

Sixth Asian Conference on Heat Treatment and Surface Engineering

Organized by

ASM International Chennai Chapter

In association with

International Federation of Heat Treatment and Surface Engineering (IFHTSE)

Conference Program

Time (Hrs.)	Day 1: 5 th March, 2020 (Thursday)	
08:15 – 09:00	REGISTRATION	
09:15 – 10:30	INAUGURAL FUNCTION	
10:30 – 11:00	VISIT TO EXHIBITION & TEA BREAK	
	Keynote Session – 1 Session Chair: Dr. Eva Troell, President, IFHTSE & RISE IVF, Sweden	
11:00 – 11:30 KL1	The Structure and Properties of Thermal Spray Coatings <i>Prof. Christopher Berndt, Swinburne University of Technology, Australia</i>	
11:30 – 12:00 KL2	On the Bio-inspired computational methods and AI technics supporting Heat Treatment processes <i>Prof. Imre Felde, Obuda University, Hungary</i>	
12:00 – 12:30 KL3	A Research and Development Roadmap to Benefit the Heat-treating Industry <i>Mr. Michael Pershing, Caterpillar Inc., USA</i>	
12:30 – 13:00 KL4	The Yoga of Failure Analysis: Materials Engineering as a Path towards Insight <i>Ms. Debbie Aliya, Aliya Analytical, USA</i>	
13:00 – 14:00	LUNCH	
	Keynote Session - 2 Session Chair: Prof. Marcel A.J. Somers, Technical University of Denmark	
14:00 – 14:30 KL5	Direct gas carburizing using hydrocarbon and nitrogen with water vapor <i>Prof. Masahiro Okumiya, Toyota Technological Institute, Japan</i>	
14:30 – 15:00 KL6	Current status of Additive Manufacturing - Myths and Realities <i>Dr. Ramesh Raghavendra, Waterford Institute of Technology, Ireland</i>	
	HALL - A	HALL - B
	Technical Session 1A Session Chair: Dr. Zoltan Kolozsvary, SC Plasmaterm SA, Romania	Technical Session 1B Session Chair: Prof. Shrikant Joshi, University West, Sweden
15:05 – 15: 20	IL-01: Case hardening by LPC and Oil and Gas Quenching for high volume production <i>Manoranjan Patra, SECO/WARWICK. India</i>	IL-04: Thermal Spray Technology to combat Rolling Contact Fatigue and Thermal/Traction Defects <i>Siva P., Nirmal Saha, Vinod Patil and Babu P.K., EWAC Alloys Ltd., Gujarat</i>

