

Title (en)  
DEVICE FOR SEPARATIVE MACHINING OF COMPONENTS MADE FROM BRITTLE MATERIAL WITH STRESS-FREE COMPONENT MOUNTING

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

Title (fr)  
DISPOSITIF POUR L'USINAGE A L'OUTIL DE COUPE DE COMPOSANTS EN MATERIAU FRAGILE AVEC SUPPORT DE COMPOSANT EXEMPT DE CONTRAINTES

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Application  
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Abstract (en)  
[origin: WO2005107998A1] The invention relates to a device for the separative machining of components (4), made from brittle material, for example, glass, ceramics, glass ceramics or similar, by generation of a thermally-induced stress fracture on the component at a separation zone. The device comprises a laser for directing a laser beam (10) onto the component for machining, such that the component (4) partly transmits the laser beam with partial absorption at least twice simultaneously or serially along the separating zone essentially at the same point or at points with a small separation. According to the invention, a mounting device, with a bearing surface (40) on which the component for machining may be mounted, is provided in order to reduce or avoid externally-induced mechanical stresses, whereby the bearing surface (40) is at least partly made from a material which is highly transmissive for the laser beam. Said device permits a separative machining of components made from a brittle material with particularly high precision.

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