



Thursday, July 11, 2024

TIME	SALON DES ROSES A (Level 0)	JUPITER (Level 0)	SALON DES ROSES B (Level 0)
09:00-10:45	Session 6 “Infrastructures for Innovative Renewable Resources” Chair: Prof. Mayorkinos Papaelias	Session 5 “Worldwide Availability of Welding related Personnel” Chair: Dr. Clovis Rodrigues	Session 1 “Innovative Welding and Joining Technologies” Chair: Prof. Myung Hyun Kim
09:10-09:30	KEYNOTE SPEAKER: Design Considerations for CO2 Transportation Pipelines K. Diamantopoulos		
09:30-09:45	OP 187 Influence of hydrogen exposure on the behaviour of transporting pipeline sections János Lukács , Nóra Nagy	OP 438 Data for worldwide availability of Welding related personnel Georgia Kolyva, Fernando Manas	OP 452 Characterizing liquid metal embrittlement during resistance spot welding of Zn coated steels Gautham Mahadevan
09:45-10:00	OP 231 Assessment of Mechanical Properties and Corrosion Resistance of Low Ni Austenitic Stainless Steels for Application in LNG Carrier Pipes Youngchai Lee , Changmin Lee, Cheolhyun Bae, Jaehee Lee	OP 041 How Bilateral Agreement Between Countries Can Solve South Korea's Problem of Welder Scarcity for Its Ship Manufacturing Industry Peping Rahmawati Sugianto	OP 309 High-magnesium-content aluminum alloys via wire-based friction stir additive manufacturing Yongxian Huang, Jinqi Wang
10:00-10:15	OP 325 The next generation of large offshore wind energy generators Rita Bola , Sara Fernandes , Marta Mateo, Cristina Salazar	OP 461 Enhancing Welder Training in Shipbuilding with AR Virtual Welding Systems Antonio Fernandez Perez	OP 215 Quantitative Structural Health Monitoring of Composite Materials Matthew Gee , Mayorkinos Papaelias, Farzad Hayati, Sanaz Roshanmanesh, Xiaoying Li, Hanshan Dong
10:15-10:30	Op 178 Factors affecting the integrity of pipelines transporting hydrogen containing media Judit Kovács , János Lukács	OP 473 Residual Life Assessment (RLA) and standardization Lauriane Guilmois , Fabien Lefebvre , Bruno Depale	OP 431 Performance Study of 1100MPa High-strength Steel Joints under Laser-Arc Hybrid Welding Process Ziyou Ren
10:30-10:45	OP 274 The Role of DED Additive Manufacturing in Supporting the Energy and Maritime Industries Teresa Melfi, Mark Douglass, Patrick Wahlen	OP 416 Use of welding camera in education and industry Juha Kauhanen , Taito Alahautala	OP 448 Comparison of mechanical and microstructural properties by heat source of laser-arc hybrid welding using Aluminum alloys Seong-hyun Kim , Changwook Ji
10:45-11:15	Coffee Break		



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11:15-13:00	Session 6 “Infrastructures for Innovative Renewable Resources” Chair: Prof. Moeini Ghazal	Session 1 “Innovative Welding and Joining Technologies” Chair: Prof. Mayorkinos Papaelias	Session 1 “Innovative Welding and Joining Technologies” Chair: Prof. Alexander F. H. Kaplan
11:15-11:30	OP 536 Technoeconomic and Life Cycle Analysis of Energy Storage Systems Dimitris Zarras, Dimitris Zarras	OP 414 Investigation of stress field with neutron diffraction technique of welds carried out under a temper bead technique Romain Jeanpierre , Sébastien Rouquette, Dominique Deveaux, Frédéric Deschaux-Beaume, Laurent Jubin, Fabien Soulié, Fabien Lefebvre	OP 092 Comparative study on the oxide of SLMed maraging using VIGA and PREP powders Chao Wang