15:20 – 15: 35	IL-02: Vacuum Heat Treatment, Low pressure carburizing in the Mass/Serial Production (IL03) <i>Ulrich Dittrich, ALD Vacuum Technologies India Pvt. Ltd, Mumbai</i>	IL-05: Fire protective intumescent coatings for loadbearing steel elements <i>Marco Antonelli, Promat Training & Conferences, Belgium</i>
15:35 – 15:50	IL-03: Plasma nitriding (ion-nitriding) of Maraging steel 250 grade for a Complex part <i>Kishora Shetty, Boeing India Pvt Ltd, Bengaluru</i>	IL-06: Influence of Tempering Parameters on Liquid Nitriding Properties of AISI 4340 Steel <i>A. Venugopal, S. Shanmugham and V.P. Balaji, WABCO India Pvt Ltd., Chennai</i>
15:50 – 16:05	TEA BREAK	
	Technical Session 2A Session Chair: Mr. N. Gopinath – Fluidtherm Technology, Chennai	Technical Session 2B Session Chair: Dr. T. Sundararajan, Wheels India, Chennai
16:05 – 16:20	IL-07: Endothermic Gas Projection <i>Eric Jossart, United Process Control, USA</i>	IL-12: Modern Vacuum and Plasma Surface Heat Treatment Technologies in Mold design, Automotive and Aviation Industry <i>Juergen Krueger-Holz and Dietmar Voigtlaender, PVA, Germany</i>
16:20 – 16:35	IL-08: Continuous Nitrocarburising Furnace with Kn Potential Control <i>N. Gopinath and V. Raghunathan, Fluidtherm Technology, Chennai</i>	IL-13: High speed nanomechanical property mapping of thermal barrier coatings <i>P. Sudharshan Phani¹, B. Vignesh¹, G. Siva Kumar¹ and Warren Oliver²</i> <i>¹ARCI, Hyderabad, ²KLA Corporation, USA</i>
16:35 – 16:50	IL-09: Latest trends and Developments in quenching technology <i>Atul Kamble, Hardcastle Petrofer Pvt. Ltd., Pune</i>	IL-14: High Emissivity Coating for High Temperature Applications on TPS in Hypersonic vehicle <i>Subir Roy, S. Rangaswamy Reddy, Narendra Balasaheb Patil and V.V. Bhanu Prasad, DMRL, DRDO, Hyderabad.</i>
16:50 – 17:05	IL-10: Single piece flow heat treatment – innovative technology <i>Manoranjan Patra, SECO/WARWICK, India</i>	IL-15: Heat Treatment Cost Reduction: Preventing Rejections, Reducing Shot Blasting and Reducing Fuel Consumption by the Use of Protective Coatings <i>S. P. Shenoy, Steel Plant Specialities LLP, Mumbai</i>

17:05 – 17:20	IL-11: Investigation of surface coated components – Höganäs way <i>Vipul Utakar and Amitava Sen, Hoganas, Pune</i>	IL-16: Dense Ceramic Coatings and Its Process: A new Development <i>Satish Tailor, Ankur Modi and S. C. Modi, Metallizing Equipment Company Pvt. Ltd, Jodhpur</i>
17:20 – 17:35	CL-01: A Comparative performance study with special surface treatment processes for high durable gear shifting fork application <i>Ezhilarasi C. and Magendran G., Mahindra & Mahindra Ltd., Chennai</i>	CL-03: Diffusion bonding process to get Conformal cooling in Injection moulding process <i>S.K Subramanian and V. Venkatasubramanian, Nathan & Nathan Global Inc., Bengaluru</i>
17:35 – 17:50	CL-02: Nitridation and Hydrogen reduction of Fe-2.3wt.% Al alloy powder <i>Akeshwar Singh Yadav¹, Philipp Kürnsteiner², Eric A. Jäggle² and Sai Ramudu Meka¹, ¹IIT Roorkee, ²Max-Planck-Institut für Eisenforschung, Germany</i>	CL-04: Effect of Laser Clad parameters on microstructure of Cr₃C₂-NiCr Coatings designed for elevated temperature erosion resistant applications <i>Ratnesh Pandey, Mohan Bharathi, Ajit Hebbal, Manish Tak, G. Sivakumar, D. Srinivasa Rao and G. Padmanabham, ARCI, Hyderabad</i>
17:50 – 19:00	Visit to Poster Session & Exhibition	
19:00 – 21:30	Cultural Program & Banquet Dinner	

Day 2: 6th March, 2020 (Friday)	
	Keynote Session - 3 Session Chair: Prof. M. Kamaraj, IIT Madras
09:00 – 09:30 KL7	Challenges and provocations in materials science and surface engineering at the beginning of the 21st century <i>Dr. Zoltan Kolozsvary, SC Plasmaterm SA, Romania</i>
09:30 – 10:00 KL8	Electroless nickel-boron coatings, can it replace hard chrome? <i>Prof. Véronique Vitry, Université de Mons, Belgium</i>
10:00 – 10:30 KL9	Modern Approach to the Quality Control of HT Processes Based on CQI-9 Requirements <i>Mr. Damian Bratcher, Super Systems Inc., USA</i>
10:30 – 11:00 KL10	Advanced Concepts in Furnace Design: Continuous Furnaces with Rapid Gas Quenching for Emerging Applications <i>Mr. N. Gopinath, Fluidtherm Technology, Chennai</i>
11:00 – 11:20	TEA BREAK

