

Title (en)

METHOD OF CONCENTRATING NICKEL IN SAPROLITE ORE

Title (de)

VERFAHREN ZUR KONZENTRATION VON NICKEL IN SAPROLITERZ

Title (fr)

PROCÉDÉ DE CONCENTRATION DU NICKEL DANS UN MINÉRAI DE SAPROLITE

Publication

**EP 2226403 B1 20120627 (EN)**

Application

**EP 09814358 A 20090430**

Priority

- JP 2009058450 W 20090430
- JP 2008238904 A 20080918

Abstract (en)

[origin: WO2010032513A1] A method of nickel concentration is provided which is inexpensive and simple and is reduced in environmental burden.

By using the method, saprolite ore of a low nickel grade, which has not hitherto been effectively used as a raw material for ferro-nickel smelting because of the low nickel grade, can be improved in nickel grade to such a level that the ore can be profitably used as a raw material for ferro-nickel smelting. The method is characterized by comprising the following steps (1) to (4). (1) Saprolite ore is crushed to regulate the ore particle size so that the ore particles pass through a screen having an opening size of 50 mm. (2) Surface layer parts of the crushed ore are subjected to dry attrition. (3) The attrited ore is subjected to dry classification using, as a classification point, a size selected from the range of from 0.5 to 2.0 mm, and that part of the ore which has a particle size not larger than the classification point is then recovered as a nickel concentrate. (4) That part of the ore which has a particle size exceeding the classification point is subjected to dry gravity separation, and that part of the ore which has a specific gravity not higher than 2.0 is then recovered as a nickel concentrate.

IPC 8 full level

**C22B 23/00** (2006.01); **B07B 1/00** (2006.01); **B07B 4/08** (2006.01); **B07B 9/00** (2006.01); **C22B 1/00** (2006.01)

CPC (source: EP)

**C22B 1/00** (2013.01); **C22B 23/005** (2013.01); **C22B 23/023** (2013.01)

Cited by

CN104959219A; CN106994387A; WO2015185457A1; US10072313B2; US10301704B2

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 MK MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 2010032513 A1 20100325**; BR PI0906560 A2 20160809; BR PI0906560 B1 20170124; EP 2226403 A1 20100908; EP 2226403 A4 20101201; EP 2226403 B1 20120627

DOCDB simple family (application)

**JP 2009058450 W 20090430**; BR PI0906560 A 20090430; EP 09814358 A 20090430