

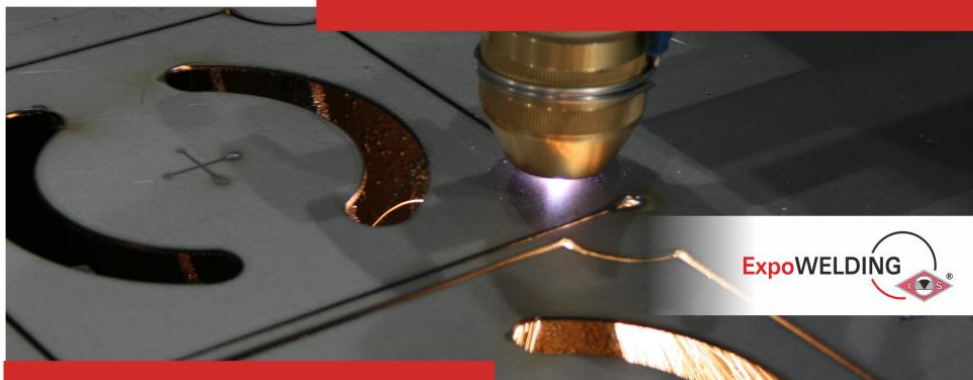
**TECHNOLOGIES
OF THE XXI CENTURY**



INSTYTUT SPAWALNICTWA

58.

Welding Conference International



PROGRAMME

**Sosnowiec
18-20 October 2016**



Organizing Committee

Dr. Adam Pietras
Dr. Bogusław Czwóróg
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Enrolment fees

Enrolment fee: **250 €**

The enrolment fee includes the attendance at the Conference and Fair, a volume of the Conference Proceedings as well as the participation in all events mentioned in the programme. The payment of the fee should be effected by bank transfer to:

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Programme

Tuesday, October 18

- 9⁰⁰ Visiting of the International Welding Fair ExpoWELDING 2016
- 11⁰⁰ Opening ceremony of the Fair
- 13⁰⁰–13⁴⁵ **Welcome and opening of the Conference**
- 13⁴⁵–15¹⁵ Presentation of papers
- 15¹⁵–15⁴⁵ Coffee break
- 15⁴⁵–17¹⁵ Presentation of papers
- 18⁰⁰ Cocktail party

Wednesday, October 19

- 9⁰⁰–10¹⁵ Presentation of papers
- 10¹⁵–10⁴⁵ Coffee break
- 10⁴⁵–11⁴⁵ Presentation of papers
- 11⁴⁵–12⁰⁰ Coffee break
- 12⁰⁰–14¹⁵ Session: ***Significance of welding in construction of nuclear power plant – aspects for Polish industry***
- 14¹⁵–15³⁰ Lunch
- 14¹⁵–17⁰⁰ Visiting the Fair exposition
- 18⁰⁰ Cocktail party

Thursday, October 20

- 9⁰⁰–11⁰⁰ Presentation of papers
- 11⁰⁰–11³⁰ Coffee break
- 11³⁰–12⁴⁵ Presentation of papers
- 12⁴⁵ **End of the Conference**
- 13⁰⁰–14⁰⁰ Lunch
- 13⁰⁰–16⁰⁰ Visiting the Fair exposition

DETAILED PROGRAMME

18th October (Tuesday)

13⁰⁰ Welcome and opening of the Conference

IIV: developing global best practices for fatigue assessment of welded structures

Gary B. Marquis – President of International Institute of Welding, Dean of the School of Engineering, Aalto University, Finland

13⁴⁵–15¹⁵ Presentation of papers

- 1. DIN 2304 – quality requirements for adhesive bonding processes**
Erik Meiß – Fraunhofer IFAM, Bremen, Germany
- 2. Robot-like MIG welding machines for large steel structures**
Steffen Keitel, Uwe Wolski, Uwe Mückenheim, Christian Sondershausen, SLV Halle GmbH; Jörg Müglitz, ZIS Industrietechnik GmbH, Meerane, Germany
- 3. Control of mechanical properties for high strength steels through optimized welding processes**
M. Fiedler, A. Plozner – Voestalpine Böhler Welding, Kapfenberg, Austria;
B. Rutzinger, W. Scherleitner – Fronius International GmbH, Wels, Austria
- 4. Laser beam welding of thermomechanical rolled 10 mm thick steel plates T-joints**
Jacek Górka – Silesian University of Technology, Gliwice, Poland; Sebastian Stano – Instytut Spawalnictwa, Gliwice, Poland

