

Title (en)
CONTROL METHOD, CONTROL DEVICE AND PRODUCTION APPARATUS

Title (de)
STEUERVERFAHREN, STEUERUNGSEINRICHTUNG UND HERSTELLUNGSVORRICHTUNG

Title (fr)
PROCÉDÉ DE COMMANDE, SYSTÈME DE COMMANDE ET DISPOSITIF DE FABRICATION

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Abstract (en)
[origin: WO2020178216A1] The invention relates to a control method for controlling a multi-beam apparatus having one or more beam sources for producing a plurality of beams of a system for manufacturing a three-dimensional workpiece by means of a generative layer construction method, in which method a material that can be solidified in order to manufacture the three-dimensional workpiece is applied in layers to a surface of a carrier and the material that can be solidified is solidified by the plurality of beams in a respective layer at points of incidence of the plurality of beams on the material that can be solidified, wherein the points of incidence of the beams for solidifying selective regions of the layers of the material that can be solidified in order to manufacture the three-dimensional workpiece are each controlled substantially against a gas flow direction of a gas flow over the surface of the carrier; wherein the control method comprises: (a) dividing the material to be solidified in the respective layer into at least two sections, wherein two of the at least two sections extend in the gas flow direction of the gas flow prevailing over the two of the at least two sections in succession at least in part, (b) dividing at least one of the two of the at least two sections into at least two surface pieces, (c) assigning each of the surface pieces to exactly one specific beam, which solidifies the material to be solidified in the assigned surface piece, (d) controlling the points of incidence of the beams such that, at at least one point in time during an exposure of the material to be solidified, the material to be solidified is solidified in at least two surface pieces, and a network consisting of straight lines extending between each center point of the points of incidence to every other center point of the points of incidence, at no point in time during the exposure, in which all center points of the points of incidence are located outside of a predetermined distance from each other, has a straight line parallel to the gas flow direction of the gas flow prevailing over the two of the at least two sections.

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