

Title of the session: Energy optimization of mines

Date: 12.04.2019

Location of organization of the thematic session: – Ornontowice, ul. Żabik 1

Time: 9.00 – 15.00

Expected time of presentations: – 20 min.

Supervisor of the session – Grzegorz Kuś

Leader of the session – Prof. dr hab. inż. Nikodem Szlązak

Description of the session:

The session will present mining ventilation and air conditioning systems with regard to energy optimization. Selected plants of JSW S.A. will present the tools used to optimize the energy of the mines, as well as the systematic use of methane on the example of the Budryk mine. There will also be an opportunity to use waste heat with low parameters for the production of electricity in Organic Rankine Cycles. Due to certain difficulties in the possibilities of financing own projects aimed at improving the energy efficiency of mines, other possibilities will be shown by including a third party to implement projects. At the end, a technical trip is planned that presents modern energy systems at KWK Budryk.

Agenda:

- 9:00 - 9:15 Welcome
- 9:15 – 9:35 Development of mine air conditioning systems with regard to energy optimization, prof. dr hab. eng. Nikodem Szlązak, prof. dr hab. eng. Dariusz Obracaj AGH Kraków
- 9:35 – 9:55 Energy optimization of the mine ventilation system, prof. dr hab. eng. Nikodem Szlązak, prof. dr hab. eng. Dariusz Obracaj, AGH Kraków
- 9:55 – 10:15 Installations and tools to optimize the consumption of energy carriers on the example of KWK Pniówek - Marcin Płoneczka, KWK Pniówek
- 10:15 – 10:35 System methane handling in KWK Budryk - current and target status - Andrzej Tabaka KWK Budryk.
- 10:35 – 10:55 An innovative method of using waste heat from gas engines using ORC systems, dr eng. Łukasz Antczak - Head of the Marani Research and Development Department
- 10:55 – 11:15 Implementation of projects aimed at improving energy efficiency in the form of financing by three parties:
- theory - types of contracts,
 - practice - how does it work?
- Łukasz Feldman - Dyrektor Finansowy DB Energy Wrocław.
- 11:15 – 11:35 Mines revitalization – methane management in the closed mine Maltby - Bill Tonks-Hargreaves Industrial Services UK
- 11:35 – 12:00 Summary and discussion, coffee break.
- 12:00 – 14:00 On site program: visit on the shaft of VI Chudów: methane drainage station, cogeneration systems 2x4MWe, boiler room equipped with a dual-fuel boiler (heating oil, gas from the methane drainage station) central air-conditioning station.
- 14.00 – 15:00 Lunch.