Fourth Heat Treatment and Surface Engineering Conference & Expo
(HTSE 2023)

Organized by

ASM International Chennai Chapter

Tentative Conference Program

Time (Hrs.)	Day 1: 28th September 2023 (Thursday)
08:15 – 09:00	**Registration**
09:15 – 10:30	**Inaugural Function**
10:30 – 11:00	**Exhibition Inauguration & Tea Break**
11:00 – 13:30	**Technical Session – 1** **Session Chair:**
11:00 – 11:45 PL1	Inventing the Future with Materials: 'The Backbone of Modern Technology & Innovation *Dr. Navin Manjooran, Senior Vice President, ASM International, USA & Solve-global, USA*
11:45 – 12:30 PL2	Thermal Process Prototyping & Spin-off Heat Treatment Technologies *N. Gopinath, Dr Vivek Singal, Fluidtherm Technology, Chennai, India*
12:30 – 13:00 KL1	Graphene nanocomposite coatings for protecting low-alloy steels from corrosion *Dr. Tapan Rout, Tata Steel, India*
13:00 – 13:30 KL2	A successful collaborative endeavor between ISRO & CUMI: Technology Absorption, Standardization & Space Qualification Process of 3-layer (Cr-Cu-Au) Metallized 99.6% Alumina Substrate for MIC Fabrication *Dr. Santanu Mandal, CUMI Murugappa, Chennai, India*
13:30 – 14:30	**Lunch Break**
14:30 – 16:45	**Technical Session - 2** **Session Chair:** To be decided
14:30 – 15:15 PL3	The Extrinsic Features of Thermal Spray Microstructures that Provide Architectural Ingenuity *Prof. Christopher C. Berndt, Swinburne University, Australia*
15:15 – 15:45 KL3	Additive Manufacturing (Manufacturing and Process Mechanics aspects), Rapid Manufacturing *Prof. S. Marya and Dr. J.Y. Hascoet, Ecole Centrale de Nantes, Nantes Cedex, France*

15:45 – 16:15 KL4	Xitiz Technology on Vacuum Heat Treatment through high performing, highly efficient and cost-effective solution for Hardening, Tempering, Annealing, Brazing, Solution Annealing, Stress Relieving and Low-Pressure Carburising through High Pressure Gas Quenching/Oil Quenching Through Horizontal and Vertical Furnaces *Manoranjan Patra, Xitiz Technomech LLP, USA*		
16:15 – 16:45 KL5	Modern Approach to the Quality Control of HT Processes Based on CQI-9 Requirements *Damian Bratcher, Super Systems Inc., USA*		
16:45 – 17:00	**Tea Break**		
17:00 – 18:00	**Technical Session – 3 (Invited Presentations)**		
	HALL – A	**HALL - B**	**HALL - C**
	Technical Session 3A **Session Chair:** To be decided	**Technical Session 3B** **Session Chair:** To be decided	**Technical Session 3C** **Session Chair:** To be decided
17:00 – 17:15	***IL-01:*** Advance technology in low viscosity & shorter vapour phase quenching oils to control distortion in critical automotive parts *BN Balasundar, Hardcastle*	***IL-05:*** Compositionally modulated Ni-W multilayers to alleviate the residual stresses in coatings for superior wear resistance *Nitin Wasekar, ARCI Hyderabad*	***IL-09:*** Development of a Diffusion Bonding Press for manufacture of Stainless Steel 304 Plates used in Printed Circuit Heat Exchangers *Shubham Vishwakarma, Vijay Biradar, Pramod Kumar, Nagarjun Sakhamuri, Prameela Hind High Vacuum Company Pvt. Ltd.*
17:15 – 17:30	***IL-02:*** Effect of Induction Hardening on the Durability of Nodular Iron Rear Spring Support Brackets *Mrunali S., Ashok Leyland Technical Centre*	***IL-06:*** High Temperature ceramic coating for Automotive Engine component *K Krishnamoorthy, Ashok Leyland Technical Centre*	***IL-10:*** Development of Wear Resistant Metal Matrix Composite by Hot Isostatic Process for High Pressure Grinding Application *Biju Karakkunnummal, FL Smidth*
17:30 – 17:45	***IL-03*:** Energy efficiency in Heat Treatment Processes *Rudrarup Sengupta and Omprakash D, KANTHAL Alleima India Private Limited*	***IL-07:*** Advanced Thermal Barrier Coatings for Aerospace Gas Turbine Engine Applications *P. Kuppusami, Sathyabama Institute of Science and Technology*	***IL-11*:** Powder Metallurgy Processing and Tribological Behaviour of Titanium Alloys for Biomedical Implant Applications *Rakesh Kumar Gautam, Rupesh Kumar, IIT BHU, Varanasi*

