

Title (en)

METHOD AND DEVICE FOR ATOMIZING MOLTEN METALS

Title (de)

VERFAHREN UND VORRICHTUNG ZUM ZERSTÄUBEN VON METALLSCHMELZEN

Title (fr)

PROCEDE ET DISPOSITIF D'ATOMISATION DE MASSES METALLIQUES FONDUES

Publication

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Application

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Abstract (en)

[origin: WO0204154A1] The invention relates to a method for atomizing molten metals. According to said method, the liquid molten metal bath is atomized from a tundish using a propellant gas via an outlet with gas into a refrigerated chamber or onto a surface to be coated to compact the reduced particles. The liquid molten metal is introduced via an annular gap into the outlet, in which hot gas with a temperature of between 250 DEG C and 1300 DEG C and a supercritical pressure of between 2 and 30 bar is ejected concentrically in relation to the outlet, by means of a Laval nozzle. The hot gas is brought into contact with the molten metal bath by a component that is directed radially outwards, or by a torsion whose speed is greater than the speed of sound. The device for carrying out said method has a molten metal tundish (1), an immersion pipe (4) that is immersed in the molten metal (2) and that forms an annular gap that surrounds the outlet for the molten metal (2) and a lance (7) for ejecting the propellant gas. The lance (7), whose height can be adjusted bears a Laval nozzle (9).

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