11:30-11:45	OP 171 Study on Impact Toughness of the Austenitic Stainless Steels at Super-Cryogenic Temperature for Liquefied Hydrogen Storage Tanks Changmin Lee , Jaehee Lee	OP 277 Joining SrTiO3 ceramics by using SnO-ZnO-P2O5-SiO2 phosphate glass filler Ding Hao	OP 345 On Combined Tensile - Shear Behavior of Laser Welded Overlap Thin Plates of Similar and Dissimilar Steels Mihaela Iordachescu , Eng. Maricely De Abreu, Eng. Patricia Santos, Andrés Valiente, Prof. Elena Scutelnicu
11:45-12:00	OP 059 Development of a Camera Module and Digital Image Correlation (DIC) for the Reliability Assessment of Cryogenic Welded Joints for Hydrogen Embrittlement and Liquid Hydrogen Storage Alloys Jongwon Lee, Mokali Veeresham, Nokeun Park , Hyomin Kim, Eunjin Lee, Yoona Lee, Namhyun Kang, Eungryul Baek	OP 430 Microstructure and Hydrogen Embrittlement Sensitivity of TC4 Titanium Alloy Welded Joint with Narrow Gap Xudong Feng , Yu Shi	OP 295 Fit-up tolerance in laser welding Wojciech Suder , Stewart Williams
12:00-12:15	OP 419 Automated arc welding and quality assessment of large-scale support structures for offshore wind turbines Andreas Pittner , Cagtay Fabry, Michael Rethmeier	OP 437 The Influence of Power Modulation Laser Welding on the Interface Microstructure and Mechanical Properties of Aluminum-Steel Dissimilar Metal Joints Junze Lu	OP 540 Technical challenges in achieving widespread implementation of wave energy converter systems and future directions Matthew Gee , J. Aguzzi, G. Picardi, I. Masmitja, D. Chatzievangelou, N. Bahamon, J. Grinyo, N. Robinson, M. Clavel-Henry, J. B. Company, J. Del Rio, M. Francescangeli, D. M. Toma, M. Carandell, E. Martinez, E. Chatzidouros, M. Karakitsiou, L. Constantinou, A. Chronakis, M. Hlatky, Z. Zhang, F. Hayati, S. Roshanmanesh, G. Fernando, Dimitris Zarras
12:15-12:30	OP 420 Mechanical properties of hydrogen-exposed austenitic stainless-steel weld at cryogenic temperatures Dongjin Oh , Yongjoon Kang, Sangwoo Song	OP 009 Effect of surface modification of AISI 8620 steel on mechanical properties Sachin Balbade , Sourav Das	OP 299 Development and application of arc sensing and seam tracking algorithm for collaborative robots Bum Jin Kim , Bo Wook Seo, Kwan Woo Ko, Seok Kim, Young Tae Cho
12:30-12:45	OP 481 Temperature and stress simulation of thermal barrier coatings on gas turbine blades Je Min Lee	OP 389 The effect of welding and strain conditions on the susceptibility to solidification cracking of a fully austenitic stainless steel Yang Shaowei , ITO Tamaki, Yamamoto Michimoto, Shinozaki Kenji	OP 405 Investigations of welded joint properties of 1200M steel by laser beam welding Raghavendra Pratap Singh Sisodia , Marcell Gáspár, Ferenc Hareancz, Gergely Juhász, Ferenc Tajti
12:45-13:00	OP 788 Promoting Intelligent Welding and Additive Manufacturing Technologies through Social Organization Standard Zhenying Liu	OP 191 Ultrasonic Metal Welding Characteristics of Aluminum Alloy and Automotive Steel Sheet Byeong-jin Kim , Insung Hwang, Seong-Guk Son, Chanhoon Park, Seung Hwan Lee, Young-Min Kim	OP 517 Effect of power modulated laser welding on the interfacial organization and mechanical properties of aluminum-steel dissimilar metal welded joints Junze Lu
13:00-14:30	Lunch Break		



Thursday, July 11, 2024

