

Title (en)

Method and apparatus for processing solid waste by pyrolysis.

Title (de)

Verfahren und Vorrichtung zur Behandlung von festen Abfallstoffen durch Pyrolyse.

Title (fr)

Procédé et dispositif pour le traitement de déchets solides par pyrolyse.

Publication

EP 0403708 A1 19901227 (EN)

Application

EP 89311138 A 19891027

Priority

US 36785489 A 19890619

Abstract (en)

Carbonaceous solid waste such as garbage and other refuse, with recyclable material such as metal, aluminum and glass substantially removed, is ground to small bits and pieces of relatively uniform size for processing by pyrolysis in a vertical retort. Material for processing is moved from a source of supply via a gas stream into the top of the retort in a cyclone fashion or swirling motion where it falls by gravity through countercurrent hot gases to exit for collection at the bottom of the retort as char. The hot gases are initially generated in the startup operation by igniting the first falling particles to reach the bottom with a fuel burning ignitor that is turned off when the material is sufficiently ignited and ambient air is blown into the bottom of the retort in a swirling or cyclone motion to maintain combustion of the swirling ignited material whereby the continual flow of falling material becomes the fuel to sustain the process of generating the hot gases without any outside source of fuel. The material is in constant motion from the time it enters the retort until it exits at the bottom and at no time is there a bed of material or a packed column being processed. The gases exit at the top of the retort where part of the gas stream is reduced in temperature and directed through the source of supply to serve as the vehicle for moving cold materials from such source to the top of the retort and the remaining gas stream is directed to a point of deposit which can be a secondary combustor for incinerating all impurities therein. The flow of the gas stream from the retort to the source of supply is through a closed conduit to provide a closed loop in which material is moved into and out of the system in an air free environment. The quantity of material processed per hour can be varied by varying the speed of delivery of material to the gas stream moving through the source of supply to the retort and the flow of ambient air can be increased or decreased correspondingly with an increase or decrease in the flow of material from the source of supply to maintain combustion. A storage bin may be provided for replenishing the source of supply and the speed of delivery of material from such bin to the source of supply can be varied to correspond with the amount of material being taken therefrom.

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C10B 53/00

IPC 8 full level

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CPC (source: EP)

C10B 49/08 (2013.01); **C10B 53/00** (2013.01)

Citation (search report)

- [X] AU 51784 A
- [A] GB 844705 A 19600817 - DIDIER WERKE AG
- [A] AU 414940 A
- [A] FR 830719 A 19380808

Designated contracting state (EPC)

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DOCDB simple family (application)

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