

Title (en)

PROCESS FOR PARTIAL DECONTAMINATION OF RADIOACTIVE WASTE

Title (de)

VERFAHREN ZUR TEILDEKONTAMINATION RADIOAKTIVER ABFÄLLE

Title (fr)

PROCEDE DE DECONTAMINATION PARTIELLE DES DECHETS RADIOACTIFS

Publication

**EP 2593942 A1 20130522 (DE)**

Application

**EP 11790855 A 20110706**

Priority

- DE 102010026936 A 20100712
- DE 2011001414 W 20110706

Abstract (en)

[origin: WO2012010145A1] The invention relates to a method for partially decontaminating radioactive waste. In said method, the waste is first mixed with or brought in contact with at least one corrosion medium. Then activation energy is provided to the corrosion medium so that at least a portion of the radionuclide present in the waste is converted into at least one gaseous reaction product or put into solution by hydrogen or hydrogen ions, oxygen or oxygen ions, and/or a halogen (for example, chlorine) or halogen ions from the corrosion medium. The objective of the method according to the sub-claim is to decontaminate a porous solid waste that contains  $^{12}\text{C}/^{13}\text{C}$  and that is laden with the radionuclide  $^{14}\text{C}$ . The waste is exposed to  $\text{CO}_2$  and/or hydrogen as a corrosion medium so that the waste is at least partially converted into at least one gaseous reaction product, wherein the process temperature is selected in such a way that the concentration of the radionuclide  $^{14}\text{C}$  is increased in the reaction product relative to the concentration of  $^{12}\text{C}/^{13}\text{C}$ .

IPC 8 full level

**G21F 9/00** (2006.01); **G21F 9/30** (2006.01)

CPC (source: EP US)

**G21F 9/002** (2013.01 - EP US); **G21F 9/30** (2013.01 - EP US); **G21F 9/302** (2013.01 - EP US); **G21F 9/305** (2013.01 - EP US)

Citation (search report)

See references of WO 2012010145A1

Cited by

WO2011159789A2; EP2582624B1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**DE 102010026936 A1 20120112**; EP 2593942 A1 20130522; RU 2013105729 A 20140820; US 2013211172 A1 20130815;  
US 8754283 B2 20140617; WO 2012010145 A1 20120126

DOCDB simple family (application)

**DE 102010026936 A 20100712**; DE 2011001414 W 20110706; EP 11790855 A 20110706; RU 2013105729 A 20110706;  
US 201113808214 A 20110706