



INTERNATIONAL INSTITUTE OF WELDING

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Chair: Prof. Huaping Xiong
Delegation: China

Doc. XVII-0065-22
July 19, 2022

Commission XVII: Brazing, Diffusion Bonding and Soldering

Agenda for the 75th Annual Assembly

Tokyo, Japan, 17-22 July 2022

Program Summary

Date/Time	Meetings	Room
July 19 th (Tuesday) 8:30-12:10 JST	C-XVII Meeting	Hybrid: ON-SITE (Room Vendome) and ON-LINE (Zoom)
July 20 th (Wednesday) 8:30-11:50 JST	C-XVII Meeting	Hybrid: ON-SITE (Room Pensée) and ON-LINE (Zoom)
July 20 th (Wednesday) 14:00-17:15 JST	C-VII & C-XVII Joint Meeting	Hybrid: ON-SITE (Room Pensée) and ON-LINE (Zoom)

75th IIW Annual Assembly, Commission XVII

Tuesday July 19th, 2022, 8:30am – 12:10am

Location: Grand Nikko Tokyo Daiba, 2-6-1 Daiba, Minato-ku, Tokyo, 135-8701, Japan, Room Vendome

Final Agenda

- 1) Welcome and opening (8:30am — 8:35am) chaired by Huaping Xiong
- 2) A visit and speech by TMB director of IIW, Dr. Egerland Stephan (8:35am — 8:40am)
- 3) Introduction, apologies/no response (8:40am — 8:45am), chaired by Warren Miglietti
- 4) Agreement on future procedure to present at the IIW Commission XVII meetings (8:45am — 8:50am), chaired by Warren Miglietti

5) Presentations, chaired by Warren Miglietti

- 5.2) Presentation 1: Doc XVIIA-0229-22 “Performing a Brazing Filler based on Eutectic High Entropy Alloy Design by Machine Learning.”
- By Xavier Sanuy Morell, University of Sheffield, England (08:50am — 09:10am), pre-recorded
- 5.3) Presentation 2: Doc XVIIA-0234-22 “Research on application of environmental-friendly automatic brazing for thin walled workpiece”
- By Jo Gai, Hangzhou Huaguang Advanced Brazing Materials Co., Ltd., Hangzhou, P. R. China (09:10am — 09:30am), live
- 5.4) Presentation 3: Doc XVIIA-0237-22 “Composite particles for regulating thermal expansion and interfacial reactions in BCZYYb/AlSi 441 joints”
- By Xiaoqing Si, Harbin Institute of Technology, P. R. China (09:30am — 09:50am), live

Coffee Break (09:50am — 10:05am)

Presentations, chaired by Robin Grunert

- 5.5) Presentation 4: Doc XVIIIB-0063-22 “Diffusion bonding of magnesium alloys using Gallium-based interlayers”
- By Maksym Khokhlov, E.O. Paton Electric Welding Institute of the NAS of Ukraine, Kyiv, Ukraine (10:05am — 10:25am), pre-recorded
- 5.6) Presentation 5: Doc XVIIA-0236-22 “Measurement of the residual stress distribution as a function of depth in ceramic/ metal joints”
- By Chun Li, Harbin Institute of Technology, P. R. China (10:25am — 10:45am), live
- 5.7) Presentation 6: Doc XVIIA-0232-22 “Local approaches for the fatigue strength assessment of brazed joints considering brazed seam quality and failure behavior”
- By Andre Jöckel, Fraunhofer-Institut, Darmstadt, Germany (10:45am — 11:05am), live

- 5.8) Presentation 7: Doc XVIIIA-0239-22 “The application of Si based eutectic alloys in high-temperature brazing”
- By Zongjing He, Harbin Institute of Technology, Harbin, P. R. China
(11:05am — 11:25am), live
- 5.9) Presentation 8: Doc XVIIIA-0247-22 “Influence of the application of ultrasound on the microstructure of cemented carbide/steel-joints brazed with Ag49ZnCuMnNi”
- By Lukas Wojarski, TU Dortmund University, Dortmund, Germany
(11:25am — 11:45am), pre-recorded
- 5.10) Presentation 9: Doc XVIIIA-0248-22 “Application of Ni-plating by galvanization on steel surface of brazed cemented carbide-maraging steel joints”
- By Tim Ullitzka, TU Dortmund University, Dortmund, Germany
(11:45am — 12:05am), physical