15¹⁵–15⁴⁵ Coffee break

15⁴⁵–17¹⁵ Presentation of papers

- 5. Welding of (super) duplex stainless steel**
Vincent van der Mee – Lincoln Electric Europe B.V., Nijmegen, the Netherlands
- 6. Failures of high alloy austenitic steel structures – case studies**
Peter Bernasovský, Annamária Petrářová – Welding Research Institute – Industrial Institute of Slovak Republic, Bratislava
- 7. Resistance welding of hybrid structures made of Fibre-Reinforced Plastics and steel using special connecting elements made of metal**
O. Obruch, S. Jüttner – Otto-von-Guericke University, Magdeburg, Germany;
G. Ballschmiter, M. Kühn, K. Dröder – Institute for Machine Tools and Production Engineering TU, Braunschweig, Germany
- 8. Analysis of distribution of temperature and stresses during the friction metallisation of AlN ceramics with titanium**
Michał Hudyc, Tomasz Chmielewski, Dariusz Golański – Warsaw University of Technology, Poland

18⁰⁰ Cocktail party

09⁰⁰–09⁴⁵ Presentation of papers

1. **Properties of laser welded finned tubes made of nickel alloys**
Janusz Adamiec – Silesian University of Technology, Katowice, Poland
2. **Determination of linear welding energy by measuring cross-sectional areas of joints**
Kwiryń Wojsyk, Michał Macherzyński – Częstochowa University of Technology, Poland

09⁴⁵–10¹⁵ “Technika Spawalnicza” in Poznań – 25 years of automatization and robotization of joining processes

Mirostaw Nowak – Technika Spawalnicza, Poznań, Poland

10¹⁵–10⁴⁵ Coffee break

10⁴⁵–11⁴⁵ Presentation of papers

3. **Heat treatment effect on the structure and properties of electron beam welded joints made of high-alloy titanium**
Svitlana G. Hryhorenko, Sergiy W. Achonin, Valery Ju. Belous, Roman W. Selin – E. O. Paton Electric Welding Institute, the National Academy of Sciences of Ukraine, Kiev
4. **Surfacing performed using flux-cored wires in Ukrainian companies**
Andrii A. Goliakevych, Leonid N. Orlov – OOO “TM WELTEK”, Kiev, Ukraine
5. **Selected technological features concerning welding in making of the ammonia storage tanks**
Marin Beloev – Consortium KZU Holding Group, Sofia, Bulgaria;
Nikolay Lolov – Technical University, Sofia, Bulgaria

11⁴⁵–12⁰⁰ Coffee break

12⁰⁰–14¹⁵ Session: SIGNIFICANCE OF WELDING IN CONSTRUCTION OF NUCLEAR POWER PLANT – ASPECTS FOR POLISH INDUSTRY



1. **State of preparations for construction of nuclear power plant in Poland**
Ministry of Energy, Department of Nuclear Power Engineering
2. **Welding issues in construction of EPR reactor**
Yera-Ethienne BIANQUINCH – Welding engineer, AREVA NP, RCC-M Sub-committee
3. **Welding Technology for Advanced BWR**
Yukihiro Soga, Yoshio Yada – Hitachi-GE Nuclear Energy, Ltd.
4. **Welding issues in construction of AP1000 reactor**
Xavier Pitoiset, Consulting Engineer, EMEA Engineering Centre of Excellence, Belgium
5. **Scope and prospects for contribution of Polish welding industry to construction of first Polish nuclear power plant**
Jerzy Niagaj, Assoc. Prof., PhD Eng. – Instytut Spawalnictwa, Poland

