

## Atmospheric Fluid Bed Gasification of Different Biomass Fuels

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**Abstract :** This paper shortly describes biomass types and growing amount in the Czech Republic. The considerable part of this paper deals with energy parameters of the most frequent utilizing biomass types and results of their gasification testing. There was chosen sixteen the most exploited "Czech" woody plants and grasses. There were determined raw, element and biochemical analysis, basic calorimetric values, ash composition and ash characteristic temperatures. After that, each biofuel was tested by fluid bed gasification. The essential part of this paper yields results of chosen biomass types gasification experiments. Partly, there are described an operating conditions in detail with accentuation of individual fuels particularities partly, there is summarized gas composition and impurities content. The essential difference was determined mainly between woody plants and grasses both from point of view of the operating conditions and gas quality. The woody plants was evaluated as more suitable fuels for fluid bed gasifiers. This results will be able to significantly help with decision which energy plants are suitable for growing or with optimal biomass-treatment technology selection.

**Keywords :** biomass growing, biomass types, gasification, biomass fuels

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