	HALL – A	HALL - B
	Technical Session 3A Session Chair: Mr. Michael Pershing, Caterpillar Inc. USA	Technical Session 3B Session Chair: Prof. Imre Felde, Obuda University, Hungary
11:20 – 11:35	IL-17: Nitriding-Control the process <i>Damian Bratcher, Super Systems Inc., USA</i>	IL-24: Wear and friction behavior of laser clad iron based alloy at elevated temperature <i>Nikita Mohite and Mangesh Patil, Hoganas, Pune</i>
11:35 – 11:50	IL-18: Selection of Base Stocks for Enhanced Performance of Quenching Oils <i>Gautam N. Mehra, Savita Group, Mumbai.</i>	IL-25: Hot Corrosion-Erosion Behavior of HVOF Sprayed WC-Co/NiCrFeSiB Coatings on Boiler Tube Steels <i>M.R. Ramesh¹, S. Prakash² and S.K. Nath²</i> <i>¹NIT Surathkal, ²IIT Roorkee</i>
11:50 – 12:05	IL-19: Two new products for heat treatment & surface engineering industry from Techmat group <i>Krishna Iyengar, B K Venkatesh, Senthil Kumar, Maheswaran Lokesh and Vinodh Venkatesan, Techmat Group, Chennai</i>	IL-26: Development of HVOF Sprayed Cr₃C₂-NiCr Coating on Grade T91 Tubes of AISC Boiler <i>Hemant Kumar¹, Shaju K. Albert¹, Vivek Arya² and Sanjay Pande³, ¹IGCAR, Kalpakkam, ²BHEL, Hyderabad, ³National Thermal Power Corporation, Prayagraj</i>
12:05 – 12:20	IL-20: Synthesis and Fabrications of Additive Free Electrode Materials for High Performance Li-ion Battery Technologies: Recent Progress <i>Kuldeep Singh Rana, CPRI, Bangalore</i>	IL-27: Importance of Cleaning in Pre and Post Heat treatment processes, Systemic Approach for Total Solution <i>Ashok Konduskar, Henkel Adhesives Technologies India Pvt. Ltd., Mumbai</i>
12:20 – 12:35	IL-21: Improving Furnace Atmosphere Control and Circulation with Close Loop Atmosphere Control System <i>Debashis Roy¹, Sheetal Mohapatra¹, Indranil Mukherjee¹ and Michael Graf², ¹Linde India Limited, Kolkata, ²Linde Gas, Germany</i>	CL-05: Challenges in Localisation of Automotive Coatings & its Validation <i>Rakesh Mahendiran and Prince Lourdu Raj, Renault Nissan Technology & Business Centre India, Chennai, India</i>
12:35 – 12:50	IL-22: ZF- Nitriding <i>Kamil Siedlecki, SECO/WARWICK, Poland</i>	CL-06: Effect of Zinc Phosphate Coating Morphology on the Tightening Characteristics of Threaded Fasteners <i>P. Gokul¹, P. Shanmugam¹, S. Ramanathan² and M. Kamaraj²</i> <i>¹Sundram Fasteners Ltd., Chennai, ²IIT Madras</i>

