

Title (en)

Method for preventive consolidation of the soil for underground minings.

Title (de)

Verfahren zur präventiven Konsolidierung des Bodens beim Untertagebau.

Title (fr)

Méthode pour la consolidation préventive du sol dans l'industrie minière souterraine.

Publication

EP 0437262 A1 19910717 (EN)

Application

EP 91100265 A 19910110

Priority

IT 330690 A 19900111

Abstract (en)

A method for the preventive consolidation of tunnel excavations by using the protective umbrella technique, exploiting an equipment comprising: a metallic tube (1) of reinforcement, a tubular rod (12) provided with nozzles, a piercing bit (4) and a double rotary unit. The process comprises the following phases: a) mainly sub-horizontal drilling of the soil with the piercing bit (4) coaxially contained inside the tube (1), said tube (1) and said rod (2) being rotated one opposite to each other by a rotary unit; b) injection of pressurized liquid mixtures through the nozzles of the rod (2) with the removal of the finest part of the soil that is being consolidated; c) extraction of the rod from the inside of the tube. <IMAGE>

IPC 1-7

E02D 3/12; **E21D 20/02**

IPC 8 full level

E02D 3/12 (2006.01); **E21D 20/02** (2006.01)

CPC (source: EP)

E02D 3/12 (2013.01); **E21D 20/02** (2013.01)

Citation (search report)

- [A] EP 0125490 A1 19841121 - FONDEDILE SPA [IT]
- [A] DE 3447872 A1 19860710 - RODIO FOUND ENG LTD [CH]
- [A] PATENT ABSTRACTS OF JAPAN, vol. 6, no. 45 (M-118)[923], 20th March 1982; & JP-A-56 159 417 (GISUKE EBINE) 08-12-1981
- [A] PATENT ABSTRACTS OF JAPAN, vol. 9, no. 282 (M-428)[2005], 9th November 1985; & JP-A-60 123 616 (TAISEI KENSETSU K.K.) 02-07-1985

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CN104564113A; RU2468207C1; FR2680380A1; ES2065204A2

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EP 0437262 A1 19910717; **EP 0437262 B1 19940727**; **EP 0437262 B2 19980114**; AT E109234 T1 19940815; DE 69103027 D1 19940901; DE 69103027 T2 19941117; DE 69103027 T3 19980610; IT 1238428 B 19930726; IT 9003306 A0 19900111; IT 9003306 A1 19910712

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