

Title (en)

Method and apparatus for high temperature heat treatment of combustible material in particular waste

Title (de)

Verfahren und Vorrichtung zur Hochtemperaturbehandlung von brennbarem Material insbesondere von Abfall

Title (fr)

Procédé et dispositif pour le traitement à haute température de matériaux combustibles en particulier de déchets

Publication

EP 1607681 A1 20051221 (EN)

Application

EP 04425425 A 20040610

Priority

EP 04425425 A 20040610

Abstract (en)

Apparatus (1) for high temperature heat treatment of combustible material, in particular municipal solid waste (waste products), or waste combustible of a desired nature, provided solid and not explosive, comprising a pyrolysis chamber (41) in which the material to treat is heated in a reducing environment to a temperature suitable for making a first molecular break of the substances in they present and a combustion chamber (42) within which is achieved a full combustion of the combustible material fed by feeding oxygen in amount predetermined. The full combustion of the combustible material executed in combustion chamber (42) of the apparatus (1) produces, in particular, gas at high temperature that is sent to the pyrolysis chamber in order to raise remarkably the temperature of pyrolysis. This associated to the introducing water vapour, through a duct (6), and of air, through a duct (7), in pyrolysis chamber (41) produce semiwater gas that is then burnt in combustion chamber (42) by feeding a current (8) of a fluid containing oxygen to raise the combustion temperature in order to carry out the process to temperature that assures the molecular break of the totality of the toxic substances. <IMAGE>

IPC 1-7

F23G 5/027

IPC 8 full level

F23G 5/027 (2006.01); **F23G 5/10** (2006.01); **F23G 5/16** (2006.01); **F23G 5/50** (2006.01); **F23G 7/10** (2006.01); **F23G 7/12** (2006.01);
F23J 15/04 (2006.01)

CPC (source: EP US)

F23G 5/0273 (2013.01 - EP US); **F23G 5/10** (2013.01 - EP US); **F23G 5/16** (2013.01 - EP US); **F23G 5/50** (2013.01 - EP US);
F23G 7/10 (2013.01 - EP US); **F23G 7/12** (2013.01 - EP US); **F23J 15/04** (2013.01 - EP US); **F23G 2202/104** (2013.01 - EP US);
F23G 2203/101 (2013.01 - EP US); **F23G 2203/803** (2013.01 - EP US); **F23G 2207/101** (2013.01 - EP US); **F23G 2207/102** (2013.01 - EP US);
F23G 2207/108 (2013.01 - EP US); **F23G 2209/20** (2013.01 - EP US); **F23G 2209/22** (2013.01 - EP US); **F23G 2209/261** (2013.01 - EP US);
F23G 2209/262 (2013.01 - EP US); **F23G 2209/281** (2013.01 - EP US); **F23G 2900/00001** (2013.01 - EP US);
F23J 2900/01005 (2013.01 - EP US); **F23L 2900/07009** (2013.01 - EP US)

Citation (search report)

- [XY] US 5553554 A 19960910 - URIC JR ALBERT E [US]
- [Y] US 6024032 A 20000215 - SHARPE JOHN ERNEST ELSOM [GB]
- [Y] US 2002179541 A1 20021205 - SPRITZER MICHAEL H [US], et al
- [A] DE 10333279 A1 20040304 - HERHOF UMWELTTECHNIK GMBH [DE]
- [A] US 2002119407 A1 20020829 - PISUPATI SARMA V [US]
- [A] DE 19961155 C1 20010613 - STEINBRECHT DIETER [DE], et al

Cited by

CN109578975A; CN109578976A; PL422701A1; FR2929526A1; PL422281A1; WO2012046258A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1607681 A1 20051221; EP 1607681 B1 20110720; AT E517292 T1 20110815; CA 2569886 A1 20051222; CA 2569886 C 20111011;
CY 1112534 T1 20151209; DK 1607681 T3 20111114; ES 2369907 T3 20111209; PL 1607681 T3 20111230; PT 1607681 E 20111024;
SI 1607681 T1 20111130; US 2008282946 A1 20081120; WO 2005121645 A1 20051222

DOCDB simple family (application)

EP 04425425 A 20040610; AT 04425425 T 20040610; CA 2569886 A 20050603; CY 111100998 T 20111020; DK 04425425 T 20040610;
EP 2005005996 W 20050603; ES 04425425 T 20040610; PL 04425425 T 20040610; PT 04425425 T 20040610; SI 200431763 T 20040610;
US 57041905 A 20050603