14:30-16:15	Session 2 “Energy Projects in the Mediterranean Sea” Chair: Prof. Kubit Andrzej	Session 1 “Innovative Welding and Joining Technologies” Chair: Prof. Haichao Cui	Session 1 “Innovative Welding and Joining Technologies” Chair: Prof. Mayorkinos Papaelias
14:30-14:45	OP 478 Dual-Channel Limited Penetrable Visibility Algorithm for Acoustic Emission of Pipeline Weld Crack Leakage Quantitative Monitoring Jing Huang , Zhifen Zhang, Rui Qin, Guangrui Wen	OP 447 Compared to weld zone by Welding method to Cryogenic Austenitic Stainless Steel Jaehan Park , JeongYeol Park, ChangWook Ji	OP 450 A study on optimization of welding parameter to thick plates for application laser-arc hybrid welding Jeong Yeol Park , Changwook Ji, Jooyong Cheon, Hyun Uk Jun
14:45-15:00	OP 444 Underwater Flux-Cored Arc Welding (UWFCAW) - how pulling and drag angle affect process stability, microstructure, and mechanical properties Antonios Antoniou , Philipp Schempp, Martin Bonnet	OP 611 Advancements in Welding Techniques for Copper Pipes in Heat Pump Systems: A Comparative Analysis João M. S. Dias, António Pereira , Ana Horovistiz, Nélia M. Silva, Sathishkumar Duraisamy, Eyuel A. Lemma, Bernardo Mascate, Diogo Costa	OP 303 Cracking mechanism and suppression method of selective laser melted refractory high-entropy alloy Hongyuan Wan , Zexin Zhang, Wei Chen
15:00-15:15	OP 472 Effect of preload on the fatigue behaviour Lauriane Guilmois , Isabel Huther, Laurent Jubin, Fabien Lefebvre	OP 415 Experimental and computational fatigue strength analysis of typical penstock welds Claudia Pollak-Reibenwein	OP 520 Double-sided friction stir spot welding of ultra-high strength C-Mn-Si martensitic steel by adjustable probes Xiaopei Wang , Yoshiaki Morisada, Kohsaku Ushioda, Hidetoshi Fujii
15:15-15:30	OP 480 The influence of ambient pressure on arc welding processes with consumable electrode Andrés Mauricio Moreno Uribe , Paulo Modenesi, Thomas Hassel, Alexandre Bracarense	OP 350 Microstructure evolution, mechanical and electrochemical properties of heat-treated hot isostatically pressed Ni60A hardfacing layer Lei Yu , Yingjie Yan, Jinyuan Ma, Hao Dong, Zhengyi Jiang, Rui Cao	OP 020 Metallurgical Processes and Mechanical Properties of Friction Stir Welded Commercially Pure Titanium Michael Regev , Stefano Spigarelli
15:30-15:45	OP 418 MariClad - Repair of ship propellers using additive manufacturing methods Fabian Kaschke, Sarunas Plenaitis, Tim Böttcher , Rigo Peters	OP 149 Comparison of selected rutile flux-cored wires stored under different environmental conditions Aleksandra Świerczyńska , Michał Landowski, Dariusz Fydrych	OP 453 Effects of cooling rate on the microstructure and properties of coarse-grained zone in complex steel 780HE Yue Wang , Xuetao Li, Shan Jiang, Xianchun Dong, Bing Yu
15:45-16:00	Q&As	OP 278 Effects of post-welded hot rolling on the properties of explosively welded Mg alloy/Al alloy cladding plates Mami Mihara-Narita , Hisashi Sato, Yoshimi Watanabe, Minzhe Bian, Yasumasa Chino	OP 010 Hardness Prediction of the Heat-Affected Zone in Multilayer Welded Austenitic Stainless Steel Based on Dislocation Density Change Behavior Lina Yu , Kazutoshi Nishimoto, Hiroyuki Hirata, Kazuyoshi Saida
