



sidahmed.kessas@ensiacet.fr

Doctoral School: MEGeP

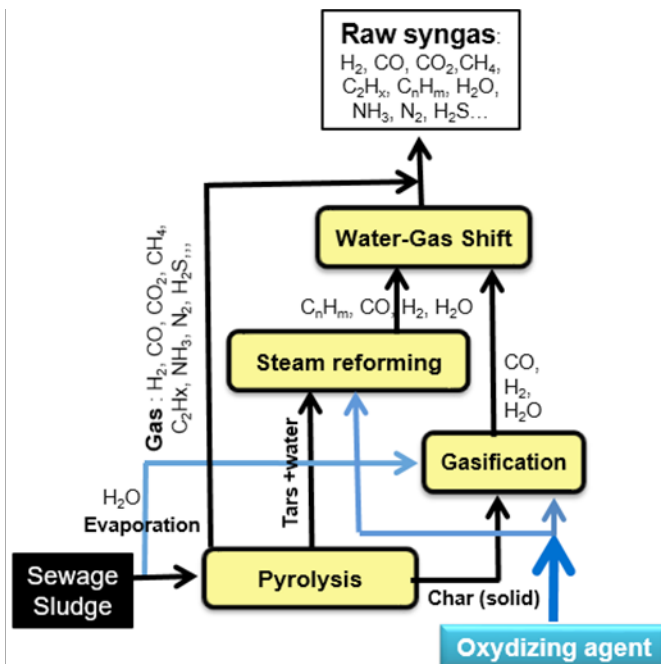
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Supervisor: Mehrdji HÉMATI

THERMO-CHEMICAL CONVERSION OF LIGNOCELLULOSIC WASTES IN FLUIDIZED BED REACTOR

Conversion thermochimique des déchets lignocellulosiques en réacteur à lit fluidisé



Many studies have focused on determining the influence of the nature of biomass on gasification; some of them have recently focused on the influence of inorganics. These works generally concern the determination of the kinetics of the elementary reactions.

However, few studies have focused on products of the gasification process. On the other hand, the tensions that are beginning to appear on the wood market are encouraging working on other lignocellulosic resources, such as agricultural residues, municipal green waste or contaminated waste. Depending on the case, these biomasses are seen as effluents to be treated, their cost may sometimes be zero or negative.

However, Some residual biomasses have properties that could be favorable to gasification, and they contain some types of minerals that can improve reaction kinetics. In this project, we propose to work on the thermochemical processes of conversion of the biomass in order to consolidate the knowledge of laboratories on the link between variability of biomass, operating conditions of gasification and composition of gaseous products. We focus on fluidized bed reactors for heat and electricity production (cogeneration) or liquid or gaseous biofuels synthesis.

This project is set up with a view of development of a Thermochemical conversion platform allowing other laboratories and industrialists to test the potentialities of biomass with variable composition.