SCIENTIFIC COMMITTEE - condt

Technology

Prof. Bohdan WEGLOWSKI,	Department of Energy of the Cracow University
DSc, PhD, Eng.	of Technology

Wacław WOJNAR. DSc, PhD, Eng.

Prof. Wiesław ZIMA, DSc, PhD, Eng.

Department of Energy of the Cracow University of Technology Prof. Jarosław ZUWAŁA,

DSc, PhD, Eng.

Institute for Chemical Processing of Coal, Zahrze

DPET. Silesian University of Technology

DPET, Silesian University of Technology

Department of Power Engineering and

Turbomachinery, Silesian University of

ORGANISING COMMITTEE

Prof. Marek PRONOBIS. Chairman of the Organizing Committee Silesian University of Technology DSc, PhD, Eng. Associate Prof. Director of the ICBT Poland

Sylwester KALISZ, DSc, PhD, Eng.

Andrzej W. WALEWSKI, PhD, Eng.

Associate Prof. Franciszek GRAMATYKA. PhD, Eng.

DPET, Silesian University of Technology

Director of the Conference Office

DPET, Silesian University of Technology DPET, Silesian University of Technology

DPET, Silesian University of Technology

DPET, Silesian University of Technology

DPET, Silesian University of Technology

DPET, Silesian University of Technology

DPET, Silesian University of Technology

Izabella MAJ, PhD, Eng.

Zbigniew RATAJ.

Associate Prof. Bartlomiei HERNIK.

DSc, PhD, Eng.

PhD, Eng.

Agnieszka SADOWSKA. MSc, Eng

Aleksandra WALEWSKA, MSc, Eng.

Associate Prof. Robert WEJKOWSKI, DSc, PhD, Eng.

DPET, Silesian University of Technology

Joanna WNOROWSKA, MSc, Eng.

Wacław WOJNAR. DSc, PhD, Eng.

CONFERENCE TOPICS

- 1. Directions of boilers and auxiliary devices transformation:
- transformation of coal-fired boilers into gaseous and liquid fuels with low CO2 emissions, e.g. H2, NH3, methanol, biogas, and biomethane;
- transformation of coal-fired boilers for combustion and co-combustion of biomass and waste, as well as municipal and RDF;
- large-fuel boilers with a grate and fluidized bed furnace;
- biomass, biogas, and waste combustion boilers, recovery boilers;
- boilers operation in terms of the Circular Economy:
- modernisation of boilers to meet IED requirements;
- retrofits of coal-fired power plants;
- coal and biomass mills, mill installations, co-grinding;
- auxiliary equipment for boilers, environmental protection equipment;
- steam generators for advance nuclear reactors;
- innovative heat exchangers for the power industry;
- biochar production, application, and prospects;
- thermal utilization of municipal waste;
- new combustion systems, oxygen combustion, reduction of CO₂ emissions:
- thermal energy storage;
- boiler materials

2. Problems of boilers and auxiliary devices operation:

-6-

- operation of boilers in transient states:
- work in the conditions of cooperation with RES;
- management of combustion by-products;
- technologies for the preparation of renewable and waste fuels;
- problems of efficiency, flexibility, and reliability;
- material diagnostics and component wear assessment:
- methods of control and improvement of operation;
- problems of erosion, corrosion, and slagging or fouling of heating surfaces:
- control and regulation systems;
- legal regulations on the emission of harmful substances.

REGISTRATION

Registration for participation in the Conference should be made by completing the REGISTRATION CARD. It should be mailed to icbt@polsl.pl or sent to the Conference Office address. Registration can be made until July 28, 2022.

CONFERENCE OFFICE 14th INTERNATIONAL CONFERENCE ON BOILER **TECHNOLOGY, POLAND 2022**

Silesian University of Technology **Department of Power Engineering and Turbomachinery** Konarskiego 20, 44 – 100 Gliwice

Information on the conference can be found on the website

www.icbt.polsl.pl icbt@polsl.pl or

After submitting the applications, a LIST OF CONFERENCE PARTICIPANTS will be created. These people will receive further messages. Guidelines for authors will be given in ANNOUNCEMENT No. 2.

During registration and when submitting a paper, Authors should send the title along with an abstract.

The submitted papers should meet the following conditions:

- English or Polish;
- up to 15 A4 pages including drawings and a reference list and an abstract in both languages of the conference (approx. 1 page).

IMPORTANT DATES

Deadline for registration Sending full papers **Deadline for fee payment** July 28, 2022 August 15, 2022 August 31, 2022

CHAIRMAN OF THE ORGANIZING COMMITTEE **ICBT** Poland 2022 Prof. Marek PRONOBIS, DSc, PhD, Eng.



