

# STUDY GROUP RES

## Agenda of Annual Meeting

### Revision 0

## SG-RES-0230-19

**Author:** Américo Scotti

**Notes:** Tuesday (09/07/2019)  
12:30 to 14:00

**Crowne Plaza Bratislava**  
**Room Paris**  
Hodžovo nám. 2  
Bratislava, Slovakia

## AGENDA

### Annual Meeting of Study Group RES

Tuesday, 9 <sup>th</sup> of July, 2019, 12:30 – 14:00			
1.	12:35	12:38	Opening Remarks (welcome, apologies and adoption of the present agenda) <i>Chairman: Prof. Américo Scotti (Brazil)</i>
2.	12:38	12:40	Approval of the Minutes of the annual meeting held on Tuesday, 17 <sup>th</sup> of July, 2018, 12:30 – 14:00, Bali (SG-RES- SG-RES-0227-18– see Annex I) <i>Chairman: Prof. Américo Scotti (Brazil)</i>
3.	12:40	12:45	Presentation of the new chairman for the next term: 2019–2021 (Dr. Maria Asuncion Valiente Bermejo, University West, Sweden) <i>Chairman: Prof. Américo Scotti (Brazil)</i>
4.	12:45	13:10	Invited presentation on Research Strategy and Cooperation <i>“AM principles for metallic materials” (see summary attached as Annex II), by Dr.-Ing. Simon Jahn, CEO of Günter-Köhler-Institut für Fügetechnik und Werkstoffprüfung GmbH (ifw Jena)</i>
5.	13:10	13:35	Invited presentation on Research Strategy and Cooperation <i>“Digitalization and Open Science in Welding Research – activities at the Federal Institute of Materials Research and Testing (BAM)” (see summary attached as Annex III), by Mr. Cagtay Fabri – research assistant at BAM, in the Division 9.3 “Welding Technology”</i>
6.	13:35	13:45	Upcoming IIW Welding Research & Collaboration Colloquia <i>by Andreas Pittner and Cagtay Fabri (Germany)</i>
7.	13:45	13:50	Open Discussion on SG-RES Strategies in IIW Business Plan: <i>All attendees</i>
8.	13:50	13:53	Closing Remarks <i>Chairman: Prof. Américo Scotti (Brazil)</i>