17:45 – 18:00	***IL-04:*** Optimization of Induction Hardening & Tempering Heat Treatment using Self-Tempering to achieve cost reduction and energy conservation *Manish Gokhale, John Deere India Private Limited*	***IL-08:*** Scratch Damage, Friction and Wear of Coatings using In-Situ Imaging and Acoustic Emission Techniques *Debdutt Patro, Ducom India Pvt. Ltd.*	***IL-12:*** Room Temperature Formability of Ultrafine Grained Materials *Suman Deb, IIT Bhubaneshwar*
18:00 – 19:00	**Visit to Poster Session & Exhibition**		
19:00 – 21:30	**Networking Dinner**		

Day 2: 29th September 2023 (Friday)	
9:00 – 11:00	**Technical Session – 4** **Session Chair:** To be decided
09:00 – 09:45 PL4	Case Hardening by Low Pressure Carburizing for Automotive and Aerospace industry *Kamil Siedlecki, Adam Adamek, SECO/WARWICK Group, Poland*
09:45 – 10:30 PL5	Diamond Coatings for Technological Applications *Prof. M.S. Ramachandra Rao, IIT Madras*
10:30 – 11:00 KL6	Base Oils and its Trends *Elanchezhian. K., Savita Oil Technologies Limited, Chennai, India*
11:00 – 11:30	**Visit to Exhibition & Tea Break**
11:30 – 13:30	**Technical Session – 5** **Session Chair:** To be decided
11:30 – 12:00 KL7	Economic & Ecological Impact and Advantages of Plasma-based Surface Treatments *Martin Strutzenberger, Rubig Group, Austria*
12:00 – 12:30 KL8	Tools and Dies heat treatment in vacuum furnaces *Kamil Siedlecki, SECO/WARWICK Group, Poland*
12:30 – 13:00 KL9	Low-Temperature Surface Hardening of Stainless Steel & Titanium *T.S. Hummelshøj, Expanite A/S, Denmark*
13:00 – 13:30 KL10	Heat treatment of additively manufactured tool steel and selected Titanium alloys *Prof. M. Pellizzari, University of Trento, Italy*

