

University of Zilina

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UNIVERSITY OF ZILINA – ESTABLISHMENT

- The University of Zilina (ZU) was established as the Railway College on **1st October 1953** by the separation from the Czech Technical University in Prague.
- It has gone through numerous changes during its history. Finally, in 1996, it was **renamed** from the University of Transport and Communications to **the University of Žilina in Žilina (ZU)**.

UNIVERSITY OF ZILINA - ACTIVITIES

- The University as a public university **provides education** (Bachelor's degree, Engineer/Master's degree and Doctoral degree).
- **In the field of science and research**, individual working places of the University have been involved in solving of more than 150 scientific and research projects.
- **Achievements are presented** through publication activities, applications for patents, presentations at international scientific symposiums, conferences, trade fairs and exhibitions.

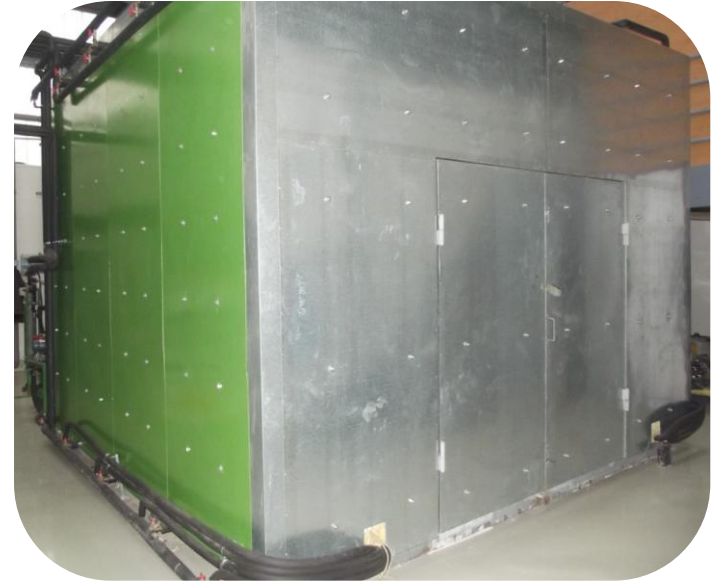
FACULTY OF MECHANICAL ENGINEERING

Research projects:

- **2011 – 2015** – Research on new ways of converting heat from RES to electricity using new advanced thermal cycles
- **2012 – 2015** – Solving issues with low-melting ash during the biomass combustion
- **2009 – 2013** – Use of low-potential geothermal heat without forced circulation of the working medium in the depth borehole
- **2009 – 2011** – BESTPELLETS - Increase the efficiency of production of pellets with using additives
- **2008 – 2010** – Microcogeneration unit based on burning of solid biomass

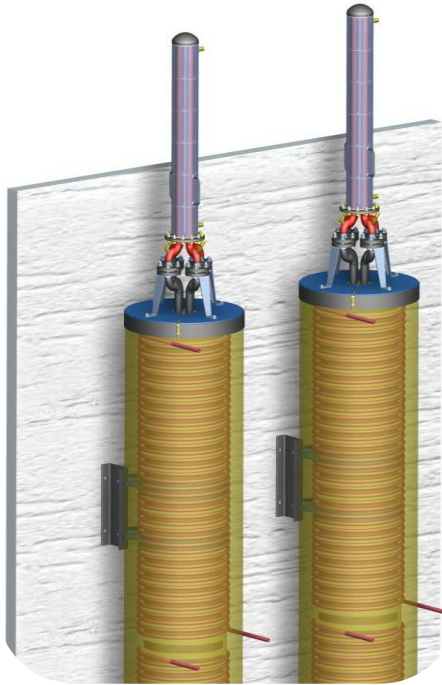
RESEARCH ACTIVITIES

The thermostatic chamber - Laboratory with a thermostatic chamber for measuring properties of heating and cooling elements.



Research Laboratory for measurement of heat sources - provides means for testing heat sources up to 100 kW. Research of small biomass-powered sources, aimed at reduction of emission production is also being carried out in the laboratory.

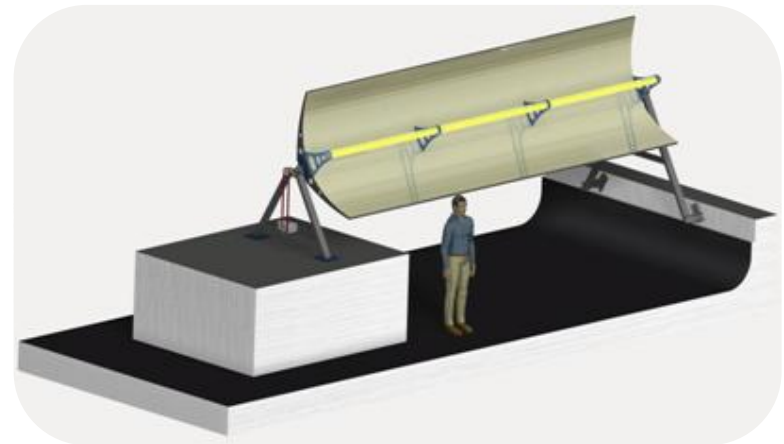
RESEARCH ACTIVITIES



Geothermal heat transport in laboratory models:

- to build simulators in laboratory conditions
- two types of heat – transfer devices
- experimental measurements
- to compare the efficiency of devices

The conversion of heat from RES into electricity



ROLES IN THE PROJECT BLC

- **Consulting activity** - biofuel production and efficient energy use
- **Implementation** of the project
- **Exchange of experience and knowledge**
- **Exchange of innovation** in research and development of quality of various materials from biomass and biofuels
- Involvement in **ECOCLUSTER**

Thank you for your attention.

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