# ANNEX I

## Document SG-RES-0229-18 Minutes of the 2017 Annual Meeting Study Group RES Annual Meeting in Bali, Indonesia

Tuesday, 17<sup>th</sup> of July 2018, 12:30 – 14:00

9. Opening Remarks  
*Prof. Scotti opened the meeting at 12:30, welcoming all presents and thanking them for their participation (attending list in annex)*
10. Adoption of the Minutes of the annual meeting held on Tuesday 26<sup>th</sup> June, 2017, Shanghai, China (SG-RES- SG-RES-0225-18)  
*Prof. Scotti pointed out that a copy of the minutes had been sent out to all SG-RES members in advance, but it was available to be read if this was the wish of the participants. The present members of the SG-RES dispensed with the reading and the Minutes were adopted as distributed.*
11. First invited presentation on Research Strategy and Cooperation  
*“World population growth and urbanization as the driving force to welding process control 4.0”*  
*Mr. Harald Langeder, Global Director Research & Development of the Business Unit Perfect Welding at Fronius International (Austria), presented the research in welding developed by Fronius to optimize a defined application and to copy the results to the serial production. A serial production managed from welding engineers was stated, where each part equaled the other one. With the geographical change of the world’s population growth within the next 30 years and the ongoing urbanization, the gap between invariable conditions like quality of the material properties, part dimensions or welders’ skills and the individuality and missing knowledge was shown to increase dramatically. To satisfy these trends and meets the necessarily requirements of the individuality of each single millimeter of a weld seam, he showed to be able to extend the company focus and integrate all external influences to the welding process control, inline and in real time. The first steps to the welding process control 4.0 was shown.*
12. Second invited presentation on Research Strategy and Cooperation  
*“Establishing the R&D Building Block of a National Welding Capability (NWC)”*  
*Chris Smallbone, IIW Past President 2005-2008, WTIA CEO Emeritus (Australia), showed that, in 1996, as an outcome of a meeting with UNIDO in 1994, the IIW Board of Directors Working Group Regional Activities and Liaison with Developing Countries (WGRA), introduced the unique IIW WeldCare Programme to assist developing countries to improve their national welding capabilities particularly through the establishment and/or growth of a not-for-profit national welding organisation. According to him, since then, IIW WGRA has assisted many countries freely through the holding of IIW technology innovation workshops, governance workshops and International Congresses as well as providing them with information, experiences and documentation on successful NWC activities particularly from South Africa and Australia. In 2013, as part of the IIW WeldCare Programme, it was demonstrated that IIW WGRA created a project named “Establishing a National Welding Capability (NWC)”. Several very successful NWC workshops have been held since then and 11 IIW Guidance Notes are now being produced to assist not only developing countries but also developed countries which could utilise them to improve their national welding capabilities. The presentation focused on explaining the draft IIW Guidance Note (GN2) for the Research and Development NWC Building Block. To the IIW SG-RES members was given the opportunity to become involved and contribute their experiences, successes, information and documentation freely to be used in the Guidance Note.*
13. Report of the 7<sup>th</sup> IIW Welding Research & Collaboration Colloquium, held at Granta Centre, TWI Ltd, Cambridge CB21 6AL, from 19<sup>th</sup> to 20<sup>th</sup> of Sep 2017, and sponsored by TWI  
*A brief report by Geoff Melton (England) was delivered (see Doc SG-RES-0228-18)*
14. Open Discussion on SG-RES Strategies in IIW Business Plan  
*No points raised by the attendants, thus the topic was closed without further discussions.*
15. Proposal for a new chairman for the next term: 2019-2021  
*No points raised by the attendants, thus the topic was closed without further discussions.*
16. Closing Remarks  
*Prof. Scotti closed the meeting, at 13:55, thanking all involved for their valuable contributions.*



# ANNEX II

## AM principles for metallic materials

### **Brief of the presentation:**

According to the standard (DIN EN ISO/ASTM 52900:2018-06), additive processes are divided into seven so-called „process categories“. However, the enormous potential of these additive processes still faces a number of obstacles that have hindered their sustainable use to date; for example, standardization has not yet kept pace with development. The presentation will give an overview about the process categories with a focus on metallic materials.

*By Dr.-Ing. Simon Jahn, BSc in Mechanical/Production Engineering at Ilmenau University of Technology, Germany, obtained his PhD degree in 2010 at the Technical University of Berlin, defending the thesis "Technologieentwicklung zur Herstellung variantenreicher innenstrukturierter Bauteile und Werkzeuge" (about additive manufacturing of parts with inside features by diffusion bonding). Currently, CEO of Günter-Köhler-Institut für Fügetechnik und Werkstoffprüfung GmbH (ifw Jena)*



# ANNEX III

## Digitalization and Open Science in Welding Research – activities at the Federal Institute of Materials Research and Testing (BAM)

### Brief of the presentation:

The talk will give an overview of past, ongoing and future activities at BAM welding divisions, specifically those regarding prospects and challenges of the ongoing digital transformation and the move to more accessible research data (open science) with concerns to welding research. We will discuss current ways to publish and share research results inside the welding community and highlight approaches and advancements from other scientific fields to improve accessibility and reproducibility. We would also like to discuss the feasibility of integrating open science principles into the current IIW landscape of meetings, publications and education. In Addition we will introduce our upcoming series of workshops organized by BAM focussing on defining and implementing an open source file format specifically designed to publish and exchange high quality welding research data.

*By Cagtay Fabri – born in Berlin, Germany, with B.Sc. and M.Sc. in “Engineering Science” at Technical University of Berlin. At Present, research assistant and PhD student at BAM since 2014, at the Division 9.3 “Welding Technology”, as a member of the arc welding group. Member of IIW Comm. XII with publications focused on narrow-gap GMAW, sensor data fusion and machine learning. Currently active in research of automated arc welding processes (including narrow-gap welding and additive manufacturing) and management of welding research data.*

