

Title (en)

Process for preparing metal articles with internal porosity

Title (de)

Verfahren zur Herstellung von Metallkörpern mit innerer Porosität

Title (fr)

Procédé de fabrication d'articles métalliques à porosité interne

Publication

EP 0868956 B1 20030903 (DE)

Application

EP 98890051 A 19980226

Priority

AT 34297 A 19970228

Abstract (en)

[origin: EP0868956A1] Production of metal bodies with homogeneous internal porosity involves (a) homogeneously mixing heavy metal and/or alloy powder, blowing agent powder and optionally non-metallic reactive and/or alloying component and/or a mixing aid; (b) compacting the powder mixture under isostatic pressure optionally in a closed container and/or at elevated temperature; and (c) heat treating the green body at least partially in the region between the solidus and liquidus temperatures of a lower melting heavy metal phase, formed as a result of chemical composition inhomogeneities, and in the region of the reaction and/or decomposition temperature of the blowing agent, to form porosity in the metal body, which is subsequently cooled. Also claimed is a heavy metal or alloy body produced especially by the above process and having ≥ 40 vol.% porosity and a carbon content of 0.05-4.1 wt.% and/or a nitrogen content of 0.002-0.3 wt.%.

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CPC (source: EP)

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AT412876B; CN112662908A; EP3437766A4; US11298745B2; WO0054912A1

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