16:00-16:15		OP 683 A Study on Plasma Cutting Machine’s Nozzle Degradation Detection Method Based on Cutting Noise Analysis Tomoya Yamauchi , Takayuki Yotsuzuka, Takaaki Takeuchi, Naoki Osawa	OP 436 Wettability and interfacial structure of Cu-aSn-bCr alloys on typical carbon material surfaces Wenjuan Ci , Yu Shi, Qiaoli Lin
16:15-16:45	Coffee Break		



Friday 12 July 2024

TIME	SALON DES ROSES A (Level 0)	JUPITER (Level 0)
08:45-10:45	Session 1 “Innovative Welding and Joining Technologies” Chair: Mr. Matthew Gee	Session 4 “Additive Manufacturing” Chair: Prof. Chen Huabin
08:45-09:00	OP 329 Microstructure and Mechanical Properties of Weld Metal of Railway Wheel Steel Yongjoon Kang , Seo-Wan Kim, Kangmyung Seo, Dongjin Oh, Sangwoo Song	OP 226 Analysis and Testing solutions for Additive Manufacturing Akiyoshi Yokota
09:00-09:15	OP 526 Research Progress of Friction Stir Riveting (FSR) Technology for Al-Steel Dissimilar Metals Thin-walled Structure He Shan , Yongbing Li, Tao Yuan, Shujun Chen	OP 400 Development of Laser-Arc Hybrid Directed Energy Deposition Process for Ultra-Thin Structure In Soo Jo
09:15-09:30	OP 091 Laser welding of aluminium to copper mixed material joints with a thickness of up to 5mm Benjamin Gerhards , Bernhardt Macke, Johanna Adenacker, Philipp Liebe, Markus Schleser	OP 533 Investigating the Effect of Varying Powder Size on Particulate Matter Emission and Mechanical Properties of In-Situ Micropowder Alloyed WAAM Depositions Adarsh Prakash , Rubal Dhiman, Anirudha Ambekar, Thaseem Thajudeen, Sachin Kore
09:30-09:45	OP 038 AI Driven Autonomous Adaptive Feedback Welding Machine Benedikt von Querfurth , Shems-Eddine Belhout , Christian Knaak, Stefan Mann, Peter Abels, Carlo Holly, Jon Tatman, Darren Barborak, Mitch Hargadine	OP 053 Microstructural and mechanical characterization of a 16MND5 low alloy steel manufactured by innovative WAAM SAW process Flore Villaret , Iban Jacot, Yang Shen, Zichen Kong, Tingting Xu, Yiling Wang, Di Lu
09:45-10:00	OP 036 Evaluation of mechanical properties and corrosion resistance of low-pressure cold spray coated high-strength low-alloy steel components manufactured using the Directed Energy Deposition-Arc process Marc Müggenburg , Hendrik Jahns, Heli Koivuluoto, Antoine Queguineur, Suraj Panicker, Klaus Thiele, Eric Coatanéa, Julian Unglaub, Hossein Mokhtarian	OP 172 Microstructure evolution of Ni-Co-Al alloy by laser directed energy deposition Haozhi Chai , Xin Lin
10:00-10:15	OP 392 Simulation study on the mechanism of flux strip influence on arc characteristics in FBCA ultra-narrow gap welding of high-strength steel T-joints Lei Wang	OP 332 The comparison investigations of the WAAM technology in order to improve forging tools Leszek Łatka , Paweł Widomski, Maciej Zwierzchowski, Constantinos Goulas, Marcel Joseph Marie Hermans
10:15-10:30	OP 129 Effect of bonding temperature on microstructure and mechanical properties of Ti2AlNb diffusion bonded joint Jiafen Song , Jiangtao Xiong, Jinglong Li	Q&As
10:30-10:45	OP 366 Characterization of Welds in Copper Generated by a High-Power Blue Laser Sean Teoh , Pratik Shukla, Ioannis Metsios, Sanjay Gupta, Naien Wu, Aurélie Tolten, Wei Zhou	
10:45-11:15	Coffee Break	



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11:15-13:30	Session 1 “Innovative Welding and Joining Technologies” Chair: Prof. Mayorkinos Papaelias	Session 4 “Additive Manufacturing” Chair: Prof. Cai Xiaoyu
