

Title (en)

Method for imprinting a three-dimensional design into a synthetic material

Title (de)

Verfahren zum Prägen eines dreidimensionalen Entwurfs in ein synthetisches Material

Title (fr)

Procédé pour imprimer un design tridimensionnel sur un matériau synthétique

Publication

**EP 2390109 B1 20130306 (EN)**

Application

**EP 10164340 A 20100528**

Priority

EP 10164340 A 20100528

Abstract (en)

[origin: EP2390109A1] A method, product, and apparatus for imprinting a three-dimensional design into a textured surface of a synthetic material includes laser-ablating the design into the synthetic material and then imprinting the design. The design is laser-ablated into the textured surface of the synthetic material by vaporizing a portion of the material in an x-y shape of the design to a predetermined z-depth. The vaporized portions of the material form a design-shaped void that extends a prescribed distance into the textured surface of the synthetic material. In one implementation, the design is imprinted by inserting a tool in the design-shaped void of the laser-ablated design. The tool has a substantial conformance fit with the void, thereby forming a substantially distortion-free imprint of the design on the synthetic material.

IPC 8 full level

**B44C 1/22** (2006.01)

CPC (source: EP)

**B44C 1/228** (2013.01); **B44C 1/24** (2013.01); **B44F 9/12** (2013.01)

Cited by

CN106297544A; CN105578817A

Designated contracting state (EPC)

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

DOCDB simple family (publication)

**EP 2390109 A1 20111130**; **EP 2390109 B1 20130306**; CA 2738159 A1 20111128; CA 2738159 C 20141021

DOCDB simple family (application)

**EP 10164340 A 20100528**; CA 2738159 A 20110421