



Working unit: C-IX

**Draft Agenda of AA Meeting of Commission IX
'Behavior of Metals subject to Welding'**

July 8~10, 2024

IX-2861-2024

Venue

Room JUPITER
Rodas Palace Hotel:
Trianton Avenue, Ixia, 85100.
Rhodes Island, Dodekanesos Complex, Greece

Meeting Schedule

July 8 (Monday)	9:00 ~ 13:00	Opening session IX-L meeting
July 9 (Tuesday)	9:00 ~ 13:00	IX-AM meeting IX-NF meeting
July 10 (Wednesday)	9:00 ~ 13:00	IX-H meeting Closing

IIW ANTITRUST POLICY

IIW activities are based on a close, voluntary cooperation of its worldwide members with the overall target to improve the knowledge and skills in joining. To maintain these fruitful activities, it is strictly necessary to meet the obligatory terms of antitrust laws during IIW working sessions, meetings and other events. Thus, any commercial oriented discussion (including, but not limited to market shares, prices, turnovers, production quantities, costs, suppliers and/or customers) is strictly banished. By attending the meeting, you commit to follow the terms of prevailing antitrust laws (relevant antitrust laws can be found at www.iiwelding.org).

Monday, July 8, 2024

I. Welcome and Administration (Chair: Dr. Hee Jin KIM)

1. Opening of the meeting
2. Apologies
3. Approval of Agenda (IX-2861-2024)
4. Approval of MoM
 - 2023 AA meeting (IX-2823-2023re1)
 - 2024 Intermediate meeting (IX-2825-20245)
5. Election
 - Chair of C-IX by IIW Secretary
 - Chair of IX-AM by Commission Chair (Att: List of National delegates)

II. Technical meeting of Commission IX-L: *Low alloy steel welds* (Chair: Prof. Nobert Enzinger)

1. IX-2860-2024 (IX-L-1290-2024) The effect of post weld heat treatment on mechanical properties and the micro- and nanostructure of creep-resistant 2.25Cr-1Mo-0.25V submerged-arc weld metal, *Ronald Schnitzer, H. Fleißner-Rieger, M. Schmitz-Niederau*
2. IX-2858-2024 (IX-L-1295-2024) Welding of 42SiCr treated by Quenching and Partitioning - Mechanical properties of the HAZ and preheating proposal, *J. Kaars, F. Dittrich, P. Mayr, J. Hensel*
3. IX-2832-2024 (IX-L-1291-2024) Welding Study on Nano-High Strength Steel in Baosteel, *Z. Qu, L. Xia, Q. Zheng*
4. IX-2833-2024 (IX-L-1292-2024) New Methodology for hydrogen-induced cold cracking sensitivity assessment in MAG welding of steel sheets for automotive chassis application, *D. Cornette, J. Haouas, K. Thihay*
5. IX-2833-2024 (IX-L-1293-2024) Evaluation of susceptibility to gaseous hydrogen of a longitudinal weld seam in an API X65 pipeline using the hollow specimen technique, *T. Böllinghaus, F. Konert, J. Nietzsche, O. Sobol*
6. IX-2829-2023 (IX-L-1284-2023) Continuous Cooling Transformation diagram of a high-strength all-weld metal with a yield strength exceeding 1100 Mpa, *D. Schrittwieser, D.M. Morales, H. Pahr, R. Schnitzer*

7. IX-2830-2024 (IX-L-1285-2024) Effect of silane-doped argon shielding gases for gas metal arc welding, *Kai Treutler, Philipp Neef, Volker Wesling*
8. IX-2831-2024 (IX-L-1286-2024) Effects of cooling rate on microstructural evolution and low temperature impact toughness of inter-critically reheated coarse-grained heat affected zone (ICCGHAZ) in 420 MPa offshore engineering steel, *Savyasachi Nellikode, Siva Prasad Murugan, Jun-Ho Chung, Hyungkwon Park, Yeong-Do Park*
9. IX-2835-2024 (IX-L-1294-2024) Physical simulation-based analysis of multipass welding in S500 shipbuilding steel, *M. Gáspár, J. Kovács J. Sainio, H. Tervo, V. Javaheri, A. Kajjalainen*

Tuesday, July 9, 2024

III. Technical meeting of Commission IX-AM: Metallurgy of AM (Chair: vacant)

1. IX-2836-2024 (IX-AM-012-2024): Effect of Substrate Preheating and In-Situ Cooling on Dimensional Accuracy, Microstructure, and Hardness of Wire Arc Additive Manufacturing Components, *T. Reindl, N. Hempel, P. Mayr*
2. IX-2837-2024 (IX-AM-013-2024): Origin of anisotropy in tensile properties in thin wall of martensitic stainless steel fabricated by wire arc additive manufacturing, *Z. Lyu, Y. S. Sato, S. Tokita, Y. Zhao, J. Jia, A. Wu*
3. IX-2859-2024 (IX-AM-014-2024): Specimen design for determination of fatigue strength parameters on WAAM materials, *K. Treutler, M. Wächter, M. Hupka, M. Leicher, A. Esderts, V. Wesling*
4. IX-2838-2024 (IX-AM-015-2024): Influence of machining on residual stresses in additive manufactured high-strength steel components, *K. Wandtke, L. Engelking, D. Schroepfer, R. Scharf-Wildenhain, A. Hälsig, A. Kromm, T. Kannengiesser, J. Hensel*
5. IX-2828-2024 (IX-AM-016-2024): High strength plasma wire arc additive manufacturing (PWAAM) on a high carbon steel – a detailed characterization of the transition zone, *M. Moschinger, R. Hou, J. Inoue, N. Enzinger*
6. IX-2840-2024 (IX-AM-017-2024): Insitu alloying of Al-Cu-Si using dual-wire plasma additive manufacturing, *S. Reinbacher, T. Klein, C. Simson, P. Spörk-Erdely, N. Enzinger*

