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INTERNATIONAL INSTITUTE OF WELDING
A world of joining experience

IX-2723-2021

COMMISSION IX

BEHAVIOR OF MATERIALS SUBJECTED TO WELDING

IX-2723-2021

**AGENDA FOR 2021 MEETINGS OF COMMISSION IX,
74TH ANNUAL ASSEMBLY, ONLINE, JULY 14~16, 2021**

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AGENDA FOR 2021 MEETINGS OF COMMISSION IX, 74TH ANNUAL ASSEMBLY, ONLINE, JULY 14~16, 2021

Program Summary

July 7, 2021 (Wednesday)	13:00 - 16:15	General Assembly and Opening <i>Venue : on-line</i>
July 14, 2021 (Wednesday)	13:00 - 13:10 13:10 - 16:00	Opening of C-IX meetings Commission IX-L meeting <i>Venue : on-line, Room 2</i>
July 15, 2021 (Thursday)	13:00 - 13:10 13:10 - 16:00	Video presentation of WithW Commission IX-H meeting <i>Venue : on-line, Room 2</i>
July 16, 2021 (Friday)	13:00 – 16 :00 16:00 - 16:15	Commission IX-C meeting Commission IX-NF meeting Summary of C-Ixmeetings & Closing <i>Venue : on-line, Room 2</i>

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.

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Wednesday, July 14, 2021

I. Opening Session

- I-1. Opening and welcome by Chair
- I-2. Approval of Agenda (IX- 2723-2021)
- I-3. Approval of Minutes of AA meeting 2020 (IX-2709-2020)
- I-4. Approval of Minutes of Intermediate meeting 2021 (IX-2722-2021)
- I-5. Election of Chair for 2022-2025

II. Subcommittee IX-L: Low alloy steel welds

(Chair: Prof. Norbert Enzinger)

- II-1. Administration matters of IX-L
- II-2. Technical Presentation of documents (presentation order by Chair):
 - 1. IX-2735-2021 IX-L-1236-2021 Investigation of WC-tool-component solution mechanism arose in a steel surface layer during friction stir processing
 - 2. IX-2736-2021 IX-L-1237-2021 Feature of Microstructure and its Formation Mechanism in a Newly Developed Electro Slag Welding
 - 3. IX-2737-2021 IX-L-1239-2021 EBSD characterisation of grain sub-structures for welded low-alloy steel
 - 4. IX-2738-2021 IX-L-1240-2021 Microstructural aspects of hydrogen stress cracking in low carbon and high strength steel welds
 - 5. IX-2739-2021 IX-L-1241-2021 Nature of non-metallic Inclusions in Electro-gas weld metal
 - 6. IX-2740-2021 IX-L-1242-2021 Comparison of weld metals mechanical and microstructural properties of S1100 obtained by MAG and EBW
 - 7. IX-2741-2021 IX-L-1243-2021 Beneficial use of hyperbaric process conditions for the welding of high strength low alloyed steels

Thursday, July 15, 2021

II. Subcommittee IX-H: Welding of stainless Steels and Nickel-base Alloys

(Chair: Dr. Elin M. Westin)

- II-1. Video presentation of WithW (Prof. John Lippold)
- II-2. Administration matters of IX-L
- II-3. Technical Presentation of documents (presentation order by Chair):

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1. IX-2726-2021 IX-H-??-2021 Precipitation of sigma phase in weld part of duplex stainless steel
2. IX-2727-2021 IX-H-??-2021 Influential Factors on Weld Solidification Cracking Susceptibility of Stainless Steels with F-mode Solidification
3. IX-2728-2021 IX-H-??-2021 Welding Guidance on specification and measurement of ferrite in stainless steel weld metal
4. IX-2729-2021 IX-H-??-2021 Microstructural changes in 16-8-2 weld metal during exposure to 750°C for extended times
5. IX-2730-2021 IX-H-??-2021 Electron beam welding of duplex stainless steels with nickel-based filler wire using multi-beam technique
6. IX-2731-2021 IX-H-??-2021 Effect of pre-weld microstructure on hot cracking susceptibility of newly-developed superalloy G27 through Gleeble hot ductility testing
7. IX-2732-2021 IX-H-??-2021 Wire Laser Metal Deposition of Duplex Stainless Steel Components
8. IX-2733-2021 IX-H-??-2021 Effect of Track Overlap on Defect Content and Microstructure in Laser Directed Energy Deposited Alloy 718
9. IX-2734-2021 IX-H-??-2021 Laser Weld Formation and Microstructure Evolution in Stainless Steel Alloys

Friday, July 16, 2021

III. Subcommittee IX-C: Creep and Heat resistant welds

(Chair: Prof. Peter Mayr)

II-1. Administration matters of IX-C

II-2. Technical Presentation of documents (presentation order by Chair):

1. IX-2724-2021 IX-C-1095-2021 An investigation on delta ferrite retention in the weld metal of various SMAW Modified 9Cr-1Mo electrodes using thermodynamic modelling, optical metallography and quenching experiments
2. IX-2725-2021 IX-L-1096-2021 Thickness and microstructure effect on hydrogen diffusion in creep-resistant 9%Cr P92 steel and P91 weld metal
3. IX-2747-2021 IX-L-??-2021 High strength precipitation hardenable nickel alloys – weldability and metallurgical challenges

IV. Subcommittee IX-NF: Non-ferrous materials

(Chair: Prof. J. P. Bergmann)

II-1. Administration matters of IX-NF

II-2. Technical Presentation of documents (presentation order by Chair):

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1. IX-2742-2021 IX-NF-26-2021 Modification of Co-Cr alloys to optimize of additively welded microstructures and subsequent surface finishing
2. IX-2743-2021 IX-NF-32-2021 Influence of rotational speed on the electrical and mechanical properties of the friction stir spot welded aluminium alloy sheets
3. IX-2744-2021 IX-NF-28-2021 Mechanical properties and failure behavior of aluminum/copper spot welds joined by hybrid friction diffusion bonding
4. IX-2745-2021 IX-NF- 35-2021 Effect of heat input on microstructure and mechanical property of wire-arc additive manufactured Ti64 alloy
5. IX-2746-2021 IX-NF-31-2021 Laser Weld Formation and Microstructure Evolution in Ti-6Al-4V
6. IX-2748-2021 IX-NF-33-2021 The solidification cracking sensibility of the 7075 aluminum alloy gas tungsten arc welding under pulse modulation technology

V. Meeting Summary and Others

- I. Review of WitW recommendation
- II. Review of Administrative matters
- III. Plan for Next meetings
 - AA meeting 2022: July 2021, Tokyo Japan
 - Intermediate Meeting of 2022 :
- IV. Adjournment of C-IX meeting

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