

Title (en)  
METHOD AND DEVICE FOR THE CONTROLLED MACHINING OF A WORKPIECE BY MEANS OF CONFOCAL DISTANCE MEASUREMENT

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR KONTROLLIERTEN BEARBEITUNG EINES WERKSTÜCKS MITTELS KONFOKALER ABSTANDSMESSUNG

Title (fr)  
PROCÉDÉ ET DISPOSITIF POUR LE TRAITEMENT CONTRÔLÉ D'UNE PIÈCE AU MOYEN D'UNE MESURE DE DISTANCE CONFOCALE

Publication  
**EP 4087701 A1 20221116 (DE)**

Application  
**EP 20845223 A 20201221**

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Abstract (en)  
[origin: WO2021140396A1] The invention describes a method and a device for the controlled machining of a workpiece. According to the described method, a laser light beam is focused at a target point of the workpiece to be machined in order to produce a laser focal point. Furthermore, according to the method, distance measurement data are acquired by means of an optical distance-measuring device in order to determine a distance between the target point of the workpiece to be machined and the laser target optical unit. The method comprises positioning the workpiece to be machined in relation to the laser focal point on the basis of the acquired distance measurement data. The distance-measuring device is designed as an optically confocal distance-measuring device having a measurement light source for producing a measurement light and having a variable-focal-length measurement light optical unit. The method comprises varying the focal length of the variable-focal-length measurement light optical unit over time in order to acquire distance measurement data at different focal length values of the variable-focal-length measurement light optical unit, the laser light reflected by the workpiece and/or the process light produced during machining of the workpiece being detectible.

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See references of WO 2021140396A1

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