

Title (en)
A PROCESS AND GASIFIER FOR GASIFICATION OF SOLID BIOFUEL

Title (de)
VERFAHREN UND VERGASER ZUM VERGASEN VON FESTEM BIOBRENNSTOFF

Title (fr)
PROCEDE ET DISPOSITIF SERVANT A GAZEIFIER UN BIOCOMBUSTIBLE SOLIDE

Publication
EP 1442101 B1 20050803 (EN)

Application
EP 02787423 A 20021105

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Abstract (en)
[origin: WO03040267A2] A process and a gasifier for the gasification of solid, moderately flowable biofuel in a downdraft gasifier having an open core and a fixed gasification bed wherein the fuel material and primary air are fed at the top so as from the top and downward to pass a) a drying zone, b) a pyrolysis zone, c) a combustion zone involving flaming pyrolysis to which secondary air is fed, and where the fuel is supported by way of a narrowed portion in the inner cross section of the gasifier, d) a reduction zone, and e) optionally an inactive charcoal zone. The narrowed portion in the flaming pyrolysis zone (c) retains the fuel material through bridging across the opening of the narrowed portion until the material as a result of the partial combustion has been converted into a material having such a flowability that it resumes the downward movement towards the reduction zone. A self-adjustment of the decisive part of the process is obtained thereby ensuring a long-term, stable gasification even in a small gasifier.

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