

Energetic Aspects of Oak and Larch Pellets Obtained from Sawdust Biomass

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Abstract

This paper aims to present the energetic problems of lignocellulosic biomass in the form of pellets. The main energetic characteristics of lignocellulosic biomass, such as calorific value, ash content, and calorific density are presented as a comparison between oak and larch biomass. From an experimental point of view it was shown that the oak and larch pellets obtained within the work had small differences in density, but after the torrefaction treatment they considerably increased their calorific value. There have been observed increases of up to 30% of the calorific value, both for oak and larch sawdust. The final conclusion of the paper is that although the role of vegetal biomass has diminished significantly in the last few years, it has not yet said its last word. The role of lignocellulosic biomass, as a sustainable fuel, will increase as fossil fuels will be diminish, and when the world's population will realize that fossil fuels are exhaustible and that others type of fuels have to be replaced instead.



Biography:

Aurel Lunguleasa has completed his PhD at the 1999 from Transilvania University of Brasov. He is member of Department of wood Engeneering and design of wooden products. He has published more than 50 papers in reputed journals from which 26 ISI Web of science, and over 15 in the field of biomass, pellets and briquettes. He has expertize in the field of Wood science, biomass, quality control and management, wooden composites.

Speaker Publications:

1. Aurel Lunguleasa, Cosmin Spirchez, Octavia Zeleniuc
Evaluation of the calorific values of wastes from some tropical wood species, July 2020Maderas: Ciencia y Tecnologia 22

2. Pavlo Bekhta, Emilia-Adela Salca, Aurel Lunguleasa. Some properties of plywood panels manufactured from combinations of thermally densified and non-densified veneers of different thicknesses in one structure December 2019 Journal of Building Engineering.



3. Dumitrascu Adela-Eliza, Aurel Lunguleasa, Emilia-Adela Salca, Valentina Doina Ciobanu. Evaluation of Selected Properties of Oriented Strand Boards Made from Fast Growing Wood Species,
4. Aurel Lunguleasa, Nadir Ayrimis, Cosmin Spirchez, Catalin Croitoru. Increasing the Calorific Properties of Sawdust Waste from Pellets by Torrefaction.

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