13:30 – 14:30	**Lunch Break**		
14:30 – 16:00	**Technical Session – 6 (Invited Presentations)**		
	HALL – A	**HALL - B**	**HALL - C**
	Technical Session 6A **Session Chair:** To be decided	**Technical Session 6B** **Session Chair:** To be decided	**Technical Session 6C** **Session Chair:** To be decided
14:30 – 14:45	***IL-13*:** Synergetic effect of process parameters and heat treatment on microstructure and mechanical properties of LPBF Processed MS300: Fabrication of Porous Structures *Harsh Sonia and B.N. Sahoo, SVNIT Surat*	***IL-19*:** Surface Engineering and DLC Coating of Ti6Al4V for Improved Tribological Performance and Longevity of Hip Implant *P. Ramkumar, IIT Madras*	***IL-25*:** Influence of metal powder manufacturing in additive manufacturing process *Arunkumar M, Indo-MIM Private Limited*
14:45 – 15:00	***IL-14:*** Electrical assisted forming and heat treatment *K. Hariharan, IIT Madras*	***IL-20:*** Face centered cubic (fcc) titanium: Not an artifact in titanium / aluminum multilayer thin films *Ramaseshan, IGCAR Kalpakkam*	***IL-26*:** New Approach towards solving NVH issues - Automotive Brake Friction Materials *Balaji Srinevasan and N. Bala-subramanian, Rane Brake Lining Ltd.*
15:00 – 15:15	***IL-15**:* Digitization and Data Analysis in Foundries – Predictive and Prescriptive Quality *Daniel Panny, UPC Marathon, USA*	***IL-21:*** Application of novel nanoceramic coatings and in-situ surface modification methodologies to improve abrasive properties of alumina-based materials *N.S. Karthiselva, CUMI Murugappa*	***IL-27:*** Thermal Processing related failures of Engineering Components *R.R. Bhat, Advisor - Aerospace, Menon and Menon Limited, Kolhapur*
15:15 – 15:30	***IL-16*:** Novel heat treatment to improve temper embrittlement resistance of martensitic stainless steels *Bharat B. Panigrahi, Kirtiratan Godbole and C. R. Das, IIT*	***IL-22*:** Tribological properties of ceramic solid lubricants based anti-seize paste for high temperature applications- an economical alternative solution to molybdenum di sulphide anti-seize pastes	***IL-28:*** Failure analysis of Instrumented Relief Valve (IRV) elbow joint of Power Station *Raman Saini, Suraj kumar, B N Rath, Nitin Kumawat, and P.P. Nanekar, Bhabha Atomic Research Centre,*

	Hyderabad	*Shubrajit Bhaumik, Amrita School of Engineering, Amrita Vishwa Vidyapeetham, Chennai*	*Mumbai*
15:30 – 15:45	***IL-17*:** Effect of varying tempering temperatures on the microstructure and mechanical properties of low alloy steels *Ananthu Prasan and Nithin Raj P, Peekay Steels*	***IL-23*:** Study on the effects of acid passivation on hot corrosion resistance of hyper duplex stainless steel *Nithin Raj P, Peekay Steels*	***IL-29:*** Development of high-performance age hardenable ultrafine grained AA6063/SiC nanocomposite sheets using a novel hybrid manufacturing *Omkar Bemblage, IIT Dharwad*
15:45 – 16:00	***IL-18*:** Vacuum heat treatment for Aerospace *Adam Adamek, Seco/Warwick S.A. Swiebodzin, Poland*	***IL-24*:** Cyclic oxidation and hot corrosion behaviour of HVOF sprayed WC-Co/NiCrFeSiB alloy coating on industrial boiler tube steel *M.R. Ramesh, NIT Surathkal*	***IL-30:*** A physical metallurgy study on AZ91/Ti surface composite developed through Friction stir processing for improving fatigue performance *Jose Immanuel, Indian Institute of Technology Bhilai, Raipur*
16:00 - 16:20	**Tea Break**		
16:20 – 17:00	**Technical Session – 7 (Contributed Presentations)**		
	HALL – A	**HALL - B**	**HALL - C**
	Technical Session – 7A **Session Chair:** To be decided	**Technical Session – 7B** **Session Chair:** To be decided	**Technical Session – 7C** **Session Chair:** To be decided
16:20 – 16:30	***CL-01:*** Applications of Puls-plasma Nitriding technology *V. Venkat, PVA Industrial Vacuum Systems GmbH*	***CL-05:*** Residual Stress in Engineering Materials *Anand Joshi, Caterpillar India Pvt. Ltd.*	***CL-09:*** Alternate material in place of EN353 for the production of gear box components *K Krishnamoorthy, Ashok Leyland Technical Centre*
16:30 – 16:40	***CL-02:*** Optimization of Process and Heat-treatment Parameters on Metallurgical and Mechanical Characteristics of Aluminum Alloys: A Critical Study &	***CL-06:*** Reliability improvement in high frequency Air control solenoid plungers using novel surface treatment techniques *Jagdish D.K., UCAL Fuel Systems*	***CL-10:*** Material Selection through Artificial Intelligence in Automotive industry *Shanmugam S, Balaji VP, Diviya S, Karthi S, Kavitha R, and Mohankumar*