12:50 – 13:05	IL-23: Comparison of Metal flow Phenomena during Friction Stir Welding and Friction welding of Tube to Tube Plate Using an External Tool Processes <i>S. Muthukumaran, NIT Trichy</i>	CL-07: Development of Plasma sprayed Rare Earth Zirconate based Thermal barrier coatings for enhanced CMAS/VA infiltration resistance <i>Rahul Alroy Jude, K. Praveen, D. Srinivasa Rao and G. Siva Kumar, ARCI, Hyderabad</i>
13:05 – 14:00	LUNCH	
	Keynote Session - 4 Session Chair: Prof. Masahiro Okumiya, Toyota Technological Institute, Japan	
14:00 – 14:30 KL11	Heat treatment of additively manufactured steel and selected non-ferrous alloys <i>Prof. Massimo Pellizzari, University of Trento, Italy</i>	
14:30 – 15:00 KL12	Modern vacuum technologies for Aerospace and Defense Industries + Tools & Dies heat treatment in accordance with global standards <i>Dr. Maciej Korecki, SECO/WARWICK, Poland</i>	
15:00 – 15:30 KL13	Prospects for realizing diverse functional coatings by liquid feedstock thermal spraying <i>Prof. Shrikant Joshi, University West, Sweden</i>	
15:30 – 15:45	TEA BREAK	
	Technical Session 4A Session Chair: Dr. Stefan Hock, IFHTSE, Italy	Technical Session 4B Session Chair: Dr. Sushanta Kumar Panigrahi, IIT Madras
15:45 – 16:00	IL-28: Hot Corrosion Studies on Alloy 617 OCC in Ultra- Supercritical Power Plant Environment <i>N. Arivazhagan, VIT Vellore</i>	IL-33: Effect of Equal Channel Angular Pressing and Laser Shock Peening on Magnesium Alloy <i>T. R. Praveen and H. Shivananda Nayaka, NIT Surathkal</i>
16:00 – 16:15	IL-29: How to guarantee reliable hardness test results? <i>John Piller, ZwickRoell, UK</i>	IL-34: Laser Cladding – Unveiling of new possibilities on wear and corrosion protection <i>Amitava Sen and Mangesh Patil, Hoganäs India Pvt. Ltd., Pune</i>
16:15 – 16:30	IL-30: Precipitation Hardening Heat Treatments of C250 Grade Maraging Steel and the Resultant Properties <i>M.M. Ghosh and Gaurav Kumar Singh, NIT Durgapur</i>	IL-35: Effect of heat treatment on high cycle fatigue behavior of Inconel 718 processed by selective laser melting <i>Pramod S. and D. Kesavan, IIT Palakkad</i>

16:30 – 16:45	<p>IL-31: Effective and Efficient way to achieve Properties and Productivity of Heat-Treated parts by Continuous Conveyor Belt Sub-Zero Tunnel</p> <p><i>Debashis Roy¹, Indranil Mukherjee¹ and Matthias Bors², Linde India Limited, Kolkata, ²Linde Gas, Germany</i></p>	<p>IL-36: Metallurgical understanding of the cryogenic treatment of steel: the role of isothermal martensite</p> <p><i>Matteo Villa and Marcel A.J. Somers, Technical University of Denmark</i></p>
16:45 – 17:00	<p>IL-32: Smart SICFET Modules for High Frequency Induction Heat Treatment and Tube Welding Applications</p> <p><i>Enrique J. Dede¹, José Jordán¹, Vicente Esteve¹, Shesadri B. Chanda², Satadri Chanda² and Kazi M. Islam². ¹Smart Induction Converter Technologies S.L, Spain, ²Emt Megatherm Pvt. Ltd., Kolkata</i></p>	<p>IL-37: Influence of phase proportions on the tribological performance of Al₂O₃-TiO₂ ceramic composite coatings deposited by detonation spray technique</p> <p><i>P Suresh Babu, L Rama Krishna, D Srinivasa Rao and G Padmanabham, ARCI, Hyderabad</i></p>
17:00 – 17:15	<p>CL-08: Innovative Sensors, Gas Analysers, Measuring technology and its application in Production & Control of Furnace Gas Atmosphere</p> <p><i>Manoranjan Rath, AMB Electronic System Tech. Pvt. Ltd, New Delhi</i></p>	<p>IL-38: Microstructure and Wear Behaviour of MoSi₂ Reinforced Al-Composites Processed by Stir casting method</p> <p><i>Vikas Gadpale and M.K. Manoj, NIT Raipur</i></p>
17:15 – 17:30	<p>CL-09: Enhancement of Mechanical Properties for Automotive Exhaust Manifold by Ferritic Annealing</p> <p><i>Pillai Pratik, Sivakumar V. and Vijaysankar G., Mahindra & Mahindra Ltd., Chennai</i></p>	<p>CL-12: Effects of various aging treatments on microstructures and mechanical properties of beta Titanium alloy Ti-15-3</p> <p><i>Anushree Kirthika, Aman Thakkar, R. Santhosh, M. Geetha and M. Nageswara Rao, VIT Vellore</i></p>
17:30 – 17:45	<p>CL-10: Mechanical and corrosion response of shot-peened liquid nitrided 316 stainless steel</p> <p><i>Nitin Kumar, G.P. Chaudhari, and Sai Ramudu Meka, IIT Roorkee</i></p>	<p>CL-13: Electrochemical Corrosion and Erosion Wear behavior of FeAlCr Intermetallic Coatings Deposited by Detonation Spray Technology</p> <p><i>D Vijaya Lakshmi, P Suresh Babu, S B Chandrashekar, R Vijay and L Rama Krishna, ARCI, Hyderabad</i></p>

