Poster Session

Posters 1 to 7 are results from projects of the Industrial Collective Research for SMEs. The core activity of the German Federation of Industrial Research Associations (AiF) is the so called Industrial Collective Research (IGF). Collective research is a mechanism enabling businesses to solve shared problems through shared projects. This kind of pre-competitive research closes the gap between basic research and industrial application. The results are available for everyone interested and the basis for individual adaptations within enterprises.

01 **Advanced process control during induction brazing by detecting the filler metal state**
J. Hebing*, K. Bobzin, M. Öte, S. Wiesner (RWTH Aachen University, Germany)

02 **Production and application of thermoplastic-coated braze metal particles for brazing processes with powdered brazing alloys**
M. Schmieding*, U. Holländer, F. Weber, K. Möhwald, H. Maier (Leibniz University Hannover, Germany), E. Schmidt (Technische Hochschule Georg Agricola, Germany)

03 **Development of copper aluminium composite wires for the in situ formation of CuAl based braze metals during furnace brazing of CrNi steels**
M. Schmieding*, U. Holländer, A. Langohr, K. Möhwald, H. Maier (Leibniz University Hannover, Germany)

04 **Process monitoring during brazing of large components**
M. Manka, W. Tillmann, L. Wojarski, B. Lehmert* (Dortmund University of Technology, Germany)

05 **Influence of the process atmosphere on the fatigue behaviour of brazed stainless steel joints before and after corrosive attack**
V. Fedorov*, T. Uhlig, G. Wagner (Chemnitz University of Technology, Germany), A. Langohr, U. Höllander (Leibniz University Hannover, Germany)

06 **Hybrid friction surfacing – Supporting a friction surfacing process by resistance heating**
D. Köberlin*, J. Zschetzsche, U. Füssel (Technische Universität Dresden, Germany)

07 **Influence of manufacturing and geometric parameters on the performance of arc-brazed galvanized steel structures t > 3 mm**
P. Andreazza*, R. Banaschik, K.-M. Henkel (Fraunhofer IGP, Germany)

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08 **High entropy alloys as brazing filler metals**
R. Goodall*, M. Way, L. Hardwick, R. Snell (University of Sheffield, Great Britain), E. Pickering (University of Manchester, Great Britan)

09 **Kinetic investigations for brazing Zn-surfaced AlSi duplex braze metal coatings with NH_4Cl-doped process gases**
A. Langohr*, U. Holländer, K. Möhwald (Leibniz University Hannover, Germany), S. Groß-Bölting (Dortmund University of Technology, Germany)

10 **Joining sintered NdFeB permanent magnets using two kinds of filler metals: microstructure and mechanical properties**
C. Luo*, Y. Lu, F. Xing, Y. Ruan, X. Qiu (Jilin University, P.R. China)

11 **The thermal stability of Cu/W nano-multilayers for low-temperature brazing applications**
H. Li*, Z. Xing, Q. Qiao (Beijing University of Technology, P.R. China), B. Lehmert, M. Manka, W. Tillmann (Dortmund University of Technology, Germany)

12 **Brazing of nonmetallic materials with Ta and Nb by fillers based on Cu-Ni system without pressure application**
T. Sydorenko*, V. Zhuravlev (I. Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Ukraine)

13 **Influence of gap clearance on brazing joint strength for Ni and Fe based filler metals for brazing ferritic stainless steels**
T. Grøstad*, L. Kjellén (Höganäs AB, Sweden), M. Stroiczek (Höganäs GmbH, Germany)

14 **Ultrarapid formation of full Cu_3Sn joints through ultrasonic-assisted die bonding with Sn+Cu composite solder paste for high temperature application.**
H. Ji*, M. Li (Harbin Institute of Technology, P.R. China)

15 **Direct bonding of Al_2O_3 ceramic, Cu and 5056 aluminum alloy with Sn-Zn-Sb type solders**
H. Li*, J. Zhang, W. Qu, H. Zhuang (Beijing University of Technology, P.R. China)

16 **Low temperature joining of copper with Ag precursors**
S. Hausner*, P. Frenzel, J. Noll, G. Wagner, H. Lang (Chemnitz University of Technology, Germany)

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17 **Joint interface of diamond produced by using nano-gold ink and vanadium examined by infrared-rays spectroscopic analysis**
M. Hino*, T. Yamazaki (Tokyo Institute of Technology, Japan)

18 **Scarf joining repair of carbon/carbon composite using Au-Ni-Cr alloy powder**
T. Yamazaki*, M. Fukuda, G. Yamazaki (Tokyo Institute of Technology, Japan)

19 **Coating technologies for tailored brazing solutions**
J. Janczak-Rusch, T. Burgdorf*, H. Elsener, B. Rheingans, C. Cancellieri, L. Jeurgens (EMPA, Switzerland)

20 **Study on brazing SiC ceramics and metal Mo with AuPdCoMnNi alloy**
H. Feng*, B. Chen, H. Xiong, W. Li, Y. Cheng (Beijing Institute of Aeronautical Materials, P.R. China)

21 **Estimation of the corrosion resistance of ferritic stainless steel brazed joint using an electrochemical method**
K. Kudo*, M. Iwata, Y. Miyazawa (Tokai University, Japan), Y. Bizen (Hitachi Kinzoku, Japan)

22 **Metallurgical analysis at the brazed joint of metallic cultural heritages**
H. Sato*, T. Sasaki, Y. Miyazawa, K. Yamahana (Tokai University, Japan)

23 **Influence of vibratory action on soldered joint formation**
I. Pashkov, V. Misnikov* (PBSU, Russia), T. Bazlova (MISIS, Russia)

24 **In situ observation during copper alloy brazing using X-ray system**
H. Okada*, Y. Miyazawa (Tokai University, Japan), F. Kanazaki (Saginomiya seisakusho Incorporated, Japan)

25 **The effect of molybdenum and vanadium on corrosion behaviour of high chromium nickel brazing alloys**
S. Sivasli*, 0. Sorucu, K. Boz (Sentes-Bir A.S., Turkey)

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26 **Development of rapidly quenched filler alloys for brazing of ITER and DEMO components**
A. Suchkov*, B. Kalin, O. Sevryukov, D. Bachurina, A. Ivannikov, P. Morokhov, M. Penyaz (National Research Nuclear University MEPhI, Russia)

27 **Damage zone analysis of Ni-based super alloy brazed joints for high temperature gas turbine applications**
J. Wildofsky*, B. Alexandrov, A. Benatar (Ohio State University, United States of America), R. Xu (Rolls-Royce, United States of America)

28 **Melting characteristics of selected brazing filler metals by thermal analysis; differential scanning calorimetry (DSC)**
J. Brace*, A. Battenbough, A. Osmanda (Wall Colmonoy Ltd., Great Britain), M. Weinstein, L. Lee, L. Johnson (Wall Colmonoy Corp., United States of America)

29 **Brazing of stainless steel and C/C composite with active brazing filler metal**
M. Uchibori*, T. Sasaki, Y. Miyazawa (Tokai University, Japan)

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