	Review *M. Jagannatham, S.A. Vimalat-hithan and V. Padmanabhan, Wheels India Ltd.*	*Ltd., Chennai*	*A, ZF Commercial Vehicle Control System India Limited*
16:40 – 16:50	***CL-03:*** Effect of Forging and Solution treatment temperature on Mechanical Properties of AA6061 forged Motor Mount Swingarm & Rear Mount LH/RH Swingarm *Sathish Kumar, River Mobility Private Limited*	***CL-07:*** Study of Microstructure, mechanical properties and corrosion behavior of MAO coated Pistons *Jagadeshwaran J, Ashok Leyland Technical Centre*	***CL-11:*** Additive Manufacturing for Automotive Application – Case Study: Intercooler prototype *Muthupandy A., ZF Commercial Vehicle Control System India Limited*
16:50 – 17:00	***CL-04:*** Heat treatment sequence and surface treatment effect in wheel bolt for improving fatigue life *Dhandapani P, Ragothaman Balakrishnan, Vijayaraj B, and Vijaysankar G, Mahindra and Mahindra ltd, Chennai*	***CL-08:*** Investigation of the emittance properties of multilayer insulation used in cryogenic applications *Uday Kumar, ITER-India, Institute for Plasma Research*	***CL-12:*** Effect of tungsten content on liquid phase sintered W-Ni-Co tungsten heavy alloys *U. Ravi Kiran, J. Mahesh, S. Rajesh, J. Jhasi, P.K. Jena, and G. Prabhu, Defence Metallurgical Research Laboratory, Hyderabad*
17:00 – 18:30	**Technical Session – 8**	**Session Chair:** To be decided	
17:00 – 17:30 KL11	Carburizing in a de-carburizing world *M.S. Ganesh, ECM Furnaces, France*		
17:30 – 18:00 KL12	Bridging the Gap between Batch & Continuous Heat Treatment Furnaces *N Gopinath, Girish Chintawar, Fluidtherm Technology, Chennai, India*		
18:00 – 18:30 KL13	Improving Resistance to type IV cracking of P91 Steel Weld Joints by Modifying Initial Microstructure employing Heat treatment and/or TMT Processes Prior to Welding *M. Vasudevan, Indira Gandhi Centre for Atomic Research, Kalpakkam, India*		
18.30 – 19.30	**Visit to Exhibition and Poster Session**		
19.30 – 21.30	**Cultural Program & Dinner**		

Day 3: 30th September 2023 (Saturday)			
9:00 – 10:30	**Technical Session – 9** **Session Chair:** To be decided		
09:00 – 09:30 KL14	Development of coils for induction hardening/heating applications by simulation *R.V. Chari, GH Induction, Chennai, India*		
09:30 – 10:00 KL15	Heat Treatment of Materials and Components for Space Applications *Dr. S.V.S. Narayana Murty, Liquid Propulsions System Centre, Trivandrum, India*		
10:00 – 10:30 KL16	Specialty Steels for Strategic Applications *Dr. R. Balamuralikrishnan, Defence Metallurgical Research Laboratory, Hyderabad, India*		
10:30 – 11:00	**Visit to Exhibition & Tea Break**		
11:00 – 12:15	**Technical Session – 10**		
	HALL – A	**HALL - B**	**HALL - C**
	Technical Session 10A **Session Chair:** To be decided	**Technical Session 10B** **Session Chair:** To be decided	**Technical Session 10C** **Session Chair:** To be decided
11:00 – 11:15	***IL-31*:** Oxidation Behavior of Nanostructured & Post-Plasma-Spraying Gas Nitrided AlCrN Coating on ASTM-SA213-T-22 Boiler Steel under Cyclic Conditions *Vikas Chawla, I.K. Gujral Punjab Technical University*	***IL-36*:** Development of hardfacing technology for surfacing of nuclear power plant components *Hemant Kumar, C.R. Das, and M. Vasudevan, IGCAR Kalpakkam*	***IL-41*:** Bead Geometry and Microstructural Properties of AZ31 Magnesium Alloy Deposited By Cold Metal Transfer Welding *Manjaiah M, National Institute of Technology Warangal*
11:15 – 11:30	***IL-32*:** Effect of Solution Heat Treatment on Surface Modification of Single-Crystal *Nandam Srinivas, Defence Research and Development Organization*	***IL-37:*** Surface Treatment of Heat Sink Fins made of Aluminium alloy used for Thermal Management of Travelling Wave Tube Amplifiers *Himanshu Shukla and Sharad Shukla, ISRO Ahmedabad*	***IL-42*:** Novel modeling strategy to understand the deformation behaviour of cryo- manufactured materials *Srinivas Behera, NIT Rourkela*
11:30 – 11.45	***IL-33*:** Heat Treatment of	***IL-38:*** Development of CVD	***IL-43:*** Effect of heat treatment on

