

Title (en)
Soil improvement using hybrid piles

Title (de)
Baugrundverbesserung durch Hybrid-Säulen

Title (fr)
Améliorer la consolidation du sol avec des colonnes hybride

Publication
EP 1688543 A3 20060823 (DE)

Application
EP 06000386 A 20060110

Priority
DE 102005001227 A 20050110

Abstract (en)
[origin: EP1688543A2] Method for improving a foundation in the ground comprises inserting columns (11) having a lower bound section (12) made from mortar or cement and an upper bound section (13) made from ballast. The lower bound section is produced by displacing the soil using a hollow tool and inserting the mortar or cement into the borehole produced whilst removing the hollow tool. An independent claim is also included for a device for producing a column section. Preferred Features: A borehole having a diameter of 200-600 mm is produced by the hollow tool. The borehole is approximately 20 m deep.

IPC 8 full level
E02D 3/08 (2006.01); **E02D 5/48** (2006.01)

CPC (source: EP)
E02D 3/08 (2013.01); **E02D 3/123** (2013.01); **E02D 5/44** (2013.01); **E02D 5/48** (2013.01); **E02D 7/14** (2013.01)

Citation (search report)

- [XY] GB 515120 A 19391127 - ALFRED HILEY, et al
- [Y] WO 02077136 A2 20021003 - MENARD SOLTRAITEMENT [FR], et al
- [A] US 4730954 A 19880315 - SLIWINSKI ZIEMOWIT J [GB], et al
- [DA] DE 10108602 A1 20020912 - KELLER GRUNDBAU GMBH [DE]
- [A] LAURENT BRIANCON: "Renforcement des sols par inclusions rigides, Etat de l'Art en France et à l'étranger", September 2002, IREX, PARIS, XP002389410
- [A] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 02 30 January 1998 (1998-01-30)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 11 28 November 1997 (1997-11-28)

Cited by
DE102015105701A1; CN104594330A; EP2241677A3; ITTO20090282A1; CN113684814A; FR2960571A1; EP2390419A3; US10822762B2; EP3638854A4; EP2390419A2; EP2212478B1; EP2212478B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

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