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CHARACTERISTICS OF WASTE BARK COMBUSTION

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Abstract

The paper presents some aspects regarding the use of certain bark biomass as sustainable and renewable fuel. The main bark uses are listed exhaustively, emphasizing the fact that they are parts of the forestry biomass. The main problems arising from the ecological burning of bark are highlighted, namely the amount of ash and the resulting gases, especially carbon dioxide, but the emphasis is placed on the amount of heat and ash that bark produces during combustion. Accordingly, the high and low calorific value and ash content are determined experimentally, but they are also estimated according to the relationships of prediction. Other calorific characteristics of bark for the four analyzed species and a mixture of them as calorific density, rate of energy release, limitative moisture content and so on are presented. The influence of ash content on the calorific value of bark use is also evaluated. The main conclusions of the paper refer to the net calorific value of the bark to be used for domestic purposes, in natural shredded form, or in the form of briquettes or pellets.

Key words: ash content, bark, calorific value, renewable energy, woody biomass

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