

**Process and product quality**

Session Chairmen: H. Li, A. Demmler

**08:40 Advances in strength measurements of glass sealants used for solid oxide fuel cells**

S.-M. Groß-Barsnick\*, C. Babelot, D. Federmann, U. Pabst

**09:00 Applications of the electrical resistance measurement for a quality assurance of brazed joints**

N. Sievers\*, W. Tillmann

**09:20 Fatigue strength of brazed components considering the influence of brazing quality, mean stresses and loading type**

J. Baumgartner\*, W. Tillmann, K. Bobzin, L. Wojarski, M. Öte, M. Manka, S. Wiesner, N. Sievers

**09:40 Investigation of the effect of surface contamination on the wetting behavior of Cu-based filler alloys**

S. Wiesner\*, K. Bobzin, M. Öte, W. Tillmann, L. Wojarski, M. Manka, A. Eilers

**10:00 Tabletop Exhibition, Poster Session, Coffee Break****Diffusion bonding**

Session Chairmen: H. Xiong, U. Reisgen

**10:20 Diffusion bonding – an application review**

S. Jahn\*, F. Gemse, S. Dahms, U. Broich

**10:40 Diffusion brazing of AgCu+Ni for high temperature applications**

D. Feil\*, T. Herberholz, A. Fix, F. Wetzl, M. Guyenot, G. Schmitz

**11:00 Brazing and diffusion bonding in 3D-manufacturing of titanium alloy structures**

R. Denteneer, L. Krassenburg, J. Brom, M. Menninga, A. Kodentsov, M. H. Biglari\*

**11:20 Diffusion bonding of large scale parts – system requirements**

S. Jahn, F. Gemse, U. Broich, J. Pfeiffer\*

**11:50 Assembly of heat exchanger reactors by brazing and diffusion bonding**

C. Bernardi\*, D. Macel

**12:10 Critical approach to the parameters of the diffusion bonding process using the example of 1.1191**

F. Petzoldt\*, J. Bergmann, R. Schürer, A. Regensburg

**12:30 Simulation of temperature and load distribution for diffusion bonding**  
S. Jahn, A. Fey\*, F. Gemse, S. Dahms

**12:50 Tabletop Exhibition, Poster Session, Lunch Break**

**Brazing processes**

Session Chairmen: W. Tillmann, K. Bobzin

**13:40 Optimization of temperature-/timecycles in brazing through thermodynamic calculations**  
O. Stahn\*, W. Müller, J. Wilden, B. Schmorl

**14:00 Development of a combined brazing-nitriding process for the production of bipolar plates made of chromium coated metal sheets**  
U. Holländer\*, F. Weber, I. Scharf, M. Müller, T. Lampke, K. Möhwald, H. Maier

**14:20 The mechanisms of surface deoxidation of stainless steels in vacuum brazing processes**  
C. Kunz\*, L. Wegewitz, S. Schöler, K. Möhwald, W. Maus-Friedrichs

**14:40 Fluxfree brazing of copper based alloys and steels at temperatures between 650 °C and 850 °C in monosilane-doped nitrogen**  
F. Weber\*, U. Holländer, J. Schaup, K. Möhwald, H. Maier

**15:00 Corrosion protection of steel pipes by soldering-clad layers**  
A. Shapiro\*, G. Fischer

**15:20 Gaseous process gas additives as flux substitute in arc brazing**  
G. Buchholz\*, U. Reisinger, K. Willms

**15:40 Tabletop Exhibition, Poster Session, Coffee Break**

**Properties of filler metals and brazed joints**

Session Chairmen: U. Füssel, G. Wagner

**16:00 Brazing properties and mechanical strength of new silver based brazing filler metals on the basis Ag-Cu-Zn-Mn with a 10-20 weight % reduced silver content**  
M. Schimpfermann\*, D. Schnee

**16:20 Influence of the microstructure on the properties of Fe-based brazed joints**  
S. Weis, M. Ellsner\*, T. Uhlig, G. Wagner

**16:40 Influence of surface morphology on wetting behaviors of Zn-Al filler metal on aluminum matrix composite**

H. Zhao\*, S. Elbel, P. Hrnjak

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**17:00 Temperature effects on microstructures of brazing porous copper to copper using Cu-based filler metal**

T. Zaharinie\*, M. Sami, F. Yusof, A. Tadashi

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**17:20 Grain boundary penetration at pure copper of brazed joint between pure copper / dissimilar metals**

Y. Miyazawa\*, A. Hirono, T. Wasada, Y. Andou, F. Kanazaki

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**18:00 Sightseeing Historic Old Town of Aachen**