11:15-11:30	OP 128 Exploring Electron Beam Welding Techniques for Structural Steel: Characterization and Mechanical Evaluation Bernaitz Arregi , Imanol Altuna	OP 406 Friction stir welding of additively manufactured advanced aluminum alloys Pasquale Russo Spena , Franco Lombardi, Manuela De Maddis, Vincenzo Lunetto, Mohammad Abankar, Dario Basile, Matteo Benedetti, Matteo Perini, David Novel, Pietro Mirandola
11:30-11:45	OP 259 On the influence of process parameters on the dimensional accuracy and microstructure of wire electron beam additive manufactured Ti-6Al-4V alloy Frederic Schlieker, Dzhem Kurtulan , Ghazal Moeini	OP 229 Controlling Bead Shape in Wire Arc Additive Manufacturing via Direct Roll Forming of Molten Metal Pool Hwi Jun Son , Seok Kim, Young Tae Cho
11:45-12:00	OP 106 Mechanical properties of one-sided welding for the low-temperature steel using a high-current MAG welding Youngho Cho	OP 387 Structural integrity of 3D printed billets of titanium alloy Ti-6.5Al-1Mo-1V-2 S.V. Akhonin, V.M. Nesterenkov, V.A. Matviychuk, I.M. Klochkov, V.V. Pashynskiy, V.A. Kostin, V.O. Berezos, Sviatoslav Motrucich
12:00-12:15	OP 424 On the issue of assessing the probability and preventing the occurrence of "ductility dip cracking" mechanism under conditions of multi-layer welding arc 3D-overlapping process on nickel and cobalt alloys Oleksandr Yarovytsyn , M.O. Cherviakov, H.V. Zviahintseva, I.R. Volosatov, H.D. Khrushchov, Yu.O. Nykytenko	OP 302 Additive Manufacturing of Novel CoCrMoFe Alloy for Dental and Maxillofacial Applications Jag Parvesh Dahiya , Murugaiyan Amirthalingam
12:15-12:30	OP 375 A holistic approach for near-net-shape processing of iron aluminides by means of Laser Directed Energy Deposition with cored wires Alexander Schmidt, Aliakbar Emdadi , Sebastian Härtel	OP 228 Creating a virtual model for additively manufactured structures with wire-DED monitoring data Bo Wook Seo , Kwan Woo Ko, Seok Kim, Young Tae Cho
12:30-12:45	OP 320 The effect of weld bead geometry on the microstructure and mechanical properties of 7050-T7451 aluminum alloy by laser arc hybrid welding Wenqiang Gao , Fei Xu, Jinhan Chen, Xuyi Ma	OP 383 Fabrication of High-Hardness Tantalum-Doped Eutectic High-Entropy Alloy Using Wire Arc Additive Manufacturing Anatoliy Zavdoveev, Magdalena Speicher, Illia Klochkov, Andrey Klapatyuk, Alex Gajvoronskiy, Valeriy Poznyakov, Dmitry Vedel, Vitaliy Bevez, Mykola Skoryk, Sviatoslav Motrucich
12:45-13:00	OP 281 Development of a High-magnification In-situ Observation System for Welding Solidification Phenomena Tamaki Ito , Kenshi Arima, Shaowei Yang, Keita Marumoto, Kenji Shinozaki, Motomichi Yamamoto	OP 123 Estimating printing height in L-DED from melt pool images with the aid of artificial intelligence Kandice Suane Barros Ribeiro , Henrique Hiram Libutti Núñez, Giuliana Sardi Venter, Reginaldo Teixeira Coelho
13:00-13:15	OP 095 Microstructural and mechanical characterizations of Mo-14Re alloy/AlN ceramic joints by Ni-Ti-Cr-Si-B composite braze Mengchun Fu , Panpan Lin, Peng He, Tiesong Lin	OP 396 Understanding of the oxide inclusion evolution during the additive manufacturing Du-Rim Eo , Jung-Wook Cho
13:15-13:30	Q&As	OP 417 Understanding and Overcoming the Challenges in the Welding of Additively Manufactured Aluminium Alloys Components Rafael Nunes , Koen Faes, Wim Verlinde, Wim De Waele, Matthieu Lezaack, Aude Simar