

Title (en)

REINFORCEMENT MATERIAL AND REINFORCEMENT STRUCTURE OF STRUCTURE AND METHOD OF DESIGNING REINFORCEMENT MATERIAL

Title (de)

VERSTÄRKUNGSMATERIAL UND VERSTÄRKUNGSKONSTRUKTION FÜR KONSTRUKTION UND VERFAHREN ZUM KONSTRUIEREN VON VERSTÄRKUNGSMATERIAL

Title (fr)

MATERIAU D'ARMATURE ET STRUCTURE D'ARMATURE D'UNE STRUCTURE ET PROCEDE DE CONCEPTION D'UN MATERIAU D'ARMATURE

Publication

EP 1437459 A4 20050706 (EN)

Application

EP 02775228 A 20020925

Priority

- JP 0209838 W 20020925
- JP 0108287 W 20010925
- JP 0202167 W 20020308

Abstract (en)

[origin: EP1437459A1] A reinforcement material has a woven body, a tape body, or a sheet body having high extensibility and high flexibility added thereto by weaving and installed on the surface of or inside the member or the boundary part of the member of the structure to reinforce the member, wherein the woven body, tape body, or sheet body has a Young's modulus equal to or lower than that of the member and a tensile breaking strain of 10% or higher, the Young's modulus of the reinforcement material should desirably be 1/2 to 1/20, particularly, 1/5 to 1/10 of that of the member, and specifically the value of the Young's modulus of the woven body should desirably be 500 to 50,000 Mpa, particularly, 1000 to 10,000 Mpa; the reinforcement structure wherein the member of the structure is reinforced by using the reinforcement material. An independent claim is also included for a method of designing reinforcement material.

IPC 1-7

E04G 23/02

IPC 8 full level

E04C 5/04 (2006.01); **E04C 5/07** (2006.01); **E04G 23/02** (2006.01)

CPC (source: EP)

E04C 5/04 (2013.01); **E04C 5/07** (2013.01); **E04G 23/0218** (2013.01); **E04G 23/0225** (2013.01); **E04G 2023/0251** (2013.01);
E04G 2023/0255 (2013.01)

Citation (search report)

- [X] WO 9906651 A1 19990211 - SIIKA AG [CH], et al
- [X] US 6189286 B1 20010220 - SEIBLE FRIEDER [US], et al
- [X] WO 9932738 A1 19990701 - SCHERER JOSEF [CH]
- [A] US 5617685 A 19970408 - MEIER URS [CH], et al
- [A] DE 3627627 A1 19880218 - KREMER HANS DIETER [DE]
- [X] US 5924262 A 19990720 - FAWLEY NORMAN C [US]
- [X] WO 0148337 A1 20010705 - STRUCTURAL QUALITY ASSURANCE I [JP], et al
- [X] EP 0942118 A1 19990915 - LEONHARDT ANDRAE UND PARTNER B [DE]
- [X] EP 1004722 A1 20000531 - LOCKE REGINALD A J [US]
- [A] DE 19828607 A1 19991230 - RICHARD LAUMER GMBH & CO BAUTE [DE]
- [A] DE 19805347 A1 19990812 - SIIKA CHEMIE GMBH [DE]
- [A] US 5771557 A 19980630 - CONTRASTO SAM [US]
- [X] EP 0799951 A1 19971008 - FREYSSINET INT STUP [FR], et al
- [X] EP 0269497 A1 19880601 - WOLF PHILIPPE [FR], et al
- [X] US 5727357 A 19980317 - ARUMUGASAAMY PANCHADSARAM [US], et al
- [X] WO 9741320 A1 19971106 - FAWLEY NORMAN [US]
- [X] DE 2909179 A1 19800911 - HAASE HARRY
- [T] SPADEA G ET AL: "Structural behavior of composite RC beams with externally bonded CFRP", JOURNAL OF COMPOSITES FOR CONSTRUCTION, BALTIMORE, MD, US, vol. 2, no. 3, August 1998 (1998-08-01), pages 132 - 137, XP002105969, ISSN: 1090-0268
- See references of WO 03027417A1

Cited by

ITRM20090380A1; ITBO20120564A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

EP 1437459 A1 20040714; EP 1437459 A4 20050706; JP WO2003027414 A1 20050106; JP WO2003027416 A1 20050106;
JP WO2003027417 A1 20050106; TN SN04043 A1 20060601; TW 521113 B 20030221; TW I268980 B 20061221; WO 03027414 A1 20030403;
WO 03027416 A1 20030403

DOCDB simple family (application)

EP 02775228 A 20020925; JP 0108287 W 20010925; JP 0202167 W 20020308; JP 2003530962 A 20020308; JP 2003530964 A 20010925;
JP 2003530965 A 20020925; TN SN04043 A 20040316; TW 90128098 A 20011113; TW 91113921 A 20020625