

Title (en)

Process for grain refining aluminium casting alloy, especially aluminium-silicon casting alloys.

Title (de)

Verfahren zur Kornfeinung von Aluminium-Gusslegierungen, insbesondere Aluminium-Silizium-Gusslegierungen.

Title (fr)

Procédé d'affinage du grain d'alliage de coulée à base d'aluminium, en particulier d'alliages de coulée à base d'aluminium-silicium.

Publication

EP 0539328 A1 19930428 (DE)

Application

EP 92810787 A 19921015

Priority

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Abstract (en)

For grain refining of aluminium casting alloys, especially aluminium-silicon casting alloys, gallium phosphide and/or indium phosphide is added to the melt, if appropriate in addition to further grain refining additives and/or modifying additives. <??>The addition of gallium phosphide and/or indium phosphide leads to good grain refining with a small tendency to form sink holes, and has no adverse effect on modification processes.

Abstract (de)

Zur Kornfeinung von Aluminium-Gusslegierungen, insbesondere Aluminium-Silizium-Gusslegierungen, wird der Schmelze, gegebenenfalls neben weiteren Kornfeinungs- und/oder Veredelungszusätzen, Galliumphosphid und/oder Indiumphosphid zugesetzt. Die Zugabe von Galliumphosphid und/oder Indiumphosphid führt zu einer guten Kornfeinung bei geringer Lunkerneigung und hat keinen negativen Einfluss auf Veredelungsvorgänge.

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C22C 1/03; C22C 21/04

IPC 8 full level

C22C 1/03 (2006.01); C22C 21/04 (2006.01)

CPC (source: EP US)

C22C 1/03 (2013.01 - EP US); C22C 21/04 (2013.01 - EP US)

Citation (search report)

- [Y] US 3953202 A 19760427 - RASMUSSEN ROBERT T C
- [Y] WO 9105069 A1 19910418 - TIMMINCO LTD [CA]
- [A] EP 0069680 A1 19830112 - PECHINEY ALUMINIUM [FR]
- [X] CHEMICAL ABSTRACTS, vol. 81 Columbus, Ohio, US; SAP'YAN, V. G. ET AL. 'Effect of phosphides on the structure and properties of hypereutectoid silumin's'
- [A] ZEITSCHRIFT FUR METALLKUNDE. Bd. 57, Nr. 5, Mai 1966, STUTTGART DE Seiten 396 - 401 S.T. CHIU 'THE EFFECT OF VARIOUS ELEMENTS ON THE MODIFICATION OF AL-SI ALLOYS'

Cited by

KR100754039B1; DE4328040C1; EP0687742A1; US10022788B2; US11280292B2; US6364970B1; WO9531578A1; EP3143173B1; EP3143173B2

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