

Title (en)
METHOD FOR LASER ENGRAVING AND/OR LASER MARKING, LASER MARKED AND/OR ENGRAVED ARTICLE AND ARTICLE FOR LASER ENGRAVING AND/OR LASER MARKING

Title (de)
VERFAHREN ZUM LASERGRAVIEREN UND/ODER LASERMARKIEREN, LASERMARKIERTER UND/ODER GRAVIERTER GEGENSTAND UND GEGENSTAND ZUM LASERGRAVIEREN UND/ODER LASERMARKIEREN

Title (fr)
PROCÉDÉ DE GRAVURE AU LASER ET/OU DE MARQUAGE AU LASER, ARTICLE MARQUÉ ET/OU GRAVÉ AU LASER ET ARTICLE POUR GRAVURE AU LASER ET/OU MARQUAGE AU LASER

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Abstract (en)
The invention is directed to a method for laser engraving and/or laser marking comprising the steps of:- providing a substrate with at least one layer, wherein the at least one layer comprises a polymer and an irreversible thermochromic pigment,- generating a carbon trace or vapor trace within or on the at least one layer by irradiating the substrate with a pulsed laser beam, such that a focus spot of the laser beam is within or on the at least one layer at a first predetermined position, and- irradiating the substrate with the pulsed laser beam such that the focus spot of a consecutive laser pulse is within or on the at least one layer at a predetermined consecutive position and a distance between the first position and the consecutive position is less or equal to twofold a diameter of the carbon trace or vapor trace.Furthermore, the invention is directed to a laser marked and/or engraved article produced by said method and to an article for laser engraving and/or laser marking.

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FR 3106527 A1 20210730 - OLIKROM [FR]

Citation (search report)

- [XI] US 2006068315 A1 20060330 - GORE MAKARAND P [US]
- [XI] EP 0993964 A2 20000419 - MARKEM CORP [US]
- [XY] US 2007238045 A1 20071011 - BROCKLIN ANDREW L V [US], et al
- [Y] US 2008250954 A1 20081016 - DEPTA GEORG [DE], et al
- [XA] US 2006241225 A1 20061026 - BIELEK YAN [US], et al
- [YA] US 6022648 A 20000208 - JACOBSON JOSEPH M [US], et al

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