

Title (en)
PROCESSING MACHINE FOR PRODUCING THREE-DIMENSIONAL COMPONENTS LAYER BY LAYER AND METHOD FOR HEATING A POWDER

Title (de)
BEARBEITUNGSMASCHINE ZUM SCHICHTWEISEN HERSTELLEN VON DREIDIMENSIONALEN BAUTEILEN UND VERFAHREN ZUM ERWÄRMEN EINES PULVERS

Title (fr)
MACHINE DE TRAITEMENT POUR LA FABRICATION PAR COUCHES DE PIÈCES TRIDIMENSIONNELLES ET PROCÉDÉ POUR CHAUFFER UNE POUDRE

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Abstract (en)
[origin: WO2019091801A1] The invention relates to a processing machine (1) for producing three-dimensional components (2) layer by layer by irradiating powder (3) by means of a processing beam (6), in particular by means of a laser beam, comprising: a container (10) with a lowerable support (12) for applying the powder (3), and also an irradiating device (4) with a scanner device (8) for aligning the processing beam (6) with a processing area (B) at an opening (10a) of the container (10) for producing the three-dimensional component (2) layer by layer by irradiating the powder (3). The irradiating device (4) has a heating device (18), which has a heating radiation source (19) for producing a heating beam (20) for heating the powder (3) from above by aligning the heating beam (20) with the processing area (B) and also a beam-shaping optical unit (22), which is designed to transform a first beam profile (S1) of the heating beam (20) into a second, in particular annular, beam profile (S2) of the heating beam (20). The invention also relates to a method for heating a powder (3) in such a processing machine (1).

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