

Title (en)

REINFORCING ELEMENT FOR REINFORCEMENT IN CAVITIES OF STRUCTURAL COMPONENTS

Title (de)

VERSTÄRKUNGSELEMENT ZUR VERSTÄRKUNG IN HOHLRÄUMEN VON STRUKTURELLEN BAUTEILEN

Title (fr)

ÉLÉMENT DE RENFORCEMENT SERVANT À RENFORCER DES CAVITÉS DANS DES PIÈCES STRUCTURALES

Publication

EP 2553036 A1 20130206 (DE)

Application

EP 11709971 A 20110325

Priority

- EP 10158078 A 20100326
- EP 2011054651 W 20110325
- EP 11709971 A 20110325

Abstract (en)

[origin: EP2368957A1] Reinforcing element for reinforcing structural components in cavities comprises a carrier (1) made of plastic, which is at least partially coated with a metal (2); and a foamable, thermosetting structural adhesive (3), which is applied on the metal coating of the carrier, or a thermosetting structural adhesive, which is applied on the metal coating of the carrier, and designed as a shape-memory material. An independent claim is also included for reinforcing the structural components in the cavities, comprising: (a) placing the reinforcing element in the cavity of the structural component; (b) heating the thermosetting structural adhesive on the reinforcing element to a temperature above the glass transition temperature of the thermosetting structural adhesive, where the glass transition temperature is a foaming temperature of the foamable, thermosetting structural adhesive, or is a temperature, at which the shape-memory material returns to its original shape; and (c) hardening the thermosetting structural adhesive.

IPC 8 full level

C09J 163/00 (2006.01); **C09J 175/00** (2006.01)

CPC (source: EP US)

C08G 18/10 (2013.01 - EP US); **C09J 163/00** (2013.01 - EP US); **C09J 175/04** (2013.01 - EP US); **C08G 2280/00** (2013.01 - EP US)

Citation (search report)

See references of WO 2011117405A1

Cited by

US12012149B2; US10427346B2; US10940896B2; US10173727B2; US10183699B2; US10875579B2; US11465686B2; US10106205B2; US10196097B2; US10800462B2

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)

EP 2368957 A1 20110928; EP 2553036 A1 20130206; US 2013020832 A1 20130124; WO 2011117405 A1 20110929

DOCDB simple family (application)

EP 10158078 A 20100326; EP 11709971 A 20110325; EP 2011054651 W 20110325; US 201213627202 A 20120926