control	Dr. Siva Bohm, Chief Scientific Executive, Ceylon Graphite Co., UK
9	Way forward for the Prevention & Control of Corrosion in Concrete Structures	Radhakrishna G. Pillai, IIT Madras, Chennai
10	Progress in Research on Corrosion Inhibitors	Mohammad Mobin Aligarh Muslim University
11	Corrosion control challenges in City Gas Distribution	Dr. Narendra Kumar, Torrent Gas, Lucknow
12	Role of nanoparticles on the corrosion-resistant properties of the electrodeposited and sol-gel composite coatings	Dr. S.T. Aruna, CSIR-NAL
13	Corrosion Protection of ship hull structures and seawater piping components	Dr. K. Sridhar, Naval Materials Research Laboratory (NMRL), Thane

Table 3: List of TIF

No.	Technical Interaction Forum
1	Integrity Mgmt. for Coatings, CP systems, Interference and Mitigation
2	Water Treatment
3	Corrosion Monitoring, Inspection and Testing
4	Corrosion in Concrete Structures
5	Delivering Performance through Optimum Coating Specifications
6	Regulations and standards in corrosion

Table 4: List of Best Poster and Best Paper Awardees

No.	Symposia	Paper Name	Awardees
1	Cathodic and Anodic Protection	Understanding Performance of Reference Electrodes in Measuring Pipe To Soil Potentials	Khushboo Sharma, Vartika Uprety, KB Singh & Associates
		AC Interference and its mitigation materials with Case Study	Shailesh Javia, MATCOR Inc, USA
2	Corrosion in Petrochemical and Refineries Industries	Corrosion of Reboiler Furnace Tubes in a Petroleum Refinery	Anil Kumar Teeda, Subir Kumar Mitra, Saugata Sahu, Indian Oil Corporation Limited, Gujarat Refinery, Vadodara
		Integrity Assessment and Life Cycle management of Splitter Column in Hydrocracker Unit	Amit Kumar Mishra, Praveen R, Mangalore Refinery & Petrochemicals Limited, Mangalore
3	Corrosion in Oil and Gas	Improve Asset Integrity of The Storage Tanks Up To 20 Years with Repair, Rebuild And Protection Solutions	Jigar Shah, Henkel Adhesives Technologies India Private Limited., Pune
		Laboratory Testing and Qualification of Corrosion Inhibitors: Art of Pre-Corrosion	Abhijeet Sabnis, Anupom Sabhapondit, Shell India Markets Private Ltd, Bangalore

4	Corrosion Monitoring and Testing	Effect of Niobium addition corrosion behaviour of austenitic stainless steel clad weld overlays in diffident corrosive media	Dr. Sunil D. Kahar, The M. S. University of Baroda, Vadodara
5	Direct Assessment Methodology Application	Internal Corrosion Direct Assessment for a bi-directional Natural Gas pipeline network system assessed with WG-ICDA methodology: A Case Study;	Arup Gogoi, Jatin Gogoi, Satyajit Chakrabarty, Oil India Limited, Duliajan; Ashish Khera , Bidyut B. Baniah, Allied Engineers, New Delhi and Carlos A. Palacios, CIMA-TQ, USA
6	Power Plants and Utiities	Corrosion of a Ni-Cr-Mo-Ti alloy in molten FLiNaK salt at 700 °C	Poulami Chakraborty*, Rumu H. Banerjee, Raghvendra Tewari and Vivekanand Kain Bhabha Atomic Research Center, Mumbai
7	Marine Corrosion Offshore	Failure Analysis of Bolts of an Annulus Valve: A Case Study	Jeetendra Gupta, Suraj Makkar, Srimoyee Khan, IEOT, ONGC, Navi Mumbai
8	Corrosion in RCC Structures	Service life-based design of pre-tensioned concrete	Dyana Joseline1*, Prasad Selvam S. R. 1, K. R. R. Chandran1, K. Eswara Rao1, and Radhakrishna G. Pillai2; 1 L&T Construction, Chennai 2. IIT Madras, Chennai
		Effect of Surface Applied Corrosion Inhibitor on Two Different Types of Concrete Subjected to Carbonated Environment	Kulwinder Kaur, Punjabi university, Patiala and Purnima, Ashish Kumar Tiwari, Shweta Goyal, Thapar Institute of Engg. and Tech., Patiala
9	Microbial Corrosion and Inhibitors	Development of silane based epoxy hybrid coating on water transporting pipeline materials for enhanced microbiologically influenced corrosion protection performance	B. Anandkumara, 2*, G. Sudharsan3, T. Nandakumar1, A. Ravishankara, b, John Philip1, 2; Indira Gandhi Centre for Atomic Research, Kalpakkam ; 2 Homi Bhabha National Institute Kalpakkam, Mumbai ; 3 Vellore Institute of Technology, Vellore
10	Corrosion Control of City Gas Distribution	External Corrosion Direct Assessment in CGD Network - An Overview	Shraddha Shivgan, Nirmal Kumar Mishra, Vipul Sawant, Mahanagar Gas Limited, Mumbai
11	Corrosion in Chemical and Fertilizer Industries	Material suitability study in Fertilizers and Petrochemical industry: Case studies	Ketan Amin, Chintan Mulchandani and Hussain Vasadwala, Gujarat Narmada Fertilizers and Chemicals, Bharuch
12	Coatings, Linings and Thermal Insulation	Advances in Insulation Coatings	David A. Hunter, Hempel (USA)
		Learnings from in-service failures of acrylic intumescent coatings in the Middle East	Manoj Abraham, Hempel Paints Middle East, United Arab Emirates
13	Young Student Scientist Forum	Improved Salt-Water Corrosion of Polypyrrole-based Superhydrophobic Coating on Squeeze-cast Mg-Sr-Y alloy	Meeta Ashok Kamde, Yogendra Mahton, and Partha Saha, National Institute of Technology, Rourkela
		Synthesis and characterization of highly durable and anticorrosive coating of Polypyrrole-NiO-rGO nanocomposite for protection of low carbon steel in 3.5 wt% NaCl solution;	Farina Ansar and Mohammad Mobin, Aligarh Muslim University, Aligarh
14	Materials and Composites	Assessing microstructure and corrosion behaviour of Ca added squeeze-cast AZ91 alloy reinforced with graphene nanoplatelets;	Sourav Ganguly, CSIR-IMMT, Bhubaneswar and D. K. Sharma, NIT Raipur
		Failure Analysis of Sucker Rod: A Case Study	Suraj Makkar*, Asis Isor, Jeetendra Gupta, Arzoo Saini and Maushumi K Talukdar, IEOT, ONGC, Navi Mumbai
15	Corrosion in Defence Equipment & Facilities	Novel Foul Release Coatings for Underwater Hull of Naval Ships	S S Pawar, R Baloji Naik*, R S Naik, B Balalingam, and T K Mahato, NMRL, Thane and P Deshpande, S Phule University, Pune; A K. Satapathy, K Amit, P. Veeraiah, G Ambre, G. Gunasekaran*
16	New Trends and Innovations in Corrosion Control	The Correlation Between Corrosion and the Future of Medical Healthy Implants	Amir Eliezer, Shmoon College of Engineering, Israel, AMPP

