Title (en)

METHOD FOR LASER MELTING WITH AT LEAST ONE WORKING LASER BEAM

Title (de)

VERFAHREN ZUM LASERSCHMELZEN MIT MINDESTENS EINEM ARBEITSLASERSTRAHL

Title (fr)

PROCÉDÉ DE FUSION LASER AVEC AU MOINS UN FAISCEAU LASER DE TRAVAIL

Publication

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Application

EP 14709233 A 20140306

Priority

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- EP 2014054308 W 20140306

Abstract (en)

[origin: WO2014146903A1] The invention relates to a method for laser melting, in which a component is produced in layers (15). Serving for this purpose is a bed of powder (11), in which a molten pool (14) is created by a working laser beam (12). According to the invention, it is provided that further auxiliary laser beams (16a, 16b, 16c) are used, set to such a power density that they merely slow down the cooling of the material in one zone (18), but do not cause any renewed melting. In this way, the cooling rate of the microstructure can be set in such a way that an advantageous structural formation develops. This allows for example the mechanical properties of the component produced to be advantageously improved without downstream heat treatments.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

See references of WO 2014146903A1

Citation (examination)

- WO 2014144482 A1 20140918 - MATTERFAB CORP [US]
- EP 2737964 A1 20140604 - MBDA FRANCE [FR]
- US 2012237745 A1 20120920 - DIERKES STEPHAN [DE], et al

Designated contracting state (EPC)

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