Title (en)

Oscillation device for oscillating a strand cast mould

Title (de)

Oszillationseinrichtung zur Oszillation einer Stranggießkokille

Title (fr)

Dispositif d'oscillation pour l'oscillation d'une lingotière de coulée continu

Publication

EP 2524746 A1 20121121 (DE)

Application

EP 11166162 A 20110516

Priority

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Abstract (en)

The oscillating device comprises a stationary supporting structure, a first pair of springs (3) consisting of an annular first spring and an annular second spring (5), and a second pair of springs consisting of an annular third spring and an annular fourth spring. The first and second springs partially enclose a continuous casting mold (1), lie on radius of beams having a common center, and have a closed cross-section in a normal plane of oscillation direction (2). The second spring is located at a first distance from the first spring in the oscillating direction. The oscillating device comprises a stationary supporting structure, a first pair of springs (3) consisting of an annular first spring and an annular second spring (5), and a second pair of springs consisting of an annular third spring and an annular fourth spring. The first and second springs partially enclose a continuous casting mold (1), lie on radius of beams having a common center, and have a closed cross-section in a normal plane of oscillation direction (2). The second spring is: located at a first distance from the first spring in the oscillating direction; fastened in a first quadrant on the supporting structure and in a third quadrant on the continuous casting mold while the other quadrants are free; and aligned parallel to the first spring. The first spring is fastened in a first quadrant on the continuous casting mold and in a third quadrant on the supporting structure while the other quadrants are free. The third and fourth springs partially enclose the continuous casting mold. The first pair of springs is located at a second distance from the second pair of springs. The third spring is fastened in a first quadrant on the continuous casting mold and in a third quadrant on the supporting structure while the other quadrants are free. The fourth spring is fastened in a first quadrant on the supporting structure and in a third quadrant on the continuous casting mold while the other quadrants are free. An oscillating drive for initiating or maintaining oscillation is arranged between the first pair of springs and the second pair of springs. An electromagnetic stirrer is arranged below the first pair of springs or the second pair of springs in the casting direction. The second distance is 5-20 times greater than the first distance. The first spring, second spring, third spring and fourth spring are constructed in a layer wise manner.

Abstract (de)

Die Erfindung betrifft eine Oszillationseinrichtung zur Oszillation einer Stranggießkokille (1) in Oszillationsrichtung (2), aufweisend eine ortsfeste Stützkonstruktion (14) zur Abstützung der Stranggießkokille (1), ein erstes Federpaar (3), bestehend aus einer ringförmigen ersten Feder (4) und einer ringförmigen zweiten Feder (5), wobei jeweils die erste Feder (4) und die zweite Feder (5) die Stranggießkokille (1) zumindest teilweise umschließt, und die zweite Feder (5) einen ersten Abstand (6) in Oszillationsrichtung (2) zur ersten Feder (4) aufweist. Die Aufgabe der Erfindung ist es, eine Oszillationseinrichtung zur Oszillation einer Stranggießkokille (1) zu schaffen, mit der eine exakte Führung der Kokille bei einer kompakten Bauweise und vergleichsweise großen Schwingungsamplituden realisiert werden kann. Diese Aufgabe wird durch eine Vorrichtung gelöst, bei der die erste Feder (4) in einem ersten Quadrant an der Stranggießkokille (1) und in einem dritten Quadrant an der Stützkonstruktion (14) befestigt ist, die anderen Quadranten sind freie Enden, und bei der die zweite Feder (5) in einem ersten Quadrant an der Stützkonstruktion (14) und in einem dritten Quadrant an der Stranggießkokille (1) befestigt ist, die anderen Quadranten sind freie Enden.

IPC 8 full level

B22D 11/053 (2006.01)

CPC (source: EP KR)

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Citation (applicant)

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Citation (search report)

- [AD] DE 19547780 A1 19960627 - VOEST ALPINE IND ANLAGEN [AT]
- [A] DE 19547779 A1 19960627 - VOEST ALPINE IND ANLAGEN [AT]

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