Table 5: List of Best Poster Awardees

No.	Symposia	Paper Name	Awardees
1	Modified CeO ₂ And Graphene Oxide Composite Thin Film Coating For H ₂ s Gas Sensing Application Using Electrochemical Impedance Spectroscopy	S. Chandraleka,1,2 V. Balasubramani 1, M. R. Kuppusamy2, R. Sasikumar3 And T. M. Sridhar1*, 1University Of Madras, Chennai and 2RV Government Arts College, Chengalpet	
2	Stress Corrosion Crack studies in Prestressing Steel wires in hardened concrete exposed to chlorides in both laboratory and field conditions	Sreelakshmi Srinivasan, Dyana Joseline and Radhakrishna G Pillai, IIT Madras, Chennai	
3	Performance assessment of galvanic anode cathodic protection systems in reinforced concrete structures;	Keerthi V.T. and Radhakrishna G. Pillai, IIT Madras, Chennai	
4	Towards the Development of Superhydrophobic PANI for Corrosion Protection	J. Jyothy Mol, S. Abirami, C. Arunchandran*, CSIR – CECRI, Karaikudi	
5	Wire Rope Inspection using Magnetic Flux Leakage Technique	Harikrishna S, Bharat Petroleum Corporation Ltd, Kochi	
6	Graphene Oxide/Composite Coating on Titanium metal to Improve Biocompatibility and Corrosion Resistance;	R. Vignesh, S.P. Vinothini, Saveetha Engg., College, Chennai and T.M. Sridhar, University of Madras, Chennai	

As is the practice at every CORCON event, this year too Corrosion Awareness Awards were presented to Honora and respect individuals / institutions for their contribution to corrosion awareness and development in the field of corrosion science and technology in India. Mr. Prafulla Kumar, IG of Udaipur, Udaipur was the Chief Guest at the Award Function.

At a glittering award ceremony, the Excellence in Corrosion Science and Technology in Research and Education was given to Prof Jyotsna Dutta Majumdar, IIT Kharagpur; Distinction in Corrosion Science and Technology in Research and Education, Dr Punita Mourya, CSIR – IIP, Uttarakhand; Distinction in Corrosion Science and Technology in Industrial Organization, Dr Ruchi Grover, Oxycoats, Delhi; the Student Award for PhD Degree, Dr Geetisubhra Jena, IGCAR, Kalpakkam; the Student Award for M. Tech, Mr Naveen Krishnan, IIT Madras; Award for Excellent Laboratory, Hindustan Aeronautics Ltd., Bengaluru; Meritorious Contribution in Research & Education, Dr Mohammad Mobin, Aligarh Muslim University; Meritorious Contribution in Industrial Organization, Mr Vemuri Padmanabhan Sastry, M/s Asset Integrity and Materials

Engineering Services, New Panvel; and finally, the Lifetime Achievement Award to Shri Manohar Rao, a stalwart in the oil and gas industry with over 35 years of experience.

The Expo area boasted around 80 stalls, not only from across the country, but all over the globe exhibiting the latest innovations, products and processes.

The four-day event was not just scientific and serious discussions but also had its share of lighter moments. The cultural program on the third day had delegates letting their hair down in an evening enthralled with a colourful variety of folk dances, traditional music and entertainment, on the sprawling lawns of the Ananta Udaipur, along with puppet shows, bangle makers, pottery makers, sketch artists, amidst a village fair like atmosphere which even had handicraft sellers and fortune tellers guiding delegates about the future. Also, a plethora of other activities like city tours, yoga and meditation lessons, a mini golf tournament at the mini golf course at the resort, swimming lessons, and even activities at the gym with experienced trainers were the other highlights of the event. ■

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