

Title (en)

METHOD FOR PRE-STRESSING A STEEL STRUCTURE, AND STEEL STRUCTURE PRE-STRESSED USING SAID METHOD

Title (de)

VERFAHREN ZUM VORSPANNEN EINES STAHL-BAUWERKES, SOWIE DAMIT VORGESpanNTES STAHL-BAUWERK

Title (fr)

PROCÉDÉ POUR PRÉCONTRAINdre UN OUVrage EN ACIER AINSI QU'OUVRAGE EN ACIER AINSI PRÉCONTRAINT

Publication

EP 2997197 B1 20200422 (DE)

Application

EP 14722518 A 20140416

Priority

- CH 9502013 A 20130514
- CH 2014000049 W 20140416

Abstract (en)

[origin: CH706630B1] The method involves connecting carbon fiber-reinforced polymer tapes (4) with steel girders (3) of a steel structure i.e. iron bridge (1), at end regions in a traction-force fit manner. A lifting element (7) is arranged between the polymer tapes and the steel girders. The lifting element is vertically driven to the polymer tapes in a region between end anchorages (5) for causing traction force tensioning between the end regions of the polymer tapes. The polymer tapes are installed at the steel girders over a length of the steel girders. The lifting element is a hydraulic, pneumatic, electrical or mechanical actuatable lifting element. An independent claim is also included for a steel structure.

IPC 8 full level

E01D 22/00 (2006.01)

CPC (source: EP US)

E01D 6/00 (2013.01 - US); **E01D 22/00** (2013.01 - EP US); **E04B 1/24** (2013.01 - US); **E04C 3/10** (2013.01 - EP US); **E04C 5/085** (2013.01 - EP US); **E04G 23/0218** (2013.01 - US); **E01D 2101/32** (2013.01 - EP US)

Citation (examination)

- US 2011072745 A1 20110331 - PANTELIDES CHRIS P [US], et al
- SCHLAICH MIKE, ZWINGMANN BERND, LIU YUE, GOLLER RALF: "Zugelemente aus CFK und ihre Verankerungen", BAUTECHNIK, vol. 89, 31 December 2012 (2012-12-31), pages 841 - 850, ISSN: 0932-8351, DOI: 10.1002/bate.201200057

Cited by

US11326313B2

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

CH 706630 B1 20131231; AU 2014268098 A1 20151126; AU 2014268098 B2 20180426; BR 112015028588 A2 20180724; BR 112015028588 B1 20211123; CA 2918395 A1 20141120; CA 2918395 C 20211026; CN 105518218 A 20160420; EA 031304 B1 20181228; EA 201501078 A1 20160630; EP 2997197 A1 20160323; EP 2997197 B1 20200422; ES 2802887 T3 20210121; KR 102267298 B1 20210621; KR 20160015255 A 20160212; NZ 713701 A 20190125; PT 2997197 T 20200703; US 11326313 B2 20220510; US 2016145815 A1 20160526; US 2020299911 A1 20200924; WO 2014183224 A1 20141120; ZA 201509090 B 20170125

DOCDB simple family (application)

CH 9502013 A 20130514; AU 2014268098 A 20140416; BR 112015028588 A 20140416; CA 2918395 A 20140416; CH 2014000049 W 20140416; CN 201480026747 A 20140416; EA 201501078 A 20140416; EP 14722518 A 20140416; ES 14722518 T 20140416; KR 20157035406 A 20140416; NZ 71370114 A 20140416; PT 14722518 T 20140416; US 201414898452 A 20140416; US 202016874643 A 20200514; ZA 201509090 A 20151214