

Title (en)

Device and method for monitoring the movement of a grinding ball in a ring ball mill

Title (de)

Vorrichtung und Verfahren zur Überwachung der Mahlkugelbewegung in einer Kugelringmühle

Title (fr)

Dispositif et procédé destinés à la surveillance du mouvement d'une balle de broyage dans un broyeur à bague de roulement à billes

Publication

**EP 2075072 A1 20090701 (DE)**

Application

**EP 07025134 A 20071227**

Priority

EP 07025134 A 20071227

Abstract (en)

The ball ring mill (99) has a grinder (1) with multiple grinding balls (4), which are guided in a mill track between a grinding ring (2) and a pressure ring (3). The grinding balls are movable along the mill track due to difference of rotational speeds of the grinding and pressure rings. A sensor system (11) is provided for contactless detection of the movement of the grinding balls, where the sensor system has expansion-measuring strips, a radiation source e.g. microwave source and light source, and a radiation detector e.g. microwave detector and light detector. The sensor system is inductive, capacitive, magnetic, optical, acoustic and electromagnetic proximity switches. An independent claim is also included for a method for monitoring a movement of a grinding ball in a ball ring mill.

Abstract (de)

Die Erfindung betrifft eine Vorrichtung und ein Verfahren zur Überwachung der Mahlkugelnbewegung in einer Kugelringmühle (99), bei der Mahlkugeln (4) sich entlang einer Mahlspur (10) bewegen. Dazu ist ein Sensorsystem (11) zur berührungslosen Erfassung des Vorbeilaufens einer Mahlkugel am (4) Sensorsystem (11) vorgesehen ist. Durch Auswertung des Sensorsignals können Störungen im Betrieb der Kugelringmühle (99) festgestellt werden.

IPC 8 full level

**B02C 15/12** (2006.01); **B02C 25/00** (2006.01)

CPC (source: EP)

**B02C 15/123** (2013.01); **B02C 25/00** (2013.01)

Citation (applicant)

GB 2281519 A 19950308 - PLANT MANAGEMENT CONSULT PTY [ZA]

Citation (search report)

- [A] GB 2281519 A 19950308 - PLANT MANAGEMENT CONSULT PTY [ZA]
- [A] EP 0125117 A2 19841114 - BOULTON LTD WILLIAM [GB]
- [A] JP S5434176 A 19790313 - MITSUBISHI HEAVY IND LTD

Cited by

CN109174344A; EP3159061A1; CN107127022A; CN114289137A; JP2022514190A; EP3885033A4

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DE

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