

C-II ARC WELDING AND FILLER METALS

II-2110-19

72nd IIW Annual Assembly and International Conference 2019, Bratislava, 7–12 July 2019

Chair: Gerhard Posch (Austria)

Time schedule for Social Events and Commission II activities

Sunday, 7 July		
14:00	16:00	IIW General Assembly Venue: Hall 3-5 / London I – III, Crowne Plaza Hotel
16:00	17:30	Young Professionals` Ice Breaker Session Venue: Fresh! Restaurant, Crowne Plaza Hotel
18:15	22:00	Opening Ceremony & Welcome Reception Venue: DoubleTree by Hilton
Monday, 8 July		
08:15	12:30	Commission II regular meeting (C-II A) Venue: Hall 8 / Dunaj, Austria Trend Hotel
19:00	22:00	Slovak Evening Venue: The Old Market Hall
Tuesday, 9 July		
08:15	12:30	Commission II regular meeting (C-II C) Venue: Hall 11/Berlin, Crowne Plaza Hotel
Wednesday, 10 July		
08:15	10:15	Commission II regular meeting (C-II E) Venue: Hall 8 / Dunaj, Austria Trend Hotel
10:45	12:30	Commission Joint meeting C-II, C-VIII Venue: Hall 8 / Dunaj, Austria Trend Hotel
19:30	23:00	Gala Banquet Venue: Refinery Gallery

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)



IIW Commission II

SUBCOMMISSION II-C MEETING Testing and Measurement of Weld Metal

Agenda (II-C-570-19)

Chair: Zhuyao Zhang (United Kingdom)
Tuesday, 9 July 2019, 08:15-12:30

Venue: Hall 11/Berlin
Crowne Plaza Bratislava, Hodžovo nám. 2, Bratislava, Slovakia

1. Opening remarks

- IIW Antitrust policy

2. Administrative matters of Sub Commission II-C

- II-2110-19 (II-C-570-19): Approval of the agenda
- II-2124-19 (II-C-571-19): List of members of Sub commission II-C by Z. Zhang
- II-2125-19 (II-C-572-19): List of documents of Sub commission II-C by Z. Zhang
- II-2109-18: Executive Summary Commission II, Annual Assembly 2018, Bali, Sub commission II-C by G. Posch
- II-2123-19 (II-C-569-19): Minutes of the Intermediate Meeting of SC II-C, Miami, USA, March 2019 by Z. Zhang

3. Ferrite in high alloyed weld metal

- II-2126-19 (II-C-567-19): "Microstructure investigation of duplex stainless steel welds using a novel arc heat treatment method" by Andrea Putz, Vahid Hosseini, Elin M. Westin, Norbert Enzinger

4. Testing of weld metal for hot cracking and micro fissuring

- II-2127-19 (II-C-573-19): "Evaluation of austenitic flux-cored wires for welding of ferritic 5-9%Ni steels for low temperature service" by Hannes Pahr, Elin M. Westin and Gerhard Posch
- II-2128-19 (II-C-574-19): "Analysis of the hardness-increasing mechanism for welded high-hardness-armor steel and optimization of heat input and shielding gas conditions" by Y. Jeong, Y. T. Cho

5. Corrosion testing of weld metal

- No document

6. Procedures for weld metal chemical analysis and weld metal sample preparation – Comparison of analysis methods

- No document



7. Testing of high-strength weld metals

- II-2129-19 (II-C-575-19): "Development of welding consumable for high strength steels (Rp0.2 \geq 960 MPa)" by A. Ramasamy, B. Kalfsbeek, V. van der Mee
- II-2130-19 (II-C-576-19): "Niobium behavior by during welding thermal cycle for niobium micro-alloyed HSLA steels" by H. H. Wang, Z. Tong, Z.P. Qin

8. Testing of Creep- and heat resistant weld metal

- II-2131-19 (II-C-577-19): "Gas Metal Arc (MIG) Welding of Gr. 91 (X10CrMoVNb9-1) martensitic steel - AWM characteristics, metallurgy, influence of the shielding gas mix and weld position" by Stefano Sorrentino
- II-2134-19: "HAZ microstructures in CB2 steel" by Stan T. Mandziej and Anna Vyrostkova

9. Testing of non-ferrous weld metal

- No document

10. Measuring of δ -ferrite in austenite and duplex stainless steel weld metals

- Discussion on engineering guidelines for δ -ferrite measurement of production welds
Dr D. Kotecki and all
- II-2132-19 (II-C-578-19): "Proposed ISO Technical Report: Welding Guidance on specification and measurement of ferrite in stainless steel weld metal metal" by Dr D. Kotecki

11. Working program of Sub Commission II-C

- II-2133 (II-C-579-19): SC II-C Proposed working program 2019/20 by Z. Zhang

12. Date and venue of next meetings



IIW Commission II

SUBCOMMISSION II-E MEETING Standardization

Agenda (II-E-796r1-19)