	Aluminium Pressure Die Casting: Challenges and Opportunities *T.V.L. Narasimha Rao and S.L. Pramod, Sundaram Clayton Ltd.*	Pyrolyitc Graphite Coating for High Temperature Pyroreprocessing Application - A Study on Molten Salts Corrosion *E. Vetrivendan, Hareesh Rongali, B. Madhura and S. Ningshen, IGCAR Kalpakkam*	mechanical properties of LPBF processed gradient IN718 alloy *D. Kesavan, IIT Palakkad*
11:45 – 12:00	***IL-34*:** Heat treatment in electroplating for enhanced performance properties *Kiran Sharanappa and Rohen Bhatnagar, Atotech India*	***IL-39*:** Grain boundary relaxation and its effect on hardness and corrosion behavior of nanocrystalline Ni-P *Srikant Gollapudi, IIT Bhubaneswar*	***IL-44*:** Study of Microstructure and Mechanical Properties of TIG Welded 304–316L Dissimilar Steel Joint *Prashant Pandey and S.B. Mishra, MNNIT, Allahabad*
12:00 – 12:15	***IL-35:*** Influence of Post-Weld Heat Treatments on the Strength and Toughness characteristics of 12 mm thick Maraging steel C-250 fabricated via Laser Hybrid Welding *Bibin Jose, Manikandan Manoharan, and Arivazhagan Natarajan, Vellore Institute of Technology, Vellore*	***IL-40*:** Development of Copper and Nickel based Coatings on Reinforcements and Composite Surfaces for Functional Applications *T.P.D. Rajan, Akhil M.G., Jerin K. Pancrecious, Sujith Vijayan, Bashida V.B. and Visakh M, CSIR-National Institute for Interdisciplinary Science and Technology, Trivandrum*	***IL-45:*** Effect of the addition of Si_3N_4 on the microstructure, mechanical properties and wear resistance of sintering of TiCN based cermets *V. Vetri Vel and Balasivanandha Prabu Shanmugavel, College of Engineering Guindy, Anna University*
12:15 – 13:15	**Technical Session – 11 (Contributed Presentations)**		
	HALL - A	***HALL – B***	***HALL - C***
	Technical Session 11A **Session Chair:**	**Technical Session 11B** **Session Chair:**	**Technical Session 11C** **Session Chair:**
12:15 – 12:25	***CL-13:*** Influence of Heat treatment Process Disruptions to Catastrophic failures in Automotive Transmission	***CL-19:*** Overview of coating and surface modifications used in off-highway industry. *Manish Gokhale, John Deere*	***CL-25:*** Green steel a step towards Carbon Neutrality: A Review *Mohit Madavi, ZF Commercial Vehicle Control System India Limited*