6) Closing Remarks (12:05am — 12:10am)

Wednesday July 20th, 2022, 8:30am – 11:50am

Location: Grand Nikko Tokyo Daiba, 2-6-1 Daiba, Minato-ku, Tokyo, 135-8701, Japan, Room Pensee

Final Agenda

7) Presentations, chaired by Warren Miglietti

- 7.1) Presentation 1: Doc XVIIIA-0227-22 “In-situ observation of wetting behavior during brazing”
- By Hikaru Tajima, Tokai University, Japan (08:30am — 08:50am), physical
- 7.2) Presentation 2: Doc XVIIIA-0231-22 “Inference method using Archimedean Copula function for joining of thin composite plates using nickel filler”
- By Takahisa Yamazakia, Tokyo Institute of Technology, Tokyo, Japan (08:50am — 09:20am), physical
- 7.3) Presentation 3: Doc XVIIIA-0240-22 “An efficient strategy for regulating the distribution of continuous brittle phases by spatial division of the Ti₃SiC₂/Ti₂AlNb brazing seam”
- By Bo Zhang, Harbin Institute of Technology, Harbin, P. R. China (09:20am — 09:40am), live
- 7.4) Presentation 4: Doc XVIIIA-0243-22 “Effect of filler metal on microstructure and strength in brazed joint of YG8 hard alloy with DC53 steel”
- By Juan Wang, Shandong University, Shandong, P. R. China (9:40am — 10:00am), live
- 7.5) Presentation 5: Doc XVIIIA-0245-22 “Dissimilar joining of graphite and iron and residual stresses analysis”
- By Wenwen Li, Beijing Institute of Aeronautical Materials, Beijing, P. R. China (10:00am — 10:20am), live

Coffee Break (10:20am — 10:40am)

Presentations, chaired by Kazuhiro Ito

- 7.6) Presentation 6: Doc XVIIIA-0241-22 “Microstructure and properties of diamond/Ni-based alloy composite coatings by induction brazing”
- By Jian Qin, Zhengzhou Research Institute of Mechanical Engineering Co., Ltd, Zhengzhou, P. R. China (10:40am — 11:00am), live
- 7.7) Presentation 7: Doc XVIIIC-0060-22 “Microstructure and properties of a novel Sn-based solder”
- By Linlin Yuan, Beijing Non-ferrous Metal and Rare Earth Research Institute, Beijing, P. R. China (11:00am — 11:20am), live
- 7.8) Presentation 8: Doc XVIIIA-0244-22 “Microstructure and property of Al₂O₃ and Kovar alloy joint brazed with Au-Pd-Ni filler ”
- By Wenjiang Zou, Beijing Institute of Aeronautical Materials, Beijing, P. R. China (11:20am — 11:40am), live

8) Closing Remarks (11:40am — 11:50am)

Contacts: Prof. Huaping Xiong (xionghuaping69@sina.cn) – Chairman

Dr. Simon Jahn (SJahn@ifw-jena.de) – Vice-Chair

Dr. Sabrina Puidokas (s.puidokas@listemann.com) – Secretary



Chair: Guisheng Zou
Delegation China

Doc. VII-2015-22
July 19, 2022

COMMISSION VII: MICROJOINING AND NANOJOINING

Agenda for the 75th Annual Assembly and International Conference

Tokyo, Japan, 17-22 July 2022

Program Summary

Time	Meetings	Room
July 19 (Tuesday) 14:00-17:00 JST	C-VII Workshop	Hybrid: ON-SITE (Room: Vendôme) and ON-LINE (Zoom)
July 20 (Wednesday) 14:00-17:00 JST	C-VII & C-XVII Joint Meeting	Hybrid: ON-SITE (Room: Pensée) and ON-LINE (Zoom)
July 21 (Thursday) 8:30-11:30 JST	C-VII Workshop	Hybrid: ON-SITE (Room: Étolie A) and ON-LINE (Zoom)

