

Title (en)

Apparatus for intensifying cooling in the casting of metal objects.

Title (de)

Gerät zum verstärkten Kühlen beim Giessen von Werkstücken aus Metall.

Title (fr)

Dispositif pour l'intensification de la puissance de refroidissement pour la coulée des pièces métalliques.

Publication

**EP 0481380 A1 19920422 (EN)**

Application

**EP 91117411 A 19911011**

Priority

FI 905102 A 19901017

Abstract (en)

The invention relates to an apparatus for intensifying cooling in the casting of metal objects, particularly in vertical continuous casting from bottom to top, when the nozzle (12) of the continuous casting machine is at least at the top surrounded by a cooler (11), which is divided into two parts by a separating member (14) provided therein. According to the invention, the cooler (11) is provided with at least one guide member (16) arranged in the cooler housing and/or connected to the separating member (14) located inside the cooler, which guide member is installed essentially at the height defined by the solidification front (15) located in the nozzle (12) of the continuous casting machine. The guide member is formed for instance of at least one guide channel (16) arranged inside the cooler housing, or of at least one aligning member connected to the separating member. <IMAGE>

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IPC 8 full level

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**B22D 11/055** (2013.01); **B22D 11/145** (2013.01)

Citation (search report)

- [X] DE 2060451 B2 19740131
- [XD] US 3746077 A 19730717 - HOCKSELL H, et al
- [A] US 2553921 A 19510522 - FERNANDO JORDAN JAMES

Cited by

EP0875317A1; EP0542030A1; US5381853A

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