

Title (en)

METHOD OF RECOVERING VALUABLE METALS FROM THE VRDS SPENT CATALYST

Title (de)

VERFAHREN ZUR RÜCKGEWINNUNG VON WERTMETALLEN AUS EINEM VERBRAUCHTEN VRDS-KATALYSATOR

Title (fr)

PROCEDE DE RECUPERATION DE METAUX PRECIEUX A PARTIR DES CATALYSEURS EPUISES ISSUS D'UN PROCEDE VRDS

Publication

EP 2125136 A4 20111109 (EN)

Application

EP 08723449 A 20080313

Priority

- KR 2008001412 W 20080313
- KR 20070025283 A 20070313

Abstract (en)

[origin: WO2008111802A1] The present invention discloses method of recovering valuable metals, such as vanadium, molybdenum, nickel from the catalysts spent in the VRDS process for desulfurization of petroleum. The method comprises leaching water-insoluble reactants after reacting the pre-treated waste crystals in solution of sodium hydroxide, maintaining the filtrate at pH 9.5 by adding sulfuric acid or hydrochloric acid and then heating the filtrate, removing aluminium oxide from the solution, aerating the filtrate continuously or periodically and agitating the filtrate below pH 1 at 80-100 °C, thereby precipitating molybdenum oxide and vanadium oxide, and leaching and washing the precipitated molybdenum oxide and vanadium oxide.

IPC 8 full level

B01D 11/00 (2006.01); **C22B 7/00** (2006.01)

CPC (source: EP KR US)

B01D 11/00 (2013.01 - KR); **C01G 31/00** (2013.01 - KR); **C01G 31/02** (2013.01 - EP US); **C01G 39/00** (2013.01 - KR); **C01G 39/02** (2013.01 - EP US); **C01G 53/00** (2013.01 - KR); **C22B 3/44** (2013.01 - EP US); **C22B 7/008** (2013.01 - EP US); **C22B 7/009** (2013.01 - EP US); **C22B 34/225** (2013.01 - EP US); **C22B 34/345** (2013.01 - EP US); **Y02P 10/20** (2015.11 - EP US)

Citation (search report)

- [XA] US 4666685 A 19870519 - WIEWIOROWSKI EDWARD I [US]
- [XA] JP 2002097526 A 20020402 - SUMITOMO METAL MINING CO
- See references of WO 2008111802A1

Cited by

EP2412675A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

WO 2008111802 A1 20080918; CA 2679442 A1 20080918; CN 101631598 A 20100120; EP 2125136 A1 20091202; EP 2125136 A4 20111109; JP 2010521286 A 20100624; KR 101008496 B1 20110114; KR 20070043736 A 20070425; KR 20080032057 A 20080414; US 2010111787 A1 20100506

DOCDB simple family (application)

KR 2008001412 W 20080313; CA 2679442 A 20080313; CN 200880008311 A 20080313; EP 08723449 A 20080313; JP 2009553521 A 20080313; KR 20070025283 A 20070313; KR 20080023169 A 20080313; US 53074308 A 20080313