

Title (en)

COMBINATION NOZZLE FOR APPLYING A VISCOUS MATERIAL ONTO THE EDGE OF AN ELEMENT

Title (de)

KOMBINATIONSDÜSE FÜR DEN AUFTRAG EINES VISKOSEN MATERIALS AUF EINE BAUTEILKANTE

Title (fr)

BUSE COMBINEE POUR L'APPLICATION D'UN MATERIAU VISQUEUX SUR LA TRANCHE D'UN COMPOSANT

Publication

**EP 2987561 A1 20160224 (DE)**

Application

**EP 15188874 A 20131021**

Priority

- US 201261718832 P 20121026
- US 201261718838 P 20121026
- DE 102012021590 A 20121026
- DE 102012021591 A 20121026
- DE 102013003688 A 20130304
- EP 13779747 A 20131021

Abstract (en)

[origin: WO2014063806A1] The present invention relates to a combination nozzle and a device for applying a viscous material, particularly an adhesive, to a component edge. The combination nozzle (2) has two wide-slot nozzles (1, 3) lying close to one another, of which the first (1) is used for applying the viscous material and the second (3) is used for supplying a gas such as air for shaping the applied material bead. On the nozzle mount (24), the device has a guide roller (9) that can be placed on and moved along the edge in order to guarantee a defined position of the nozzle (10) relative to the edge during application. The nozzle mount (24) is connected to a connector element (22) of the device via a connecting mechanism (23), which allows a movement of the nozzle mount (24) relative to the connector element (22) at least in a direction (13) parallel to the surface normal on the component edge and which presses the guide roller (9) against the edge during the application process by means of a spring mechanism (20). With the proposed combination nozzle and the proposed device, an optimal wetting of the component edge with the viscous material can be achieved, and additionally the component tolerances are compensated without the necessity of an elaborate sensor system.

Abstract (de)

Die vorliegende Erfindung betrifft eine Kombinationsdüse für den Auftrag eines viskosen Materials, insbesondere eines Klebstoffes, auf eine Bauteilkante. Die Kombinationsdüse (2) weist zwei eng beieinander liegende Breischlitzdüsen (1, 3) auf, von denen die erste (1) für den Auftrag des viskosen Materials und die zweite (3) der Zuführung eines Gases, bspw. von Luft, zur Formung der aufgetragenen Materialraupe dient. Mit der vorgeschlagenen Kombinationsdüse lässt sich eine optimale Benetzung der Bauteilkante mit dem viskosen Material erreichen.

IPC 8 full level

**B05C 17/005** (2006.01); **B05B 15/68** (2018.01); **B05C 5/02** (2006.01); **B05C 11/06** (2006.01); **B05C 11/10** (2006.01)

CPC (source: EP US)

**B05B 7/0815** (2013.01 - US); **B05C 5/02** (2013.01 - US); **B05C 5/0204** (2013.01 - EP US); **B05C 5/0216** (2013.01 - US); **B05C 5/0295** (2013.01 - EP US); **B05C 11/06** (2013.01 - EP US); **B05C 17/00589** (2013.01 - EP US); **B05C 11/1018** (2013.01 - EP US)

Citation (applicant)

US 4778642 A 19881018 - LEE JAY [US], et al

Citation (search report)

- [X1] JP 2004221244 A 20040805 - TOKYO ELECTRON LTD
- [X1] WO 03051550 A1 20030626 - IND AUTOMATION SERV PTY LTD [AU], et al
- [I] WO 2004039505 A1 20040513 - NORDSON CORP [US], et al
- [A] US 2012258246 A1 20121011 - SAINE JOEL E [US], et al
- [AD] US 4778642 A 19881018 - LEE JAY [US], et al
- [A] EP 2230005 A1 20100922 - SIKA TECHNOLOGY AG [CH]

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 RS SE SI SK SM TR

DOCDB simple family (publication)

**DE 102013003688 A1 20140430**; CN 104755182 A 20150701; EP 2911806 A1 20150902; EP 2911806 B1 20160720; EP 2987561 A1 20160224; EP 2987561 B1 20180221; ES 2592153 T3 20161128; ES 2669036 T3 20180523; US 2016052012 A1 20160225; US 9694381 B2 20170704; WO 2014063806 A1 20140501

DOCDB simple family (application)

**DE 102013003688 A 20130304**; CN 201380055692 A 20131021; EP 13779747 A 20131021; EP 15188874 A 20131021; EP 2013003165 W 20131021; ES 13779747 T 20131021; ES 15188874 T 20131021; US 201314435837 A 20131021