

Title (en)

Process and apparatus for the production of metallic compositions comprising at least two constituents, one constituent having a melting temperature exceeding the boiling temperature of the other.

Title (de)

Verfahren und Vorrichtung zur Herstellung metallischer Zusammensetzungen aus mindestens zwei Bestandteilen, wobei die Siedetemperatur eines Bestandteiles unter der Schmelztemperatur des anderen Bestandteiles liegt.

Title (fr)

Procédé et installation pour produire des compositions métalliques consistant en au moins deux constituants dont l'un a une température de fusion excédant la température d'ébullition de l'autre constituant.

Publication

EP 0016273 A1 19801001 (EN)

Application

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Priority

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Abstract (en)

A process and apparatus are disclosed for the production of a metallic composition, such as ferro-magnesium, wherein one constituent has a melting point which is above the boiling point of the second constituent. A liquid melt of the first constituent has an effective depth sufficient to produce a static pressure head in excess of the vapor pressure of the second constituent at the temperature of the melt. The second constituent in molten form is mixed with the first constituent to form a liquid mixture wherein at least a portion of the second constituent is in solution with the first constituent. The mixture if a solid metallic composition is to be found is solidified rapidly to form the solid metallic composition in which a substantial part of the second constituent appears as a dispersion of fine particles of the second constituent in a matrix of the first constituent. The apparatus includes a columnar furnace (10) communicating with a reaction chamber (16) to provide the requisite pressure within the reaction chamber (16), an adder mechanism (18) to supply the low-boiling point constituent to the pressurized reaction chamber (16) and means (20) to cool and solidify the liquid mixture rapidly so as to form the desired dispersion of fine particles of the low-boiling point constituent in a matrix of the other constituents.

IPC 1-7

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IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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