

Title (en)

Concrete element with an underside plastic sole

Title (de)

Betonteil mit einer unterseitigen Kunststoffplatte

Title (fr)

Élément en béton doté d'une semelle en plastique

Publication

EP 2545219 B1 20141105 (DE)

Application

EP 11710720 A 20110311

Priority

- EP 10156347 A 20100312
- EP 10156352 A 20100312
- EP 2011053709 W 20110311
- EP 11710720 A 20110311

Abstract (en)

[origin: WO2011110669A1] The invention relates to a concrete sleeper comprising a plastic footing on its lower face and provided with a concrete body (12) which has a lower face (14). The concrete sleeper further comprises a plastic panel (18) which is disposed on the lower face (14) of the concrete body (12), the single-layer or multi-layer plastic panel (18) being connected to the concrete body (12) by a random fiber layer (16) which comprises fibers that are connected to the plastic panel (18) and/or are embedded in the concrete body (12). The random fiber panel (16) comprises fibers that have a diameter between 15 µm and 50 µm and a density of 20 to 200 fibers per square millimeter. Approximately 20% to 60% of the fibers have their free ends embedded in the concrete body (12) and the embedded fiber sections of the other fibers are designed as loops, approximately 10% to 60% of the free fiber ends embedded in the concrete being curved by 30° to 90° relative to the lower face (14) of the concrete body (12).

IPC 8 full level

E01B 3/46 (2006.01); **E01B 1/00** (2006.01); **E01B 9/68** (2006.01)

CPC (source: EP US)

E01B 1/005 (2013.01 - EP US); **E01B 3/46** (2013.01 - EP US); **E01B 9/68** (2013.01 - EP US); **Y10T 428/249928** (2015.04 - EP US)

Cited by

WO2019201761A1; DE102022134100A1; WO2024132642A1

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)

WO 2011110669 A1 20110915; CN 102906335 A 20130130; CN 102906335 B 20150805; DK 2545219 T3 20150126; EP 2545219 A1 20130116; EP 2545219 B1 20141105; ES 2528144 T3 20150204; HR P20150045 T1 20150508; PL 2545219 T3 20150430; PT 2545219 E 20150205; RS 53765 B1 20150630; RU 2012143479 A 20140510; RU 2557440 C2 20150720; SI 2545219 T1 20150430; US 2013059144 A1 20130307

DOCDB simple family (application)

EP 2011053709 W 20110311; CN 201180013641 A 20110311; DK 11710720 T 20110311; EP 11710720 A 20110311; ES 11710720 T 20110311; HR P20150045 T 20150113; PL 11710720 T 20110311; PT 11710720 T 20110311; RS P20150013 A 20110311; RU 2012143479 A 20110311; SI 201130371 T 20110311; US 201113634351 A 20110311