17:45 – 18:00	CL-II: Effect of Powder Feed Rate on Weld Bead Characteristics and Dilution of Colmonoy 6 Hardfacings deposited on 304 SS by PTAW <i>S.P. Wanare and V.D. Kalyankar, SVNIT Surat</i>	CL-14: One Step Electrodeposition Method for Superhydrophobic Coating on 304L SS <i>Rasitha T.P.^{1,2}, S.C. Vanithakumari¹, R.P. George¹ and John Philip^{1,2}, ¹IGCAR, Kalpakkam, ²Homi Bhabha National Institute, Mumbai</i>
18.00 – 19.00	Visit to Poster Session & Exhibition	
19.00 – 21.00	DINNER	

Day 3: 7th March, 2020 (Saturday)		
09:00– 11:00	Keynote Session- 5 Session Chair: Prof. Christopher Berndt, Swinburne University of Technology, Australia	
09:00– 09:30 KL14	Challenges and Benefits of ‘Thru-process’ Temperature Profiling in the Heat Treatment Industry <i>Dr. Jason Dervish, Phoenix TM Ltd., UK</i>	
09:30– 10:00 KL15	Thermochemical Surface Engineering of Stainless Steels with Interstitials: Symbiosis of Science, Technology and Innovation <i>Prof. Marcel A.J. Somers, Technical University of Denmark</i>	
10:00– 10:30 KL16	Dual Frequency induction heating systems for stress relieving applications & and introducing some advances in induction packages <i>Mr. Fabien Marquis, GH Induction, Spain</i>	
10:30–10:45	TEA BREAK	
	HALL – A	HALL - B
	Technical Session 5A Session Chair: Dr. Ramesh Raghavendra, Waterford Institute of Technology, Ireland	Technical Session 5B Session Chair: Dr. Srinivasa Rao Bakshi, IIT Madras
10:45– 11:00	IL-39: Abrasive and Erosive Wear Behaviour of Nitrogen Stainless Steel <i>J.K.N. Murthy¹, B. Bhav Singh¹, B. Venkataraman¹, V. Madhu¹ and R. Arockia Kumar², ¹DMRL, Hyderabad, ²NIT Warangal</i>	IL-44: Effect of Laser Shock Peening on the structural and mechanical properties of Ni-Ti Shape Memory Alloy <i>T. Rajesh Dora^{1,5}, P. Subramaniyan², S. Kalainathan², E. Maran³, S. Anand Kumar⁴, H. Ravi Shankar⁵, P. S. De¹, R. Jha¹ and S. Gollapudi¹, ¹IIT Bhubaneswar, ²VIT Vellore, ³IIT Madras, ⁴IIT Jammu, ⁵GITAM, Visakhapatnam.</i>

