

RESEARCH ON WOOD RESIDUES POWERED STEAM BOILED FOR ENVIRONMENTAL IMPACT EVALUATION

Goal of the project

The project results are used by the beneficiary to estimate with high accuracy the emitted pollutants (particles, VOC's, CO, NO_x, SO₂, CO₂) monthly/yearly balance in compliance with relevant national and European legislation.

Short description of the project

The project consist in measurements of relevant pollutant concentrations (VOC's, particles, CO, O₂, NO, NO₂, NO_x, SO₂, CO₂) emitted a wood residue powered steam boiler stack, corroborated with thermodynamic parameters of the flue gases.



Extended reports are prepared in accordance with EU legislation and laboratory quality standard EN 17025:2005. Additional studies were performed regarding the efficiency and optimization of facility pollutant reduction systems, such as particle fabric filters mounted between steam boiler and exhaust stack. Study on potential recovery of heat losses with exhaust gases are also of interest.

Project implemented by

Faculty of Mechanical Engineering / MMUT Department

Implementation period

01.06.2016 – 20.12.2016

Main activities

- Periodic measurements campaign for flue gas pollutant concentrations (VOC's, particles, CO, O₂, NO, NO₂, NO_x, SO₂, CO₂).
- Periodic scientific reports in accordance with laboratory quality standard EN 17025:2005.

Results

A significant database comprising air pollutants emissions for large steam boilers powered by waste wood biomass.



Applicability and transferability of the results

Due to the wide spread of wood manufacturing facilities and the use of the large steam boilers powered by waste wood residues (biomass) the resulted database of air pollutants concentrations emitted can be of interest for inter-comparison studies.

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WERZALIT LEMN TECH SCS

Research Centre

Research Centre for Thermal Machines & Equipment's, Transportation and Environmental Pollution Control

Research team

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