7. IX-2839-2024 (IX-AM-018-2024): Additive manufacturing of iron aluminides: microstructure, machinability, and surface integrity, *J. Witte, D. Schroepfer, K. Treutler, T. Kannengiesser, V. Wesling*
8. IX-2841-2024 (IX-AM-019-2024): Development of high-efficiency wire and laser additive manufacturing technology for stainless steel, *Y. Banno, S. Tsubota, Y. Fujiya, M. Kimura*
9. IX-2843-2024 (IX-AM-020-2024): Hydrogen embrittlement in additively manufactured 316L – The relationship between surface quality and the influence of hydrogen on mechanical properties, *J. Nietzke, F. Konert, K. Poka, B. Merz, M. Rhode, O. Sobol, T. Böllinghaus*
10. IX-2842-2024 (IX-AM-021-2024): Proposal of IIW working group for performance and quality assessment of large-scale AM products in shipbuilding industry, *S.-B. Shin, S.-W. Song, C.-W. Ji*

IV. Technical meeting of Commission IX-NF: *Non-ferrous materials* (Chair: Jean P. Bergman)

1. IX-2847-2024 (IX-NF-62-2024): Process and joint properties of GMA-welded alloy AW6082 with MA-6063 filler metal, *Judith Schenk, Kevin Hoefer, Jonas Hensel*

Wednesday, July 10, 2024

V. Technical meeting of Commission IX-H: *Weldability of stainless and nickel base alloys* (Chair: Elin M. Westin)

1. IX-2849-2024 (IX-H-966-2024): Enhancing duplex stainless steel additive manufacturing with DED-LB/w: Microstructural, analysis and process optimization, *E.M Westin, M.A Valiente Bermejo, B. Axelsson, K. Hurtig, P. Hagqvist, I. Choquet*
2. IX-2850-2024 (IX-H-969-2024): Directed energy deposition-arc of 2205 duplex stainless steel using nitrogen-bearing shielding gas, *Tamás Tóth, E.M Westin, Markus Köhler, Klaus Dilger*
3. IX-2851-2024 (IX-H-968-2024): Effect of solution annealing heat treatment on hot cracking susceptibility of new Ni-based superalloy G27, *Achmad Ariaseta, Joel Andersson, Olanrewaju Ojo*
4. IX-2856-2024 (IX-H-978-2024): Conventional welding of additively Manufactured materials, *Vamadevan Gowreesan, W. Greaves*

5. IX-2852-2024 (IX-H-964-2024): Coupled prediction of weld bead shape and solidification microstructure of austenitic stainless steels using computer simulation, *Naoki Sahara, Shotaro Yamashita, Hiroyuki Hirata, Kazuyoshi Saida*
6. IX-2853-2024 (IX-H-973-2024): On the issue of assessing the probability and preventing the occurrence of "ductility dip cracking" mechanism under conditions of multi-layer welding arc 3D-overlaying process on nickel and cobalt alloys, *Yarovytsyn O.V., Cherviakov M.O., Zviahintseva H.V., Volosatov I.R., Khrushchov H.D., Nykytenko Yu.O.*
7. IX-2857-2024 (IX-H-979-2024): Weldability evaluation of corrosion resistant alloy weld metals for high-temperature service using transvarestraint test, *A.B.F. Sousa, F.E. Cavalcante Neto, J.S. de Souza, M.T. Piza Paes, G. Dalpiaz, R. R. Marinho, R. Gonsiorocki Mombru, É.M. Miná, M.F. Motta, H.C. de Miranda, Cleiton Carvaiho Silva*
8. IX-2826-2024 (IX-H-967-2024): Assessing ferrite content in duplex stainless steel weld metals: WRC '92 predictions vs. practical measurements, *Lukas Quackatz, Elin Westin, Axel Griesche, Arne Kromm, Thomas Kannengiesser, Kai Treutler, Volker Wesling, Sten Wessman*
9. IX-2854-2024 (IX-H-963-2024): Condition of lacy ferrite formation during FA-mode solidification in austenitic stainless steels and the pitting corrosion resistance, *Kota Kadoi, Mari Kogure, Hiroshige Inoue*
10. IX-2855-2024 (IX-H-965-2024): Effect of deformation-induced martensite on the toughness of austenitic weld metal, *Hayato Tachibana, Hajime Matsuo, Takahiro Kamo*

VI. Summary and Others

1. Summary of technical presentation
 - *WitW* recommendation
2. Administrative matters
 - Resolutions
3. Next meetings
 - 2025 Intermediate Meeting
 - 2025 AA meeting

Att :

List of National delegates of C-IX

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