11:00– 11:15	IL-40: Failure of a Furling Mast of a 42 foot Boat Due to Lack of Heat Treatment <i>Erhan Ulva, Acuren Group Inc, Canada</i>	IL-45: Electrical assisted forming of aluminium alloys <i>K. Hariharan, S.K. Panigrahi and Murugaiyan A., IIT Madras</i>
11:15– 11:30	IL-41: Investigating the friction and wear properties of micro surface-textured steel under critical lubrication regime <i>Shubrajit Bhaumik¹, Dhruvajyoti Chowdhury¹, Adarsh Batham¹, Udit Sehgal¹, Chiradeep Ghosh², Basudev Bhattacharya² and Shubhabrata Datta¹, ¹SRMIST, Kattankulathur, ²Tata Steel, Jamshedpur</i>	IL-46: Influence of Chemistry, Process and Heat-treatment Parameters on Properties of Industrial Aluminum Alloy Components: A Critical Review <i>M. Jagannatham, K. Anand, S. Manimekala, M. Monisha, S.A. Vimalathithan, and T. Sundararajan, Wheels India Pvt. Ltd., Chennai</i>
11:30– 11:45	IL-42: Optimizing Heat Treating Specifications for Medium Technology Applications Economy and Durability <i>Debbie Aliya, Aliya Analytical, USA</i>	IL-47: Synergetic effect of thermal treatment and thermo-mechanical processing on the structural properties of an Al-Si-Mg alloy – A metallurgical investigation <i>R.J. Immanuel¹ and S.K. Panigrahi²; ¹IIT Bhilai, ²IIT Madras</i>
11:45– 12:00	IL-43: Tribotesting: enabling materials innovation for challenging applications <i>Debdutt Patro¹, Sravan Josyula¹, Harish Prasanna¹, Fabio Alemano², Angela Tortora² and Deepak Halenahally Veeragowda², ¹Ducom Instruments, India, ²Ducom Instruments, Europe</i>	IL-48: Investigations on selective laser nitriding of A356 Al alloy for improving its wear behavior <i>Kulkarni Achyuth Rao¹, Manikandan M¹, Ashish K. Shukla¹, Shanmugham Subramaniam², Balaji V. P.², I.A. Palani¹ and M. Jayaprakash¹, ¹IIT Indore, ²WABCO India Pvt. Ltd.</i>
12:00– 12:15	CL-15: Wear Characteristics Study on PTFE And Peek Coatings in AISI 1040 Steel <i>S. Karthi, S. Shanmugham and V.P. Balaji, WABCO India Pvt LTD, Chennai</i>	IL-49: Development of surface pretreatments to increase corrosion resistance of AZ91 magnesium alloy <i>Charu Singh, S.K. Tiwari and Raghuvir Singh, CSIR-National Metallurgical Laboratory, Jamshedpur</i>