	V Varun, V Sivakumar, G Vijay Sankar and V Senthilkumaran, Mahindra and Mahindra ltd, Chennai		
12:25 – 12:35	***CL-14:*** Study of Gear Distortion due to Heat Treatment *Senthilkumar Balu, ZF Wind Energy, Coimbatore*	***CL-20:*** Correlation of Tortional Fatigue strength with IGO depth generated during Carburizing *Bhalchandra Bhadak, Trishita Roy, and Nikhil Deo, Eaton India Innovation Center*	***CL-25:*** Case study - Environmental assisted spring failure in commercial vehicle *Manivannan K.R., ZF Commercial Vehicle Control System India Limited*
12:35 – 12:45	***CL-15:*** Elimination of ERW tube surface imperfection by modified heat treatment process *Venugopal Azhagarsamy, ZF Commercial Vehicle Control System India Limited*	***CL-21:*** Fatigue analysis of Gas Nitrided AISI H13 Die Steel *Tarang Shinde, V.B. Maner, A.S. Shivade, A.B. Atpadkar , S.K. Raut, P.P. Nimbalkar, and M.L. Rathod, Yashoda Technical Campus, Maharashtra*	***CL-27:*** Computational Thermodyn-amics and Thermo-Kinetics for Alloy design, Process Optimization and Characterization *K Guruvidyathri, University of Hyderabad*
12:45 – 12:55	***CL-16:*** Innovative Heat Treatment solution with No-Man Operation of Batch type Furnace for High Throughput Production *Taif Hussain, Unitherm India Heat Treatment Systems Pvt Ltd.*	***CL-22:*** Pitting Corrosion in Exhaust Gas Recirculation system and its relation to the Fuel quality *Rakesh Mahendiran and Suresh Pulluru, Renault Nissan Technology & Business Centre India Pvt Ltd*	***CL-28:*** Effect of Quenching Medium on Mechanical Properties of W-Ni-Co Tungsten Heavy Alloy *Pradipta Kumar Jena, K Jagadeeshwar, and G Prabhu, Defence Metallurgical Research Laboratory, Hyderabad*
12:55 – 13:05	***CL-17:*** Core Strength Enhancement of Gears and Shafts by use of High Performance Quench Oil *Sivakumar G.K., Ramesh P., and Krishnamoorthy K., Ashok Leyland Technical Centre*	***CL-23:*** Systematic Approach to Corrosion Protection *Soumyodeep Bhattacharya and Ravi Jaiswal, Zavenir Daubert India Private Limited*	***CL-29:*** Indigenous Development of Cannon Liner Steel: Lab to Industry Scale *Ashok K, Snehashish Tripaty, Murugesan A P, Gopi K Mandal, Vikas C Srivastava, R R Singh, IIT Hyderabad*
13:05 – 13:15	***CL-18:*** Validation of heat	***CL-24:*** Tribological studies of	***CL-30:*** To be decided

	treatment technique employed for simulating microstructures of the heat-affected zones of P91 steel weld joint *K. Mariappan, Vani Shankar, A. Nagesha and M. Vasudevan, IGCAR Kalpakkam*	Fluoroelastomers used in ISI vehicle of PFBR *N.L. Parthasarathi, IGCAR Kalpakkam*	
13:15 – 14:00	**Lunch Break**		
14:00 – 15:30	**Technical Session – 10** **Session Chair:** To be decided		
14:00 – 14:30 KL17	Heat Treatment Optimization of Mechanical Properties in Additively manufactured Aluminum, Nickel and Cobalt based Superalloys for Gas Turbine Applications *Dr. Dheepa Srinivasan, Pratt & Whitney R&D Center United Technologies Corp., Bengaluru, India*		
14:30 – 15:00 KL18	Thermal Spray Coatings for Oil and Gas Refinery Applications *Dr. Urvesh Vala, L&T Energy Hydrocarbon Engineering Ltd., Vadodara, India*		
15:00 – 15:30 KL19	Indigenization efforts towards the development of plasma sprayable powders and coatings for aerospace, energy and biomedical applications *Dr. S.T. Aruna, National Aerospace Laboratory, Bengaluru, India*		
15:30 – 15:45	**Tea Break**		
15:45 – 16:45	**Technical Session – 11** **Session Chair:** To be decided		
15:45 – 16:15 KL20	Technical challenges and solutions to the complete thru-process temperature monitoring of key heat treatment applications combining heating and quench phases *Jason Dervish, PhoenixTM Ltd, United Kingdom*		
16:15 – 16:45 KL21	Experimental Investigation of Laser Nitriding and Combined Texturing of Wire-Arc Additively Manufactured NiTi Shape Memory Alloy for Biomedical Applications *Dr. I.A. Palani, IIT Indore, India*		
17:00 – 17:45	**Valedictory Function**		
17:45 hrs	**High Tea - Good Bye !**		

