

Title (en)  
METHOD FOR LASER CUTTING

Title (de)  
VERFAHREN ZUM LASERSCHNEIDEN

Title (fr)  
PROCÉDÉ DE DÉCOUPE AU LASER

Publication  
**EP 4217141 A1 20230802 (DE)**

Application  
**EP 21777725 A 20210915**

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Abstract (en)  
[origin: WO2022063647A1] The invention relates to a method for the laser fusion cutting of a workpiece (2), more particularly a planar workpiece, preferably having a thickness D of at least 1 mm, wherein a laser beam (3) and a cutting gas (24), more particularly nitrogen, with a cutting gas pressure are directed at the workpiece surface (9) by means of a convergent cutting nozzle (1), and wherein the laser power is at least 6 kW, characterized in that the cutting nozzle (1) has a workpiece-side nozzle end face (8), the distance A of which from the workpiece surface is 2 to 8 mm during the cutting, in that the cutting nozzle (1) has a nozzle channel (5) having a diameter dD of 1.5 to 4 mm on the workpiece-side nozzle end face (8), and in that, before the exiting from the cutting nozzle (1), the cutting gas pressure is 15 to 30 bar. Thus, high productivity can be achieved together with reduced risk of collision, i.e. higher process reliability.

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