14¹⁵–15³⁰ Lunch

14¹⁵–17⁰⁰ Visiting the Fair exposition

18⁰⁰ Cocktail party

9⁰⁰–11⁰⁰ Presentation of papers

1. **Effect of pipe face preparation on the quality of magnetically impelled arc welded joints**
Tomasz Piwowarczyk, Marcin Korzeniowski, Andrzej Ambroziak – Wrocław University of Technology, Tomasz Kowal, Rafał Rutka, Mariusz Karolewski – GKN Driveline, Oleśnica, Poland
2. **High-frequency inverter welding machine – advantages of new technology**
Zygmunt Mikno, Szymon Kowieski – Instytut Spawalnictwa, Gliwice, Poland; dr inż Mariusz Stępień – Silesian University of Technology, Gliwice, Poland
3. **Ultrasonic tests in the analysis of the quality of cross-sectional welded elements**
Agnieszka Bicz, Wiesław Bicz – Optel Ltd., Wrocław; Marcin Korzeniowski, Tomasz Piwowarczyk, Andrzej Ambroziak – Wrocław University of Technology, Poland
4. **Detection of imperfections in welded joints using the Time of Flight Diffraction Technique (TOFD)**
Karol Kaczmarek, Paweł Irek, Łukasz Rawicki, Jacek Słania – Instytut Spawalnictwa, Gliwice, Poland
5. **Microstructure, wear resistance and corrosion resistance of coatings surfaced with Ni-Co base alloys**
Tadeusz Hejwowski, Krystyna Marczevska-Boczkowska – Lublin University of Technology, Poland; Emil Zięba – Interdisciplinary Research Centre Lublin, Poland
6. **Application of TIG method in multiple repair welding of long operated components in power industry**
Janusz Pikuła, Mirosław Łomozik, Tomasz Pfeifer – Instytut Spawalnictwa, Gliwice, Poland

11⁰⁰–11³⁰ Coffee break

11³⁰–12⁴⁵ Presentation of papers

7. **Weldability of toughened steels used in ballistic shields**
Krzysztof Luksa – Silesian University of Technology, Gliwice, Poland; Marek Bednarek – Rosomak S.A., Siemianowice Śląskie, Poland
8. **Laser welding of T-joints made of thin austenitic sheets**
Sebastian Stano, Michał Urbańczyk, Jerzy Dworak – Instytut Spawalnictwa, Gliwice, Poland; Janusz Adamiec – Silesian University of Technology, Katowice, Poland
9. **Effect of linear energy and microstructure on the content of retained hydrogen in welded joints made of superduplex steels**
Aleksandra Świerczyńska, Jerzy Łabanowski, Dariusz Fydrych – Gdańsk University of Technology, Poland
10. **Measurement and data processing system for welding parameters and noise level during manufacturing process of welded structures**
Leszek Szubert, Jolanta Matusiak, Piotr Skoczewski, Joanna Wyciślik – Instytut Spawalnictwa, Gliwice, Poland

12⁴⁵ End of the Conference

13⁰⁰ Lunch

13⁰⁰–16⁰⁰ Visiting the Fair exposition

1. **Designation of hydrogen volume diffusing in multipass welding**
Dariusz Fydrych, Aleksandra Świerczyńska, Grzegorz Rogalski – Gdańsk University of Technology, Poland
2. **Methodology of modelling residual stresses in metal coatings sprayed on corundum ceramic base using HVOF method**
Dariusz Golański, Tomasz Chmielewski, Jolanta Zimmerman – Warsaw University of Technology, Poland
3. **Cavitation erosion resistance of NiCrBSi welds**
Mirosław Szala, Tadeusz Hejwowski – Lublin University of Technology, Poland
4. **Microstructure, wear and corrosion resistance of coatings pad welded with Ni-Co base alloys**
Tadeusz Hejwowski, Krystyna Marczevska-Boczkowska – Lublin University of Technology, Poland; Emil Zięba – Interdisciplinary Research Centre Lublin, Poland
5. **YAG pulse laser welding**
dr inż. Sebastian Stano, mgr inż. Jerzy Dworak – Instytut Spawalnictwa, Gliwice, Poland
6. **Diffusion brazing of titanium**
Maciej Różański – Instytut Spawalnictwa, Gliwice, Poland
7. **i-EcoWelding – Internet system of guidance supporting calculations of welding fumes emission in welding and allied processes**
Jolanta Matusiak, Joanna Wyciślik, Adam Pilarczyk – Instytut Spawalnictwa, Gliwice, Poland
8. **Resistance welding machine with servomechanical electrode force control system – examples of practical applications**
Zygmunt Mikno, Adam Pilarczyk – Instytut Spawalnictwa, Gliwice, Poland
9. **Characteristic of microstructural structure of joints welded in X70 steel**
Marek St. Węglowski, Janusz Rykała, Jerzy Niagaj – Instytut Spawalnictwa, Gliwice, Poland; Stanisław Dymek, Mateusz. Kopyściński – GH University of Science and Technology in Cracow, Poland; Adam Maciejewski – JT S.A., Warsaw, Poland
10. **Structure of transformers for resistance welding machines with increased frequency of operation**
Zygmunt Mikno – Instytut Spawalnictwa, Gliwice, Poland; Mariusz Stępień, Bogustaw Grzesik – Silesian University of Technology, Gliwice, Poland; Tomasz Biskup, Henryk Kotodziej – ENEL-PC Ltd., Gliwice, Poland

