

Title (en)
MACHINE FOR ADDITIVE MANUFACTURING BY POWDER BED DEPOSITION WITH A CENTRAL GAS SUCTION OR GAS BLOWING MANIFOLD

Title (de)
MASCHINE ZUR ADDITIVEN HERSTELLUNG DURCH PULVERBETTABSCHIEDUNG MIT EINEM ZENTRALEN GASABSAUG- ODER GASBLASVERTEILER

Title (fr)
MACHINE DE FABRICATION ADDITIVE PAR DEPOT DE LIT DE POUDRE AVEC UNE RAMPE CENTRALE D'ASPIRATION DE GAZ OU DE SOUFFLAGE DE GAZ

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Application
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Priority
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Abstract (en)
[origin: WO2021123608A1] The invention relates to a machine (10) for additive manufacturing by powder bed deposition, the machine comprising a working surface (12) on which at least one layer of additive manufacturing powder (14) is deposited, the machine comprising a device (16) for selective consolidation by complete or partial melting of a layer of powder deposited on the working surface, and the machine comprising a device (18) for extracting the fumes created by the selective consolidation of a powder layer, wherein the selective consolidation device emits at least two beams (F1, F2) of energy or heat in the direction of the working surface, the working surface is divided into at least two adjoining work areas (Z1, Z2), and a first beam (F1) consolidates the powder in a first work area (Z1) and a second beam (F2) consolidates the powder in a second work area (Z2). The fume extraction device (18) comprises at least one central gas suction and/or gas blowing manifold (40) mounted so as to be translatably movable above an overlapping area (ZR) in which the different adjoining work areas overlap, and two lateral gas suction and/or gas blowing manifolds (42, 44) fixedly attached and arranged on either side of the working surface. The central manifold (40) extends at least over a maximum area of the working surface (12) in a transverse direction (DT) and moves translationally in a longitudinal direction (DL) perpendicular to the transverse direction, wherein the longitudinal and transverse directions are parallel to the plane (P12) of the working surface and the powder surface.

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