

Title (en)

LASER ADDITIVE MANUFACTURE OF THREE-DIMENSIONAL COMPONENTS CONTAINING MULTIPLE MATERIALS FORMED AS INTEGRATED SYSTEMS

Title (de)

GENERATIVE LASERFERTIGUNG VON DREIDIMENSIONALEN KOMPONENTEN MIT MEHREREN, ALS INTEGRIERTE SYSTEME GEFORMTEN MATERIALIEN

Title (fr)

FABRICATION ADDITIVE AU LASER DE COMPOSANTS EN TROIS DIMENSIONS CONTENANT DE MULTIPLES MATÉRIAUX FORMÉS EN TANT QUE SYSTÈMES INTÉGRÉS

Publication

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Application

EP 15850696 A 20150923

Priority

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Abstract (en)

[origin: WO2016060799A1] Methods for laser additive manufacture are disclosed in which a plurality of powder layers (48, 50 and 52) are delivered onto a working surface (54A) to form a multi-powder deposit containing at least two adjacent powders layers in contact, and then applying a first laser energy (74) to a first powder layer (48) and a second laser energy (76) to a second powder layer (52) to form a section plane of a multi-material component. The multi-powder deposit may include a flux composition that provides at least one protective feature. The shapes, intensities and trajectories of the first and second laser energies may be independently controlled such that their widths are less than or equal to widths of the first and second powder layers, their intensities are tailored to the compositions of the powder layers, and their scan paths define the final shape of the multi-material component.

IPC 8 full level

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