12:15– 12:30	CL-16: Multi length Scale Tribology of Cr₃C₂ Reinforced Tribaloy T-400 <i>Moumita Mistri¹, Shrikant Joshi², Kamal K Kar¹ and Kantesh Balani¹, ¹IIT Kanpur, ²University West, Sweden</i>	CL-17: Evolution of microstructure of 6xxx billets during homogenization <i>Sumit Kumar Gahlyan, Vivek Srivastava and Pankaj Wanjari, HINDALCO, Mumbai</i>
12:30 -13:30	LUNCH	
	Technical Session 6A Session Chair: Prof. Massimo Pellizzari – University of Trento, Italy	Technical Session 6B Session Chair: Prof. Marcel AJ Somers, Technical University of Denmark, Denmark
13.30– 13:45	IL-50: Corrosion Behavior of Some Post-Plasma-Spraying Gas Nitrided Metallic Coatings on ASTM-SA210 Grade A-1 Boiler Steel at High Temperature <i>Vikas Chawla, I.K. Gujral Punjab Technical University, Kapurthala</i>	IL-52: Effects of Rare earth oxide doping on hot corrosion behaviour of detonation-gun-sprayed NiCrAlY coating on superalloys in sulfate and potassium containing environment at 900°C <i>Subhash Kamal¹, S. R. Pedapati² and A.M. Abdul-Rani², ¹Geethanjali College of Engg. and Technology, Hyderabad, ²Universiti Teknologi PETRONAS, Malaysia</i>
13:45– 14:00	IL-51: Second advice: how failure analysis of metallic components can bring very different results when carried out by different labs, while it should not <i>Véronique Vitry, Victor Ioan Stanciu and Fabienne Delaunois, Université de Mons, Belgium</i>	IL-53: Microstructure property relationship of UHSS steel - EN 10149-2-S700MC <i>Pradip K Patra¹ and Ashok Kumar Srivastava², ¹JSW Steel Dolvi Works, Mumbai, ²OP Jindal University, Raigarh</i>
14:00– 14:15	CL-18: Development of Empirical Relationship to Predict Porosity And Micro Hardness Of Cold Sprayed Metal Matrix Composite Coatings On AZ31B Magnesium Alloy <i>D. Thirumalaikumarasamy and M. Ashokkumar, Government College of Engineering, Bargur</i>	CL-23: Fiber metal Laminates for the subsea housing applications <i>Thirunavukkarasu A, Velamurali and Latha G, National Institute of Ocean Technology, Chennai</i>
14:15– 14:30	CL-19: Benefits for Heat Treatment and Surface Engg plants by implementing IATF 16949 and CQI requirements <i>C.N. Prasannakumar, Nathan & Nathan Consultants Pvt. Ltd., Chennai</i>	CL-24: Influence of E-waste on the Mechanical Characterization of hemp fiber Epoxy Composite <i>Quberk Jeeva Singh C, Rajamurugan G and Prabu Krishnasamy, VIT Vellore</i>

14:30–14:45	CL-20: Failure analysis of boiler hairpin of Rajasthan Atomic Power Station-2 <i>Raman Saini, Suraj Kumar, Nitin Kumawat, B.N. Rath, Akanksha Samanta and J.L. Singh, Bhabha Atomic Research Centre, Mumbai</i>	CL-25: Microstructure, Phase Characterization and oxidation Kinetics of CVD grown Pyrolytic Graphite Coatings <i>E. Vetrivendan^{1,2}, Hareesh Rongali^{1,2}, Ravikumar Sole¹ and S. Ningshen^{1,2}, ¹IGCAR, Kalpakkam, ²Homi Bhabha National Institute, Mumbai</i>
14:45– 15:00	CL-21: Low pressure carburising and high-pressure gas quenching technology in manufacturing <i>Prashant Jadhav, ECM Furnaces India Pvt. Ltd., Pune</i>	CL-26: Scaled Down Ballistic Tests using a Long Rod Penetrator with Two Stage Gas Gun <i>Rajnish Goyal and B. Venkataraman, DMRL, Hyderabad</i>
15:00 –15:15	CL-22: Comparative DC Electrochemical and Hot Corrosion performance of Thermal spray coatings for AUSC Boiler Applications <i>C. Sundaresan¹, A. Jyothirmayi², B. Rajasekharan¹ and G. Sivakumar², ¹NIT Surathkal. ²ARCI, Hyderabad</i>	CL-27: Effect of Temperature and Environment on Oxidation of 304HCU Stainless Steel <i>M. Archana^{1,2}, Ch. Jagadeeswara Rao^{1,2}, S. Ningshen^{1,2} and John Philip^{1,2}, ¹IGCAR, Kalpakkam, ²Homi Bhabha National Institute University, Mumbai</i>
15:15–16:15	VALEDICTORY FUNCTION	
16:15– 16.45	HIGH TEA- GOOD BYE!	

