

Title (en)
LASER-CUTTING METHOD AND LASER-CUTTING INSTALLATION

Title (de)
LASERSCHNEIDVERFAHREN UND LASERSCHNEIDANLAGE

Title (fr)
PROCÉDÉ DE DÉCOUPE LASER ET INSTALLATION DE DÉCOUPE LASER

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Abstract (en)
[origin: WO2021228829A1] The invention relates to a method for the laser cutting of a workpiece (14) with a thickness (16) of less than 6 mm, wherein a first laser beam (18), a second laser beam (20) and a gas stream are directed onto an entry surface (24) of the workpiece (14), wherein the laser beams (18, 20) at least partially overlap one another on the workpiece (14), wherein the first laser beam (18) has a smaller focal diameter than the second laser beam (20), wherein the beam-parameter product of the first laser beam (18) is at most 5 mm*mrad, wherein a power component of the second laser beam (20) as a proportion of the overall laser power is less than 20%, and wherein a cutting gap with a broken cutting edge is formed on the entry surface (24) of the workpiece (14). The invention also relates to a laser-cutting installation (10) for the laser cutting of a workpiece (14) in the form of a metal sheet along a cutting line, having a laser light source device (28) for overlaying a first laser beam (18) and a second laser beam (20) in a cutting zone (26), wherein the first laser beam (18) has a smaller focal diameter (54) than the second laser beam (20), wherein the beam-parameter product of the first laser beam (18) is at most 5 mm*mrad, and wherein a power component of the second laser beam (20) as a proportion of the overall laser power is less than 20%, having a nozzle (37) for directing a gas stream onto the cutting zone (26), and having a movement device (66) for moving the cutting zone (26) along the cutting line in relation to the workpiece (14).

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