Note:

14:00-17:00 JST: 13:00-16:00 PM CST; 14:00-17:00 PM KST; 7:00-10:00 AM CEST;
1:00-4:00 AM EST)

8:30-11:30 JST: 7:30-11:30 AM CST; 8:30-11:30 AM KST; 1:30-4:30 AM CEST; 19:30-
22:30 PM, EST)

JST: Japan Standard Time

KST: Korea Standard Time

CST: China Standard Time

CEST: Central European Summer Time

EST: Eastern Standard Time (USA)

Wednesday July 20, 14:00-17:15 PM JST
Hybrid: ON-SITE (Room: Pensée) and ON-LINE (Zoom)

2. Joint meeting of C-VII and C-XVII on Brazing, Soldering and Diffusion Bonding with Nanomaterials

2-1 Opening (14:00-14:05), Huaping Xiong and Guisheng Zou

- Welcome and Introduction to Commissions XVII and VII
- Review of the past joint meetings of C-XVII and C-VII

2-2 Technical presentations (14:05-16:55)

Session II-1 (Warren Miglietti and Robin Grunert)

Reference	Title	Presenter	Time (JST)
VII-0233-22 XVIIIC-0061-22	Properties of Electrically Conductive Adhesives with Polyurethane Modified Epoxy Resin under bending load	Michiya MATSUSHIMA (Osaka University, Japan) (On-Site)	14:05-14:20
VII-0238-22 XVIIIA-0228-22	Tensile strengths of ferritic stainless steels brazed with Ni-based brazing foils and their microstructures of brazed joints	Yoshio Bizen (Hitachi Metals, Ltd. Japan) (On-Site)	14:20-14:40
VII-0234-22 XVIIIC-0062-22	Microstructure and mechanical properties of Sn-xGa alloys and solder joints	Huizhe Zhang (Beijing Institute of Technology, China) (On-Line)	14:40-14:55
VII-0239-22 XVIIIA-0233-22	HEA brazing filler alloys design based on phase formation criteria with computer aided and interface bonding mechanism of active brazed Inconel718/SiC joints	Bojing Li (Beijing University of Technology, China) (On-Line)	14:55-15:10
VII-0235-22 XVIIIA-0250-22	Study of the large-area pressureless sintering behavior of micron Ag flake based paste	Jingwen Liu (Sun Yat-sen University, China) (On-Line)	15:10-15:25
Break (15:25-15:40)			

Session II-2 (Guisheng Zou and Susann Hausner)

Reference	Title	Presenter	Time (JST)
VII-0240-22 XVIIIA-0235-22	Interfacial microstructure of SiO ₂ f/SiO ₂ composites joints brazed by bismuth glass	Junlei Qi (Harbin Institute of Technology, China) (On-Line)	15:40-15:55
VII-0236-22 XVIIIC-0063-22	Microstructure evolution of Sn10Sb/Kovar under reflow and ultrasonic treatment	Hao Pan (Harbin Institute of Technology(Shenzhen), China) (On-Line)	16:55-16:10
VII-0241-22 XVIIIA-0238-22	Transient liquid phase diffusion bonding of ZrC-SiC composite and 304 steel using Ti/Ni interlayer	Jincheng Lin (Harbin Institute of Technology, China) (On-Line)	16:10-16:25
VII-0237-22 XVIIIA-0251-22	Effects of gold surface finish on the performance and reliability of sintered Ag-Au joints	Liting Lin (Tianjin University, china) (On-Line)	16:25-16:40
VII-0242-22 XVIIIA-0246-22	Study on the failure mechanism of brazing joint of TiAl alloy	Yongjuan Jing (Beijing Institute of Aeronautical Materials, China) (On-Line)	16:40-16:55
Special presentation	IIW Presentation Welding in the World	Luca Costa (IIW CEO); John Lippold and Majid Farajain (WITW)	16:55-17:10

2-3 Discussions and Closing Remarks (17:10-17:15), Guisheng Zou and Huaping Xiong

- Submission of documents
- Paper recommendations to Welding in the World(WitW), etc

