

Title (en)
DEVICE FOR SEVERING COMPONENTS MADE FROM BRITTLE MATERIAL

Title (de)
VORRICHTUNG ZUM DURCHTRENNENDEN BEARBEITEN VON BAUTEILEN AUS SPRÖDBRÜCHIGEM MATERIAL

Title (fr)
DISPOSITIF POUR USINER DES COMPOSANTS EN MATERIAU FRAGILE, DE FAÇON A LES SECTIONNER

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Abstract (en)
[origin: WO2007079847A1] The invention relates to a device for severing components (4) that are made from brittle material, for example, glass, ceramics, glass ceramics, by producing a thermally-induced stress fracture on the component (4) in a separation zone. The device comprises a laser (6) for directing a laser beam (8) onto the component (4) to be machined in such a manner that the component (4) partly transmits the laser beam (8) with partial absorption at least twice simultaneously or serially along the separation zone essentially at the same point or at points with little distance to each other. The device (2) comprises a bearing surface (14) on which the component (4) to be machined is received during machining, and means for subjecting the component (4) to mechanical stress in order to promote the thermally induced stress fracture. According to the invention, the bearing surface (14) has at least tow bearing surface sections (13, 15) that can be displaced relative to each other between a first position and a second position, the component (4), in the first position, being received in a manner substantially free from mechanical stress, and, in a second position, being subjected to mechanical stress in order to promote the thermally induced stress fracture.

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