KL- Keynote Lecture; IL- Invited Lecture; CL-Contributory Lecture; P-Poster

Poster Code	Poster Details
P01	Corrosion behavior of boronized 13Cr-4Ni martensitic stainless steels <i>Nirupama Mohan and G.P. Chaudhari, IIT Roorkee</i>
P02	In-vitro biocompatibility and corrosion resistance of electrochemically assembled PPy/TNTA hybrid material for biomedical applications <i>V. Sudhisha, V.S. Simi and N. Rajendran, Anna University</i>
P03	Use of Direct Metal Laser Sintering and Spark Plasma Sintering Techniques to Facilitate Joining of Steel and Titanium <i>N.S.M. Akhil, K. Sri Harsha, N. Naveen Kumar and D. Hemanth, Vignan's Institute of Information Technology, Visakhapatnam</i>
P04	Optimizing Cold Spray Process Parameter to Attain Minimum Porosity and Maximum Hardness in Metal Matrix Composite Coatings on AZ31b Magnesium Alloy by Response Surface Methodology <i>M. Ashokkumar and D. Thirumalaikumarasamy, Government College of Engineering, Bargur</i>

P05	A Couple Thermo-Mechanical model based on Coupled Eulerian Lagrangian to simulate Friction Stir Welding to predict forces and defect formation <i>Atul Kumar Choudhary and Rahul Jain, IIT Bhilai</i>
P06	Double Re-austenitization and Tempering Based Post Weld Heat Treatment Cycle for P91 Steel Welded Joint. <i>N. M. Pandya and V. D. Kalyankar, SVNIT, Surat</i>
P07	Engineering Initial Microstructure by Pre-Heat Treatment for Enhanced Rollability of ZK60 (Mg-Zn-Zr based) Magnesium Alloy <i>Rakesh Kumar and S K Panigrahi, IIT Madras</i>
P08	Experimental Investigation of Microstructure-induced Strain Hardening Characteristics of 17-4 PH Stainless Steel <i>Athul Sathyanath and Anil Meena, IIT Madras</i>
P09	Investigation of the microstructure induced cutting forces during high-speed machining of Ti6Al4V <i>Shiv Sharma and Anil Meena, IIT Madras</i>
P10	Influence of age hardening heat treatment on mechanical behavior of in-situ sub-micron sized TiB₂ reinforced ZE41 magnesium matrix composite <i>Sushanta Kumar Sahoo and S K Panigrahi, IIT Madras</i>
P11	Study on Diamond Like Carbon Coatings on Nitinol by Thermal Chemical Vapor Deposition <i>J. B. Rajashri and A. Siddharthan, MIT Campus, Anna University, Chennai</i>
P12	Establishment of a novel cold-welding technique to develop aluminum-copper bimetals using a combination of severe plastic deformation and heat treatment <i>B. Prathyusha, A. Dhal and S.K. Panigrahi, IIT Madras</i>
P13	Influence of heat treatment on microstructural evolution and mechanical properties of cryorolled AA6063/SiC nano composite <i>Omkar Bembalge and S K Panigrahi, IIT Madras</i>
P14	Metallurgical developments in the weld pool during cladding: A Review <i>A.R. Bhoskar and V.D. Kalyankar, SVNIT, Surat</i>
P15	Numerical and Experimental investigation of the ductile damage model for failure prediction in Incremental sheet metal forming <i>Sahil Bharti, Aishwary Gupta, K. Hariharan and S.K. Panigrahi, IIT Madras</i>
P16	Effect of dry sliding wear test parameters on wear behaviour and wear mechanisms of plasma sprayed stellite coatings on AZ91D magnesium alloy <i>Mathivanan and D.Thirumalaikumarasamy, Government College of Engineering, Bargur</i>
P17	Effect of Nickel-Based Cermet Coatings on Slurry Erosion Resistance of Monel K-500 Alloy <i>Navneet K. Singh¹, Andrew S.M. Ang², Christopher C. Berndt², Dhiraj K. Mahajan¹ and Harpreet Singh¹,¹IIT Ropar, ²Swinburne University of Technology, Melbourne, Australia</i>

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