

Title (en)
THREE-STAGE GASIFIER, FIXED BED, WHICH HAS BUFFER ZONE OF GASEOUS FLOW BETWEEN PYROLYSIS ZONE AND COMBUSTION ZONE

Title (de)
DREISTUFIGER VERGASER, FESTBETT, MIT EINER GASSTROM-PUFFERZONE ZWISCHEN DER PYROLYSEZONE UND DER VERBRENNUNGSZONE

Title (fr)
GAZOGÈNE À TROIS PHASES ET LIT FIXE, QUI COMPREND UNE ZONE TAMPON DU COURANT GAZEUX ENTRE LA ZONE DE PYROLYSE ET LA ZONE DE COMBUSTION

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Application
EP 08719101 A 20080304

Priority
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Abstract (en)
[origin: WO2008107727A2] At the upper place of the gasifier exists the first stage which is the pyrolysis zone (1) and it is a countercurrent reactor. At the middle place exists the second stage which is the combustion zone (2). At the bottom place exists the third stage which is the gasification zone (3) and it is a cocurrent reactor. Figure 1 shows the normal operation of the buffer zone (20) and figure 2 shows the reversed operation of the buffer zone (20). The three-stage gasifier is characterized from the fact that the passage from the normal operation of the buffer zone (20) to the reversed operation of the buffer zone (20) and vice versa is achieved only by proper rotation settings of the pumps (BPA), (BCA), (BPG), (BGO), so creating a new model of gaseous flow management between the three stages of the gasifier. This model can achieve the simultaneous combination of the following advantages: -Industrial scale safe operation ability, by using fuel with big possible variations in humidity and/or composition. -The producer gas is free of harmful components (tars, dioxins). -The gasifier does not expose its moving mechanical parts at temperatures above 750°C. -There is not any moving seal mechanism between the stages of the gasifier.

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