

Title (en)

DEVICE FOR PRODUCING, AND/OR COLOURING THREE-DimensionALLY CURVED GLASS AND/OR PLASTIC PANES

Title (de)

EINRICHTUNGEN ZUR HERSTELLUNG UND/ODER ZUR BEDRUCKUNG EINER HEIZBAREN GEBOGENEN GLASSCHEIBE

Title (fr)

DISPOSITIFS POUR LA PRODUCTION, POUR L'IMPRESSION ET/OU POUR LA COLORATION DE PLAQUES DE VERRE ET/OU DE PLASTIQUE TRIDIMENSIONNELLEMENT COURBES

Publication

EP 1699743 A2 20060913 (DE)

Application

EP 04802841 A 20041127

Priority

- DE 2004002632 W 20041127
- DE 10355448 A 20031127
- DE 102004020135 A 20040424

Abstract (en)

[origin: WO2005051856A2] The aim of the invention is to provide a method for printing decorative and functional elements on curved, i.e. convex glass panes, e.g. on heating surfaces, in different shades with a permeability to visible radiation that can be adjusted and to provide corresponding devices for carrying out said method, which do not have the disadvantages of known methods, in particular screen printing. The method for printing and/or colouring three-dimensionally curved glass and/or plastic panes is characterised in that the printed elements or application of colour that form the functional or decorative elements are applied to the three-dimensionally formed glass pane using an ink-jet method and a laser method and/or a photolithographic method and a laser method, or using sputter technology. The inventive device comprises: a loading and retrieval robot (1); a revolving mechanism (2) comprising different stations, such as a centring station (2.2), a colour application station (2.3), a decorative element baking station (2.4) etc. and coupled to a horizontal transport section (3), which likewise comprises several stations, such as a heating-field application station (3.2), a sintering station (3.3), a terminal application station comprising a measuring and evaluation station (3.4) of the total resistance etc.; and a sputtering system (5) running parallel to the horizontal transport section (3). The heatable pane (6) comprising a series of layers that exhibit excellent heating and sun filtration properties consists of a layer (7) that functions as a heating layer (7), composed of a semiconductor material and/or a metal oxide and an organic or inorganic protective layer (8) applied to the aforementioned layer. The main application area for the invention is the production of panes used in automobiles.

IPC 8 full level

C03C 17/00 (2006.01); **B32B 17/06** (2006.01); **B32B 17/10** (2006.01); **B32B 27/06** (2006.01); **C03C 17/34** (2006.01); **C03C 17/42** (2006.01); **H05B 3/84** (2006.01); **H05B 3/86** (2006.01)

CPC (source: EP US)

B32B 9/00 (2013.01 - US); **B32B 9/041** (2013.01 - US); **B32B 15/08** (2013.01 - US); **B32B 17/06** (2013.01 - EP); **B32B 17/10018** (2013.01 - EP); **B32B 17/10174** (2013.01 - EP); **B32B 27/06** (2013.01 - EP US); **C03C 17/002** (2013.01 - EP); **C03C 17/3417** (2013.01 - EP); **C03C 17/3435** (2013.01 - EP); **C03C 17/3441** (2013.01 - EP); **C03C 17/347** (2013.01 - EP); **C03C 17/42** (2013.01 - EP); **H05B 3/84** (2013.01 - EP); **H05B 3/86** (2013.01 - EP); **B32B 2307/712** (2013.01 - US); **H05B 2203/017** (2013.01 - EP)

Citation (search report)

See references of WO 2005051856A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2005051856 A2 20050609; **WO 2005051856 A3 20060119**; DE 112004002693 D2 20061012; EP 1699743 A2 20060913

DOCDB simple family (application)

DE 2004002632 W 20041127; DE 112004002693 T 20041127; EP 04802841 A 20041127