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12th - 13th of May 2014

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SENERES Seminar - 12-13.05.2014

Biomass gasification – the use of low calorific gas

The Seminar has been organized within the frames of SENERES project (<http://seneres.pl/>). The Sustainable Energy Research and Development Centre (SENERES) is the project funded by European Union's FP7 Capacities - Research Potential Programme focusing on developing research and demonstration potential of the Institute of Power Engineering in three high efficient low-carbon energy technologies: energy generation from biomass, clean coal technologies and fuel cells.

The two days Seminar aimed at presenting the biomass gasification experiences and potential of research and industry in Poland and Sweden. Among the invited speakers there were representatives of: KTH, Royal Institute of Technology (Sweden); Institute of Power Engineering (Poland); ICS, Industrial Combustion Systems Company (Poland); CORTUS AB (Sweden); ScanArc AB (Sweden); ECN Energy research Centre of the Netherlands; Andritz Carbona Inc., (Finland).

It has been an excellent opportunity to learn from each other's experience and exchange contacts between Polish and Swedish industry and research, eventually finding new possibilities for the future cooperation.

Seminar description:

Dr Andrzej Sławiński, SENERES project coordinator started the seminar by welcoming all participants, especially guests that arrived to Warsaw for the seminar. He also delivered a presentation showing the frames of SENERES project.

Welcome address

Welcome to the tenth issue of the SENERES Newsletter. SENERES is the project founded within frames of FP7 Capacities RegPot Programme. The main objective of the SENERES project is to reinforce and develop research and demonstration potential of the Institute of Power Engineering (Poland) and to set up the **Sustainable Energy Research and Development Centre SENERES** focused on high efficient low-carbon energy technologies: energy generation from biomass, clean coal technologies and fuel cells.

The SENERES Newsletter is a source of periodical information about SENERES project activities. It disseminates results of SENERES Centre research work and the Centre's development. It also delivers the most important information about the development of research, events and possibilities of research funding in SENERES thematic area.



Then the following presentations have been delivered:

1. The Institute of Power Engineering, Thermal Processes Department – research potential

Dr Tomasz Golec, Head of Thermal Processes Department, IEn, Poland

2. High-temperature air Combustion for low calorific gas from biomass gasification

Prof. Włodzimierz Błasiak, KTH, Sweden

3. Performance of a WoodRoll gasifier – Tests results from a 500kW plant

Rolf Ljunggren/Pawel Donaj, Cortus AB, Sweden

4. Allothermal gasification of raw and torrefied miscanthus - can pre-treatment improve gas quality?

Dr Marzena Kwapińska, University of Limerick, Ireland

5. The advantages of the zonal volumetric combustion technology in the low heating value gases utilization processes

Dariusz Szewczyk, ICS Sp. zo.o., Poland

6. Ways to increase the calorific value of gas

Bram van der Drift, ECN, The Netherlands

7. Fast pyrolysis and its latest development

Pelle Mellin, KTH, Sweden



The second day of Seminar consisted of seven scientific presentations:

1. Current status of Swedish Gasification Activities

Prof. Weihong Yang, KTH, Sweden

2. Gasification in Thermal Processes Department

Dr Marcin Siedlecki, Thermal Processes Department, IEn, Poland

3. Gasification syngas for steel reheating furnace: Opportunity and Challenge

Mohsen Saffari Pour/Pelle Mellin, KTH, Sweden

4. Burners for low calorific gas developed in Thermal Processes Department

Dr Paweł Bocian, Thermal Processes Department, IEn, Poland

5. Fuel Cells (SOFC) in Thermal Processes Department

Dr Jakub Kupecki, Thermal Processes Department, IEn, Poland

6. Gasification performance of pretreated biomass

Duleeka Rathnayaka Gunarathne, KTH, Sweden

7. Technologies of production of Solid Oxide Fuel Cells in the Institute of Power Engineering Ceramic Department CEREL

Dr Mariusz Krauz, CEREL, IEn, Poland

