

Title (en)  
Soil improvement using hybrid piles

Title (de)  
Baugrundverbesserung durch Hybrid-Säulen

Title (fr)  
Amélioration de la consolidation du sol par des colonnes hybrides

Publication  
**EP 1688543 B1 20121212 (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 3/12** (2006.01); **E02D 5/48** (2006.01); **E02D 7/14** (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)

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

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**EP 1688543 A2 20060809; EP 1688543 A3 20060823; EP 1688543 B1 20121212; DE 102005001227 A1 20060720**

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