PL – Plenary Lecture; KL- Keynote Lecture; IL- Invited Lecture; CL-Contributory Lecture; P-Poster

POSTER SESSION DETAILS

Poster Code	Poster Details
P01	Microstructure and microhardness of heat-treated Alloy 625 fabricated by laser powder bed fusion *Dinesh Babu, VIT Vellore*
P02	Microstructural changes during quenching of medium carbon steel in different solid quenchants and influence on the mechanical properties *Priya Tiwari, Maulana Azad National Institute of Technology, Bhopal*
P03	Influence of Heat Treatment Cycles on the Work Hardening Behavior of Selective Laser Melted Ti6Al4V ELI Alloy *M. D. Sukre, and Anil Meena, IIT Madras*
P04	Characteristics of martensite-austenite island decomposition during two-step tempering treatment and its effect on mechanical properties in Mn-Ni-Mo steels *Rahul Ranjan, and Anil Meena, IIT Madras*
P05	Corrosion behaviour of oxide coatings synthesized with superheated steam over Maraging Steel in acidic environment *Arun Nair, Amal Jyothi College of Engineering*
P06	Fretting wear behaviour of AA2524T3 alloy *Rajendra Kumar R T P, Jayabal K, Kamaraj M, and Srinivasa Rao Bakshi, IIITD&M Kancheepuram and IIT Madras*
P07	Numerical characterization of Particle Velocity in Aluminium Cold spray Coating *Ram Mukilan C, Rajendra Kumar RTP, Jayabal K, Kamaraj M, and Srinivasa Rao Bakshi IIITD&M Kancheepuram and IIT Madras*
P08	A Review on Application of Thermal Spray Coatings for Protection of Boiler Steels against Erosion-Corrosion Wear *Abhay Shankar Yadav, Motilal Nehru National Institute of Technology Allahabad*
P09	Modeling of Wetting Behavior of Developed Electrode Coating by Using Artificial Neural Network Approach *S. Mishra, IIT Jodhpur*
P10	Erosion Corrosion Resistance Performance Evaluation of the HVOF Sprayed Cr_3C_2-NiCr Coated AISI 304 Stainless Steel

	K. Arunkumar, D. Sathiskumar, N. Kumaravel, L. Prithivraj, and N. Sivalingam, SRG Engineering College, Aniyapuram, Namakkal
P11	Evaluating the Thermal Cyclic and Shock Performance of Multi-Layered Thermal Barrier Coatings *Renuka Y, and Anderson A, Sathyabama Institute of Science and Technology, Chennai*
P12	Surface engineered rare earth metal ion incorporated titanium substrate for orthopedic application *S. Manju Bharathi and N. Rajendran, Anna University, CEG Campus*
P13	Optimization of the turning parameters of Multi-Axial Compressed AA-6061 Alloy using Taguchi Technique *A.K. Padap, A.P. Yadav, P.K. Yadav, and N. Kumar, BIET Jhansi, and C.I.P.E.T. Lucknow*
P14	*Influence of surface modifications on the emissivity of AISI 304L stainless steel* *Uday Kumar, IIT Madras*
P15	Fabrication of nanostructure surface on titanium for orthopaedic applications *Ayisha Nachiya S.A.F, and N. Rajendran, Anna University, CEG Campus*
P16	Numerical Modeling of a tailored Stir Casting method for the Development of Globular Grains after Solidification *Nilesh Kumar, IIT Madras*
P17	Achieving Repeatability and Stability in Laser Color Marking of Stainless Steel AISI 304: Insights into Focal Length and Marking Position Significance *Ankit Awasthi, IIT Bombay*
P18	A Novel Approach to Overcome Casting Based Challenges in Magnesium Alloys *Vidya Tiwari and S.K. Panigrahi, IIT Madras*
P19	Characterization of Ni-13%WC8Co microwave clad on AISI-316 steel *Manavendra Mishra, S. B. Mishra, and D.K. Shukla, Motilal Nehru National Institute of Technology*
P20	Electroformed Copper Pillar structures on Additively Manufactured Template: Modeling and Validation *Prince Kumar Rai, IIT Jodhpur*
P21	Prediction and Modeling of Wetting Behavior of Formulated SMAW Electrode Coating Fluxes *A. Kumar, IIT Jodhpur*
P22	Tribological investigation of gas tungsten arc welded dissimilar joint of sDSS 2507/N50 steel *Anup Kumar Maurya, IIT Jodhpur*
P23	Dry Sliding Wear Study of Cao Reinforced Magnesium Matrix Nanocomposites *Shahul Hamid Khan, IIITDM - Kancheepuram*
P24	Influence of CaO Nanoparticles on Fretting Wear Characteristics of Mg Nanocomposites *Kartheesan S, Shahul Hamid Khan, and Kamaraj M, IIITDM Kancheepuram*

