Title (en)

Assembly and method for illustrating a surface of a substrate

Title (de)

Anordnung und Verfahren zur Beschriftung einer Oberfläche eines Substrats

Title (fr)

Dispositif et procédé de marquage d'une surface d'un substrat

Publication

EP 2045091 A2 20090408 (DE)

Application

EP 08105180 A 20080829

Priority

DE 102007046176 A 20070926

Abstract (en)

The laser beam passes through the substrate (SU) to a coating material (BM) behind it, on a carrier (TR). Novel use is made of a metallic carrier. The coating material comprises the carrier metal itself, or a layer comprising a chemical compound of the carrier metal. The coating material is anodized carrier metal. The carrier is aluminum and the coating material is an anodized layer of aluminum oxide. The coating material contains a mineral colorant. It contains a plastic. The holder forms a resting plane. The carrier and coating material are laid directly onto the surface to be inscribed (SO) and pressed together with given force. On the carrier, on the side carrying the coating, spacers are arranged. During operation the spacers rest against the substrate. A holder (TA) for the coating material carrier has spacer structures, on which the carrier is rested. These determine the position of the coating relative to the substrate holder. The coating material is preferably spaced 0.1-0.3 mm from the substrate surface. The carrier is plate-like. A storage cassette contains numbers of carriers and includes an automatic feeder for them. This transfers each carrier from the cassette to a position opposite the surface to be coated. The carrier is alternatively dispensed from a roll of material, as a flexible strip. The carrier is moved and guided relative to the substrate. The carrier has coating material on two opposite sides. An independent claim IS INCLUDED FOR the corresponding method of surface inscription.

Abstract (de)

Für die Beschriftung eines lasertransparenten Substrats mittels eines Lasertransferverfahrens wird vorgeschlagen, für das zu transferierende Beschichtungsmaterial einen metallischen Träger zu wählen. Vorzugsweise ist das Beschichtungsmaterial durch eine mittels Anodisieren des Trägermetalls gebildete Schicht eines Metalloxids, insbesondere eine eloxierte Aluminiumschicht auf einem Aluminiumträger gebildet. Eine besonders hohe Abriebfestigkeit ergibt sich, wenn der Träger mit dem Beschichtungsmaterial an die zu beschriftende Substratoberfläche angelegt und während des Beschriftungsvorgangs angedrückt wird.

IPC 8 full level

B41M 5/382 (2006.01); **B41M 1/34** (2006.01)

CPC (source: EP)

B41J 2/442 (2013.01); **B41M 5/38207** (2013.01); **B41M 5/38221** (2013.01)

Citation (applicant)

- DE 4430390 A1 19950316 - KRONE AG [DE]
- EP 1490222 B1 20060524 - TESA AG [DE]
- DE 20317427 U1 20040401 - STADLBAUER GERHARD [DE]
- DE 19637255 C1 19971211 - JENOPTIK JENA GMBH [DE]

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EP3023256A4

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2045091 A2 20090408; **EP 2045091 A3 20090617**; DE 102007046176 A1 20090402

DOCDB simple family (application)

EP 08105180 A 20080829; DE 102007046176 A 20070926