

Title (en)

METHOD FOR ALIGNING A MULTI BEAM IRRADIATION SYSTEM

Title (de)

VERFAHREN ZUM AUSRICHTEN EINES MEHRSTRAHL-BESTRAHLUNGSSYSTEMS

Title (fr)

PROCÉDÉ D'ALIGNEMENT D'UN SYSTÈME D'IRRADIATION À FAISCEAUX MULTIPLES

Publication

**EP 3755485 A1 20201230 (EN)**

Application

**EP 18706721 A 20180220**

Priority

EP 2018054179 W 20180220

Abstract (en)

[origin: WO2019161886A1] A method for aligning a multi beam irradiation system (20) for use in an apparatus (10) for producing a three-dimensional work piece by irradiating layers of a raw material powder with electromagnetic or particle radiation comprises the steps of: i) applying a first raw material powder layer onto a carrier (16) so as to define an irradiation plane (S) to be irradiated with radiation beams (24a, 24b) emitted by the irradiation system (20); ii) producing a first test structure (34) in the first raw material powder layer in an overlap zone (18c) of the irradiation plane (S) using a first radiation beam (24a) emitted by a calibrated first irradiation unit (22a) of the irradiation system (20); iii) producing a second test structure (36) in the first raw material powder layer in the overlap zone (18c) of the irradiation plane (S) using a second radiation beam (24b) emitted by a calibrated second irradiation unit (22b) of the irradiation system (20); iv) determining an offset (dxt, dyt) between the first and the second test structure (34, 36) in the irradiation plane (S); and v) aligning at least one of the first and the second calibrated irradiation unit (22a, 22b) based on the determined offset (dxt, dyt) between the first and the second test structure (34, 36) in such a manner that the offset does not exceed a threshold value.

IPC 8 full level

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CPC (source: EP US)

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