University

of Technology

SILESIAN UNIVERSITY OF

TECHNOLOGY DEPARTMENT OF POWER ENGINEERING AND

TURBOMACHINERY

44-100 Gliwice, Konarskiego 20 +48 32 237 11 41, +48 32 237 12 73

icbt@polsl.pl



14th INTERNATIONAL CONFERENCE **ON BOILER TECHNOLOGY POLAND '2022** CURRENT ISSUES OF CONSTRUCTION AND OPERATION OF BOILERS Beskidy Mountains or Jura Krakowsko-Czestochowska October 25-28, 2022

Under the honorary patronage of the Rector of the Silesian University of Technology Prof. Arkadiusz MEŻYK, DSc, PhD Eng.

ANNOUNCEMENT No. 1



Beskidy Mountains



LADIES AND GENTLEMEN

The Department of Power Engineering and Turbomachinery from the Silesian University of Technology in Gliwice with the co-operation of ENERGOPROJEKT - KATOWICE S.A., ENERGOPOMIAR Sp. z o.o., FAMET S.A., FPM S.A., IChPW, RAFAKO S.A., Sumitomo SHI FW, TAURON Wytwarzanie S.A., and UDT Warszawa are honoured to invite you to:

the 14th INTERNATIONAL CONFERENCE **ON BOILER TECHNOLOGY - POLAND 2022**

Current problems in the construction of boilers in the world **Transformation technologies** Problems in the operation of power plants, CHP, and heating plants

This cyclical Conference, organised for 58 years in a 4-year cycle, is considered by specialists one of the most important boiler conferences worldwide. Over 500 participants took part in previous editions. We have permanently introduced, with the consent of the organizers, a cyclical conference (in a 2-year cycle) MODERNIZATION OF GRATE BOILERS organized by the TECH-EXPO company from Bielsko-Biała. As part of the 14th ICBT Poland, a conference block on heating issues and grate boilers was separated.

The Organizing and Scientific Committees of the 14th ICBT Poland is fully aware of the seriousness of the problems related to the global pandemic situation, the climate crisis, and the depletion of fossil energy resources, but the energy, economy, and life require new ideas and new solutions from specialists. In order to survive and leave a worldfriendly existence for future generations, we must act effectively.

The standard period of four years has passed since the last 13th ICBT Poland 2018 and during that time the issues related to the need to implement new device design solutions, inventions, materials, and results of experimental studies have accrued. Hence, the time has come to assemble again to discuss the issues, evaluate and implement current accomplishments of science and technology as well as boiler materials and auxiliary devices, exchange operational experiences and choose the optimal directions for new construction and modernisation projects, and devices limiting gas and dust emissions. We need to exchange operational experiences, as well as select the appropriate directions for new investments, modernisation, and transformation. The source of specific challenges is the coming into force of changes dictated by the "European Green Deal".

ICBT Poland traditionally assembles a wide group of specialists from many companies and countries. Achievements and new solutions are presented in the field of production and operation of devices, and research results from universities and research centres. About 100 papers and announcements are delivered. The papers with the highest scientific and technical value will be published in ranked scientific journals (e.g., Heat Transfer Engineering). All submitted papers will be subject to peer review. The languages of the Conference are Polish and English. Simultaneous translations are planned.

Within the frameworks of the Conference, the thematic exhibition and 3 Sessions of Scientific-Technical Information will be organised for research, production, and operational entities to present their firms and technical accomplishments.

Conference materials, for each participant, will be delivered in full size and colour on electronic media while the compendium will be published in book format. Both versions of the publication provide an opportunity to include advertising materials delivered by companies

ORGANIZATIONAL INFORMATION

-3-

Conference place:	Beskidy Mountain or Jura KrakCzęst. October 25 – 28, 2022 (possibility of arrival 2022.10.24) English, Polish (simultaneous translation)		
Conference date:			
Language:			
Conference fees:			
MAIN HOTEL		Double room	650 EUR/person
	Single room	750 EUR /person	
CO-OPERATING HOTELS	Double room	580 EUR /person	
	Single room	650 EUR /person	

The cost of participation for 1 person includes a conference fee, accommodation in a double/single room of a hotel complex, conference materials, full board (breakfast, lunch, dinner, two coffee breaks), participation in scientific sessions, and accompanying events. For those arriving by car, the fee also includes a place in a 24/7 monitored car park.

The costs of exhibition, advertising, and presentation of the company as well as the publication of the information in the Conference materials are subject to individual agreements with the Conference Office.

