

Title (en)
ELONGATED CLAMPING UNIT

Title (de)
LÄNGLICHE SPANNEINHEIT

Title (fr)
UNITÉ DE SERRAGE ALLONGÉE

Publication
EP 3334864 B1 20210106 (DE)

Application
EP 17751270 A 20170720

Priority
• DE 102016220478 A 20161019
• EP 2017068323 W 20170720

Abstract (en)
[origin: CA2983142A1] The invention relates to an elongate tensioning unit (100) comprising a casing (102) which encloses an interior space (104), and a plurality of tensioning elements (106) which extend in the longitudinal direction (A) of the tensioning unit (100) and are accommodated in the interior space (104) of the casing (102). According to the invention, the casing (102) comprises, at at least one circumferential position, a depression (108) which projects into the interior space (104) and in which at least one electric functional unit (112), for example at least one lighting unit, and at least one connection line (114a, 114b) for the at least one electric functional unit (112) are accommodated. Alternatively, the at least one electric functional unit can also be accommodated in an associated recess in a water-repelling element arranged on the outer surface of the casing.

IPC 8 full level
D07B 1/14 (2006.01); **E01D 19/16** (2006.01)

CPC (source: EP US)
D07B 1/147 (2013.01 - EP US); **D07B 1/148** (2013.01 - EP US); **E01D 11/04** (2013.01 - EP US); **E01D 19/16** (2013.01 - EP US); **E04H 12/20** (2013.01 - EP US); **F21V 23/001** (2013.01 - US); **D07B 2201/2085** (2013.01 - EP US); **D07B 2201/2086** (2013.01 - EP US); **D07B 2201/2087** (2013.01 - EP US); **D07B 2501/203** (2013.01 - EP US); **F21V 33/00** (2013.01 - EP US); **F21Y 2115/10** (2016.07 - US)

Citation (opposition)
Opponent : SOLETANCHE FREYSSINET
• CN 202403211 U 20120829 - CHINA RAILWAY ENGINEERING CONSULTATION GROUP CO LTD
• FR 2660332 A1 19911004 - FREYSSINET INT STUP [FR]
• US 5479671 A 19960102 - STUBLER JEROME [FR], et al
• "Lighting design of the Shangdi Bridge in Beijing, China /Pictures/", 26 December 2011 (2011-12-26), Retrieved from the Internet <URL:http://bbs.zol.com.cn/dcbbs/d22_38792.html>
• LI LI, GUAN PENG: "Research on Difficult Problems in Landscape Lighting Design of Shangdi Cable-stayed Bridge of Beijing-Xinjiang Expressway in Beijing", RAILWAY STANDARD DESIGN, vol. 58, no. 8, 1 August 2014 (2014-08-01), pages 138 - 140, XP055856417
• "Beijing/Jingbao Bridge /Pictures/", December 2011 (2011-12-01), Retrieved from the Internet <URL:https://www.china-yd.com/anli_del/id/167.html>
• "Baidu Street View, Shangdi Bridge, Beijing", July 2013 (2013-07-01)
• ANONYMOUS: "Showcase Los Libertadores Bridge -Lima, Peru ", TRAXON TECHNOLOGIES LTD, 1 January 2010 (2010-01-01), pages 1, XP055856424, Retrieved from the Internet <URL:http://www.traxontechnologies.com/get_pic/pdf/682-Los_Libertadores_Bridge-Lima_Peru.pdf> [retrieved on 20211029]
• ANONYMOUS: "Pont Eric-Tabarly Inauguration", DOSSIER DE PRESSE, 17 June 2011 (2011-06-17), pages 1 - 16, XP055847842
• "Pont Eric-Tabarly", 1 January 2011, ARCHIBOOKS, article RENAUD DECHAMPS: "Pont Eric-Tabarly /Passage/", pages: 83, 120, XP055847851
Opponent : VSL International AG,
• WO 2018020289 A1 20180201 - SOLETANCHE FREYSSINET [FR]
• CN 204199176 U 20150311 - LIUZHOU GUANQIAO PRESTRESSED MACHINERY CO LTD
• CN 104868427 A 20150826 - UNIV TONGJI
• CN 105862591 A 20160817 - UNIV HUBEI TECHNOLOGY
• CN 202017905 U 20111026 - YAJUN LIU
• DE 10343878 A1 20050421 - CARL CROON GMBH & CO KG BAUELE [DE]
• DE 202010015184 U1 20110428 - WALDMANN HERBERT GMBH & CO KG [DE]
• US 4812956 A 19890314 - CHEN SCOTT [TW]
• WO 03091622 A1 20031106 - MULTI MEDIA ELECTRONICS INC [US], et al
• KR 100975145 B1 20100811 - KOLS ELECTRONICS CO LTD [KR]

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)
DE 102016220478 A1 20180419; CA 2983142 A1 20180419; CN 109790693 A 20190521; CN 109790693 B 20211015;
EP 3334864 A1 20180620; EP 3334864 B1 20210106; ES 2848676 T3 20210811; US 10683623 B2 20200616; US 2019249380 A1 20190815;
US 2020080268 A1 20200312; WO 2018072902 A1 20180426

DOCDB simple family (application)
DE 102016220478 A 20161019; CA 2983142 A 20171019; CN 201780059850 A 20170720; EP 17751270 A 20170720;
EP 2017068323 W 20170720; ES 17751270 T 20170720; US 201716333383 A 20170720; US 201916667165 A 20191029