

Title (en)

LASER BEAM PROCESSING DEVICE COMPRISING A COUPLING DEVICE FOR COUPLING A FOCUSED LASER BEAM INTO A FLUID JET

Title (de)

LASERSTRAHL-BEARBEITUNGSVORRICHTUNG MIT EINER EINKOPPELVORRICHTUNG ZUM EINKOPPELN EINES FOKUSSIERTEN LASERSTRAHLS IN EINEN FLÜSSIGKEITSSTRAHL

Title (fr)

DISPOSITIF D'USINAGE AU FAISCEAU LASER COMPRENANT UN DISPOSITIF D'INJECTION DESTINÉ À INJECTER UN FAISCEAU LASER FOCALISÉ DANS UN JET DE LIQUIDE

Publication

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Application

EP 16802113 A 20161130

Priority

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Abstract (en)

[origin: WO2017093331A1] Disclosed is a laser beam processing device, the main part of which is a coupling device (1) for coupling a focused laser beam (2) into a fluid jet (3) of a defined cross-section. The coupling device (1) comprises a housing (4), in which a fluid nozzle is configured for forming the fluid jet (3). In addition, an outlet opening (6) is provided in the housing, through which the fluid jet (3) exits from the housing (4) and the cross-section of which is larger than the cross-section of the fluid jet (3). A passage chamber is provided between the fluid nozzle (5) and the outlet opening (6) for the fluid jet (3). According to the invention, a throttle bore is provided, which connects the passage chamber (7) to the pressure chamber and is dimensioned in relation to the outlet opening so that, in the region of the passage chamber which is arranged about the fluid nozzle (5), there is a pressure that is smaller than the pressure in the pressure chamber so that an overpressure does not form in the passage chamber with respect to the pressure in the pressure chamber. In addition, a method is disclosed for setting a pressure in the passage chamber (7) in a coupling device of this type, in which the pressure does not exceed the pressure in the pressure chamber.

IPC 8 full level

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