Title (en)

Use of a device for enrichment of copper or nickel

Title (de)

Verwendung einer Vorrichtung zur Anreicherung von Kupfer oder Nickel

Title (fr)

Utilisation d'un dispositif d'enrichissement de cuivre ou de nickel

Publication

EP 2339278 A1 20110629 (DE)

Application

EP 09015674 A 20091218

Priority

EP 09015674 A 20091218

Abstract (en)

The device for obtaining and enriching of copper or nickel, comprises a smelting furnace (1) and a waste heat boiler connected to the smelting furnace for discharging and cooling the exhaust gas from the smelting furnace. The smelting furnace comprises a reaction shaft (3), a vertical rising funnel (4) and a stove (5) connected to the reaction shaft with the rising funnel for the reception of a copper-containing or nickel-containing melt. The waste heat boiler comprises a vertically orienting boiler section (12) connected to the rising funnel. The device for obtaining and enriching of copper or nickel, comprises a smelting furnace (1) and a waste heat boiler connected to the smelting furnace for discharging and cooling the exhaust gas from the smelting furnace. The smelting furnace comprises a reaction shaft (3), a vertical rising funnel (4) and a stove (5) connected to the reaction shaft with the rising funnel for the reception of a copper-containing or nickel-containing melt. The waste heat boiler comprises a vertically orienting boiler section (12) connected to the rising funnel. The boiler section is designed with the standard, where the exhaust gas and/or process gas is cooled at 850-950[deg] C. The first vertical boiler section has a height of 35-45 m and an internal cross-sectional surface of 11-13 m 2>. The internal cross-section of the first vertical boiler section is rectangularly formed. Blowing nozzles equipped for blowing oxygen-containing gases in the interior area of the boiler section are arranged in the lower area of the first vertical boiler section. A vertical intermediate piece is arranged between the rising funnel of the smelting furnace and the first vertical boiler section. The intermediate piece has a height of 2-6 m and is cooled by a cooling circuit independent by the cooling of the first vertical boiler section. The second vertical boiler section is connected to the first vertical boiler section and the second vertical boiler section is flowable by the exhaust gas vertical towards bottom. The exhaust gas is cooled at 640-760[deg] C. The first vertical boiler section is connected over a horizontal deflection section on the second vertical boiler section. In the lower area of the second vertical boiler section, a horizontal boiler section is connected at the second vertical boiler section. The exhaust gas is deflected from the second vertical boiler section into the horizontal boiler section. The cooling of the exhaust gases is carried out at 300-400[deg] C.

Abstract (de)

Vorrichtung zur Anreicherung von Kupfer oder Nickel, mit einem Schwebeschmelzofen und einem an den Schwebeschmelzofen angeschlossenen Abhitzekessel zur Abführung und Abkühlung von Abgasen aus dem Schwebeschmelzofen. Der Schwebeschmelzofen weist einen Reaktionsschacht, einen vertikalen Steigschacht und einen den Reaktionsschacht mit dem Steigschacht verbindenden Herd zur Aufnahme einer kupferhaltigen oder nickelhaltigen Schmelze auf. Der Abhitzekessel weist einen ersten an den Steigschacht angeschlossenen vertikal orientierten Kesselabschnitt auf.

IPC 8 full level

F27B 3/26 (2006.01); **C22B 15/00** (2006.01); **F27D 17/00** (2006.01)

CPC (source: EP)

C22B 15/0047 (2013.01); **C22B 23/025** (2013.01); **F27B 3/26** (2013.01); **F27D 17/001** (2013.01); **F27D 17/004** (2013.01)

Citation (search report)

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Designated contracting state (EPC)

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