

Title (en)

COMPACTING OF GAS ATOMIZED METAL POWDER TO A PART

Title (de)

VERDICHUNG VON GASZERSTÄUBTEM METALLPULVER ZU EINEM TEIL

Title (fr)

COMPACTAGE DE POUDRE MÉTALLIQUE DISPERSÉE PAR JET DE GAZ SUR UNE PIÈCE

Publication

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Application

EP 16706180 A 20160224

Priority

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- EP 2016053852 W 20160224

Abstract (en)

[origin: WO2016135187A1] A process for making full dense components of a carbon-containing steel, comprises the steps of: a) making a powder of the carbon-containing steel by gas atomization wherein the carbon content is low, less than 0.15 wt%, b) agglomerating the powder from step a) with at least one hydrocolloid and elemental carbon, c) compacting the agglomerated powder from step b) to a density of at least 80% of theoretical density, with the proviso that the compacted agglomerated powder still is porous allowing transport of gas to and from its interior, and d) sintering the compacted powder to a density of more than 98% of theoretical density, preferably more than 99 % of theoretical density, wherein a gas comprising carbon is added during sintering and finally subjecting the component to HVC. Advantages include that it is possible to manufacture a dense component of powders which otherwise are difficult to compact.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

See references of WO 2016135187A1

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