

Title (en)

Device for performing controlled melting of a material

Title (de)

Vorrichtung zur Gewährleistung des kontrollierten Schmelzens eines Materials

Title (fr)

Dispositif permettant d'assurer la fusion contrôlée d'un matériau

Publication

**EP 2083240 A1 20090729 (FR)**

Application

**EP 09290055 A 20090127**

Priority

FR 0800424 A 20080128

Abstract (en)

The fusion device comprises an enclosure (3) connected to a thermostated chamber (4) receiving a molten material (2) in its lower part, a grid (6) formed by heating elements for separating the enclosure from the thermostated chamber, and a unit to prevent the passage of grains from the material through the grid. The heating elements of the grid are parallel tubes (7) or hollow components within which a coolant reaches a temperature greater than the melting temperature of the material. The thermostated chamber is maintained in a temperature by a hot casing (5) covering walls of the chamber. The fusion device comprises an enclosure (3) connected to a thermostated chamber (4) receiving a molten material (2) in its lower part, a grid (6) formed by heating elements for separating the enclosure from the thermostated chamber, and a unit to prevent the passage of grains from the material through the grid. The heating elements of the grid are parallel tubes (7) or hollow components within which a coolant reaches a temperature greater than the melting temperature of the material. The thermostated chamber is maintained in a temperature by a hot casing (5) covering walls of the chamber. The bottom of the enclosure is heated by the casing. The tubes are connected at each end to a connection casing, which is connected to the hot casing, and have a triangular section. A tip of the triangle is directed towards the enclosure, and a base of the triangle opposite to the tip is directed towards the thermostated chamber. The unit to prevent the passage of grains comprises non-joint coil springs, which are placed in slits separating the tubes. The slit has an overall dimension of less than the dimension of grains.

Abstract (fr)

L'invention a pour objet un dispositif (1) permettant d'assurer la fusion contrôlée d'un matériau fusible (2) en grains et en particulier d'un matériau énergétique. Ce dispositif (1) comporte une enceinte (3) reliée à sa partie inférieure à une chambre thermostatée (4) destinée à recevoir le matériau fondu. Il est caractérisé en ce que l'enceinte (3) est séparée de la chambre thermostatée (4) par au moins une grille (6) formée d'éléments chauffants, des moyens (14) étant prévus pour empêcher le passage des grains du matériau à travers la grille. Application à la fusion d'un matériau explosif en vue de charger des munitions.

IPC 8 full level

**F42B 33/02** (2006.01); **C06B 21/00** (2006.01)

CPC (source: EP)

**C06B 21/005** (2013.01); **F42B 33/0235** (2013.01)

Citation (search report)

- [XY] GB 2024194 A 19800109 - WASAGCHEMIE AG
- [Y] US 2227845 A 19410107 - ROGERS GEORGE D

Cited by

CN112361902A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

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**EP 2083240 A1 20090729**; **EP 2083240 B1 20120321**; AT E550626 T1 20120415; DK 2083240 T3 20120514; ES 2384539 T3 20120706; FR 2926811 A1 20090731; FR 2926811 B1 20100827; PL 2083240 T3 20120831

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