

Title (en)  
METHOD FOR PRODUCING ELECTRIC HEATING ELEMENTS AND PLANTS IMPLEMENTING THE AFORESAID METHOD

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON ELEKTRISCHEN HEIZELEMENTEN UND ANLAGE ZUR DURCHFÜHRUNG DES VERFAHRENS

Title (fr)  
PROCÉDÉ DE PRODUCTION D'ÉLÉMENTS CHAUFFANTS ÉLECTRIQUES ET INSTALLATIONS METTANT EN OEUVRE LEDIT PROCÉDÉ

Publication  
**EP 4387390 A1 20240619 (EN)**

Application  
**EP 23216603 A 20231214**

Priority  
IT 202200025668 A 20221215

Abstract (en)  
A method for producing electric heating elements (1) comprising a substrate (2, 2a) provided with one or more electrically conductive elements (3) that heat said substrate (2, 2a) when the electrically conductive elements (3) are crossed by an electric current, the method comprising a first step in which the electrically conductive elements (3) are applied to the substrate (2, 2a), a second step in which the electrically conductive elements (3) are sintered, a third step in which at least one dielectric protective layer (4) is laid on the sintered electrically conductive elements (3), and a fourth step in which the dielectric protective layer (4) is polymerized. In particular, the electrically conductive elements (3) comprise an electrically conductive substance that is laid on the substrate (2, 2a) by means of dispensing means (6) that are associated with movement means moving the dispensing means (6) according to two or more directions with respect to said substrate (2, 2a) to configure the electrically conductive elements (3) according to a geometry with one or more continuous strips (8).

IPC 8 full level  
**H05B 3/22** (2006.01)

CPC (source: EP)  
**H05B 3/22** (2013.01); **H05B 2203/003** (2013.01); **H05B 2203/013** (2013.01); **H05B 2203/017** (2013.01)

Citation (applicant)  
• US 2018310366 A1 20181025 - NELSON MARK KEVIN [US], et al  
• US 2014197159 A1 20140717 - PANICO C RICHARD [US], et al  
• WO 2021231435 A1 20211118 - PPG IND OHIO INC [US]  
• US 2018310366 A1 20181025 - NELSON MARK KEVIN [US], et al

Citation (search report)  
• [XY] US 2018310366 A1 20181025 - NELSON MARK KEVIN [US], et al  
• [Y] US 2014197159 A1 20140717 - PANICO C RICHARD [US], et al  
• [Y] WO 2021231435 A1 20211118 - PPG IND OHIO INC [US]  
• [A] US 10440829 B2 20191008 - DARDONA SAMEH [US], et al  
• [A] CN 106739499 A 20170531 - YANCHENG INST TECHNOLOGY  
• [A] US 7386936 B2 20080617 - HUHTASALO LAURI [FI], et al

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Designated validation state (EPC)  
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