HONORARY COMMITTEE

Prof. Arkadiusz MĘŻYK,	Rector
DSc, PhD, Eng.	Silesian University of Technology
Prof. Tadeusz BOHDAL,	Chairman of the Committee on Thermodynamics and
DSc, PhD, Eng.	Combustion, Polish Academy of Science
Jacek BORUCIŃSKI, MSc, Eng.	President of the Board Fabryki Kotłów Sefako S.A.
Prof. Tadeusz CHMIELNIAK,	Member of the Polish Academy of Sciences, DPET, Silesian
DSc, PhD, Eng. PhD HC.	University of Technology, Miles Energeticae
Radosław DOMAGALSKI-ŁABĘDZKI, MSc, Eng.	Chairman of the Board, General Director RAFAKO S.A. Racibórz
Łukasz GRELA,	Chairman of the Board, General Director Energoprojekt -
MSc, Eng.	Katowice S.A.
Tadeusz KARSKI,	Former Technical Director RAFAKO S.A.
MSc, Eng.	Miles Energeticae
Prof. Janusz KOTOWICZ,	Vice-Rector of Silesian University of Technology
DSc, PhD, Eng.	DPET, SUT, Miles Energeticae
Prof. Janusz LEWANDOWSKI,	Chairman of the Power Engineering Problems Committee,
DSc, PhD, Eng.	Polish Academy of Sciences, Miles Energeticae
Jarosław MLONKA,	Chairman of the Board, General Director Sumitomo SHI FW.
PhD, Eng.	Miles Energeticae
Henryk POHL,	Former Director RAFAKO S.A.
MSc, Eng.	Miles Energeticae
Wojciech PRZEPADŁO, MSc, Eng.	Vice President of TAURON Wytwarzanie S.A. Jaworzno
Janusz PRZYBYŁA, MSc, Eng.	Chairman of the Board, FAMET S.A. Kędzierzyn - Koźle
Aleksander SOBOLEWSKI,	Director of the Institute for Chemical Processing of Coal,
PhD, Eng.	Zabrze
Robert WITEK, MSc, Eng.	Chairman of the Board, ENERGOPOMIAR Sp. z o.o. Gliwice
Andrzej ZIÓŁKOWSKI, PhD, Eng.	President of Office of Technical Inspection, Warszawa
Tomasz ZYSKA,	President of the Board,
MSc, Eng.	FPM S.A. Mikołów

SCIENTIFIC COMMITTEE

Prof. Tadeusz CHMIELNIAK, DSc, PhD, Eng.	Chairman Scientific and Programme Committee, DPET, Silesian University of Technology, Miles Energeticae
Prof. Janusz KOTOWICZ, DSc, PhD, Eng.	V-ce Chairman Scientific and Programme Committee, DPET, Silesian University of Technology, Miles Energeticae
Prof. Marek PRONOBIS, DSc, PhD, Eng.	V-ce Chairman Scientific and Programme Committee, DPET, Silesian University of Technology, Miles Energeticae
Prof. Zbigniew BIS, DSc, PhD, Eng.	Department of Energy Engineering, Częstochowa University of Technology, Miles Energeticae
Prof. Slawomir DYKAS, DSc, PhD, Eng.	Department of Power Engineering and Turbomachinery, Silesian University of Technology
Tomasz GOLEC, PhD, Eng.	Institute of Power Engineering, Warszawa, Miles Energeticae
Associate Prof. Sławomir GRĄDZIEL, DSc, PhD Eng.	Department of Energy of the Cracow University of Technology
Associate Prof. Tomasz HARDY, DSc, PhD Eng.	Department of Energy Conversion Engineering of the Wrocław University of Science and Technology
Associate Prof. Bartłomiej HERNIK, DSc, PhD Eng.	Department of Power Engineering and Turbomachinery, Silesian University of Technology
Associate Prof. Sylwester KALISZ, DSc, PhD Eng.	Department of Power Engineering and Turbomachinery, Silesian University of Technology
Prof. Dariusz KARDAŚ, DSc, PhD Eng.	Institute of Fluid-Flow Machinery Polish Academy of Sciences
Associate Prof. Rafał KOBYŁECKI, DSc, PhD Eng.	Department of Advanced Energy Engineering of the Częstochowa University of Technology
Associate Prof. Stanislaw ŁOPATA, DSc, PhD Eng.	Department of Energy of the Cracow University of Technology
Prof. Wojciech NOWAK, DSc, PhD Eng.	AGH Center of Energy, Kraków. Miles Energeticae
Tadeáš OCHODEK, Doc. Dr. Ing.	VSB – Technical University of Ostrava, Energy Research Centre
Prof. H. PAWLAK-KRUCZEK, DSc, PhD Eng.	Department of Energy Conversion Engineering of the Wrocław University of Science and Technology Miles Energeticae
Prof. Janusz POSPOLITA, DSc, PhD Eng.	Department of Thermal Engineering and Industrial Facilities, Opole University, Miles Energeticae
Associate Prof. Leszek REMIORZ, DSc, PhD Eng.	Department of Power Engineering and Turbomachinery, Silesian University of Technology
Prof. Robert SEKRET, DSc, PhD Eng.	Faculty of Infrastructure and Environment, Częstochowa University of Technology
Marek ŚCIĄŻKO, DSc, PhD Eng.	AGH Center of Energy, Kraków
Prof. Jan TALER, DSc, PhD Eng.	Department of Energy of the Cracow University of Technology, Miles Energeticae
Andrzej W. WALEWSKI, PhD Eng.	Department of Power Engineering and Turbomachinery, Silesian University of Technology
Associate Prof. Robert WEJKOWSKI, DSc, PhD Eng.	Department of Power Engineering and Turbomachinery, Silesian University of Technology