

FAST PYROLYSIS OF BIOMASS IN A CIRCULATING FLUIDIZED BED REACTOR

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ABSTRACT

A novel circulating fluidised bed reactor for biomass fast pyrolysis has been designed, operated and further improved. The concept developed incorporates the unique feature of integral utilisation of the energy content of the by-product char. The objective of this paper is to examine the improvements adopted for the reliable operation of the developed system components, to analyse the results and to explore scale-up possibilities. Finally, potential end-use applications are discussed and first operational results of a bio-oil fuelled Stirling engine are presented.