P25	Electrochemical Behavior of Gallium decorated Titania nanotube arrays *P. Muniyan & N. Rajendran, Anna University, CEG Campus*
P26	Fabrication of bio-inspired gadolinium doped pedot on nanostructured titanium implants for orthopaedic applications *V Sudhisha and N Rajendran, Anna University, CEG Campus*
P27	Polyaniline incorporated zirconium as osteoinductive implant material for orthopedic application *A. Dharshini and N. Rajendran, Anna University, CEG Campus*
P28	Surface behavior of Tungsten nanoparticles doped TNTs and its electrochemical performances *P.Cheranmadevi and N. Rajendran, Anna University, CEG Campus*
P29	Forging of Alumina Nano-Particle Reinforced Aluminium Based Metal Matrix Composites *Ravikumar K.S., Maharaja Institute of Technology Mysore*
P30	*Modeling of Physicochemical, Thermophysical and wettability Characteristics of Al_2O_3-SiO_2 -CaO-Na_3AlF_6 Based SMAW Coating* *Alok Gupta, IIT Jodhpur*
P31	Modeling of cold spray flow dynamics and particle acceleration and deformation of pure aluminum for the repair of aircraft structures *Rajendra Kumar R T P, Jayabal K, Kamaraj M and Srinivasa Rao Bakshi, IIITD&M Kancheepuram, IIT Madras*
P32	Effect of Laser Shock Peening on Micro Structure and Corrosion Properties of AA 2014-T6 Aluminium Alloy *Chandan Kumar, and Manoj Kumar Reddy Perla, NIT Surathkal*
P33	Corrosion behaviour of electrochemically surface engineered zirconium alloys *Sushmi Shree G and Rajendran N, Anna University, CEG Campus*
P34	Development of high bond strength Al/Cu bimetallic sheets by an innovative hybrid manufacturing process *B. Prathyusha, Indian Institute of Technology Madras*
P35	Phase-field Modeling of Crystal Grain Growth *Maruthuparthasarathy. K, IIT Hyderabad*
P36	Effect of sub β-transus treatment on microstructure and mechanical properties of LPBF method of Ti-6Al-4V alloy *S. Usha Rani, D. Kesavan, and M. Kamaraj, IIT Madras and IIT Palakkad*
P37	Experimental investigation of hot corrosion characteristics on bimetallic welds in a molten salt environment *Vijay Kumar, IIT Jodhpur*
P38	Development of Low-Cost Abrasive Flow Finishing Media using Waste Coal Fly-Ash, its Characterization and Performance Evaluation

	Irfan Ahmad Ansari, IIT Kanpur
P39	Kinetics of microstructural changes in P92 steel due to isothermal heat treatment *Mantosh Mandal, B. Aashranth, Dipti Samantaray, and M. Vasudevan, IGCAR Kalpakkam*
P40	Improvement in Wear Resistance properties of Austempered Ductile Iron (ADI) after Microalloying *D Parameswaran and Khushboo Rakha, Indian Institute of Technology Ropar*
P41	Fabrication of nanostructure surface on titanium for orthopaedic applications *Ayisha Nachiya S A F and N. Rajendran, Anna University, CEG Campus, Chennai*

****