

Conical Spouted Bed Combustor for Combustion of Vine Shoots Wastes

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Abstract : In order to prove the applicability of a conical spouted bed combustor for the thermal exploitation of vineyard pruning wastes, the flow regimes of beds consisting of vine shoot beds and an inert bed were established under different operating conditions. The effect of inlet air temperature on the minimum spouted velocity was evaluated. Batch combustion of vine shoots in a conical spouted bed combustor was conducted at temperatures in the range 425-550 °C with an inert bed. The experimental values of combustion efficiency of vine shoot calculated from the concentration the exhaust gases were assessed. The high experimental combustion efficiency obtained evidenced the proper suitability of the conical spouted bed combustor for the thermal combustion of vine shoots.

Keywords : biomass wastes, thermal combustion, conical spouted beds, vineyard wastes

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