Chair: David Fink (USA)
Wednesday, 10 July 2019, 08:15-10:15

Venue: Hall 8 / Dunaj
Austria Trend Hotel, Vysoká 2A, Old town, 811 06, Bratislava, Slovakia

1. Opening remarks

- IIW Antitrust policy

2. Administrative matters of Sub Commission II-E

- II-2110-19 (II-E-796-19): Approval of the agenda
- II-2135-19 (II-E-797-19): List of members of Sub commission II-E by D. Fink
- II-2136-19 (II-E-798-19): List of documents of Subcommittee II-E by D. Fink
- II-2109-18: Executive Summary Commission II, Annual Assembly 2018, Bali, Sub commission II-E by G. Posch
- II-2137-19 (II-E-795r1-19): Minutes of Miami March 2019 meeting, Subcommittee II-E by D. Fink
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3. Update standards for welding consumables in review

- II-2138-19 (II-E-799-19): "2019 Update on Standards for Welding Consumables under Review" by D. Fink
- Standards for Systematic Review (Route 1) for 2019
 - II-E-778-18: **ISO 2560:2009**, Welding consumables – Covered electrodes for manual metal arc welding of non-alloy and fine grain steels – Classification
 - II-E-779-18: **ISO 14341:2010**, Welding consumables – Wire electrodes and weld deposits for gas shielded metal arc welding of non alloy and fine grain steels – Classification
 - II-E-780-18: **ISO 15792-1:2000**, Welding consumables – Test methods – Part 1: Test methods for all-weld metal test specimens in steel, nickel and nickel alloys
 - II-E-780A-18: **ISO 15792-1:2000+ Amd 1:2011**, Welding consumables – Test methods – Part 1: Test methods for all-weld metal test specimens in steel, nickel and nickel alloys
 - II-E-781-18: **ISO 15792-2:2000**, Welding consumables – Test methods – Part 2: Preparation of single-run and two-run technique test specimens in steel
 - II-E-782-18: **ISO 18274:2010**, Welding consumables – Solid wire electrodes, solid strip electrodes, solid wires and solid rods for fusion welding of nickel and nickel alloys – Classification
 - II-E-783-18: **ISO 24034:2010**, Welding consumables – Solid wire electrodes, solid wires and rods for fusion welding of titanium and titanium alloys – Classification
 - II-E-784-18: **TR 13393:2009**, Welding consumables – Hardfacing classification – Microstructures



- Standards for Systematic Review (Route 2) for 2019
 - II-2050-17 (II-E-748-17): Systematic Review of **ISO 6847:2013** Welding consumables -- Deposition of a weld metal pad for chemical analysis
 - II-2139-19 (II-E-786r1-19): Systematic Review ISO 6847-2013 Collated comments as agreed to at March 2019 meeting
 - II-2140-19 (II-E-800-19): Draft revision of ISO 6847 for review (Mr. Fink)

4. Matrix filler metal classification standards

- II-2141-19 (II-E-801-19): Matrix of filler Metal Classifications by D. Kotecki

5. Diffusible Hydrogen Testing

- Other information on ISO 3690

6. Standards for Systematic Review for 2020 – for information

- **ISO 18273:2015** Welding consumables -- Wire electrodes, wires and rods for welding of aluminium and aluminium alloys – Classification
- **ISO 17634:2015** Welding consumables -- Tubular cored electrodes for gas shielded metal arc welding of creep-resisting steels – Classification
- **ISO 17632:2015** Welding consumables -- Tubular cored electrodes for gas shielded and nongas shielded metal arc welding of non-alloy and fine grain steels – Classification
- **ISO 14172:2015** Welding consumables -- Covered electrodes for manual metal arc welding of nickel and nickel alloys – Classification
- **ISO 6848:2015** Arc welding and cutting -- Nonconsumable tungsten electrodes – Classification
- **ISO 1071:2015** Welding consumables -- Covered electrodes, wires, rods and tubular cored electrodes for fusion welding of cast iron -- Classification

8. Working program of Sub commission II-E

- II-2142-19 (II-E-802-19): SC II-E Proposed working program for 2019/20 by D. Fink

9. Any other business

8. Date and venue of next meetings



IIW Commission II, VIII

JOINT MEETING

Agenda (II-2110-19)

Chair C-VIII: Geoff Melton (United Kingdom)
Chair C-II: Gerhard Posch (Austria)

Wednesday, 10 July 2019, 10:45-12:30

Venue: Hall 8 / Dunaj

Austria Trend Hotel, Vysoká 2A, Old town, 811 06, Bratislava, Slovakia

1. Opening remarks

2. Safety and health issues related to filler metals and arc welding processes

- IARC Monograph 118

