

Title (en)

MACHINING OPTICAL SYSTEM, LASER MACHINING DEVICE, AND METHOD FOR LASER MACHINING

Title (de)

BEARBEITUNGSOPTIK, LASERBEARBEITUNGSVORRICHTUNG UND VERFAHREN ZUR LASERBEARBEITUNG

Title (fr)

SYSTÈME OPTIQUE D'USINAGE, DISPOSITIF D'USINAGE LASER ET PROCÉDÉ D'USINAGE LASER

Publication

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Application

**EP 21730843 A 20210601**

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Abstract (en)

[origin: WO2021259597A1] The invention relates to a machining optical system (16) for machining workpieces, comprising: a polariser arrangement (7) which comprises a birefringent polariser element (1a, 1c) for splitting at least one in particular pulsed input laser beam (3) into at least two partial beams (5a, 5b) each having one of two different polarisation states; and a focussing optical system (17) which is located in the beam path downstream of the polariser arrangement (7) and is intended for focussing the partial beams (5a, 5b) onto at least two focal zones, characterised in that the polariser arrangement (7) has at least one further optical element (8, 13) which is located in the beam path downstream of the birefringent polariser element (1a, 1c) and is intended for modifying an angle and/or a distance of at least one of the partial beams (5a, 5b) relative to an optical axis (6) of the machining optical system (16). The invention also relates to a laser machining device (14) which has such a machining optical system (16) and a laser source (11) for generating a laser beam (12), and to a method for laser-machining a workpiece (9) by means of a machining optical system (16).

IPC 8 full level

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