Title (en)

PROCESS AND APPARATUS FOR THE PARTITIONING AND THERMAL TREATMENT OF HETEROGENEOUS FEEDSTOCK

Title (de)

VERFAHREN UND VORRICHTUNG ZUM AUFTRENNEN UND THERMISCHE BEHANDLUNG VON HETEROGENEN EINSATZ

Title (fr)

PROCEDE ET DISPOSITIF DE SEPARATION ET DE TRAITEMENT THERMIQUE DE CHARGES HETEROGENES

Publication

EP 1016326 A1 20000705 (EN)

Application

EP 97950951 A 19971212

Priority

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- US 76452596 A 19961212

Abstract (en)

[origin: CA2274540A1] A novel process and apparatus for the thermal partitioning of heterogeneous feedstock (11) for the production of a metal product, a glass ceramic product and a gaseous product. The process includes the capability for thermal treatment of hazardous waste as defined by the Environmental Protection Agency (EPA) which also contains radioactive isotopes in some cases (mixed waste as defined by the Department of Energy) and the production of stable long-lived products as a result of treatment. More specifically, this invention relates to a novel process and apparatus whereby an input feed stream (9) of a widely heterogeneous nature in the descriptors of physical form, combustibility, chemical content, and particle size and contaminated with varying concentrations of hazardous components and/or radioisotopes is treated in a direct current graphite electrode arc melter (4) with a contiguous thermal oxidizing reactor (5) for the production of a metal product, a basalt-like glass ceramic product and a fully combusted offgas. The apparatus described incorporates an offgas fast quench configuration (17) for the minimization of dioxin formation and subsequent ease of cleansing of the offgas stream.

IPC 1-7

H05B 7/00; A62D 3/00; F23G 5/08

IPC 8 full level

F23G 5/00 (2006.01); **F23G 5/02** (2006.01); **F23G 5/033** (2006.01); **F23G 5/08** (2006.01); **F27D 11/08** (2006.01); **H05B 7/00** (2006.01); **H05B 7/18** (2006.01)

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