

Title (en)
Drilling apparatus and drilling method

Title (de)
Vorrichtung und Verfahren zum Bohren

Title (fr)
Procédé et appareil de forage

Publication
EP 0829614 A1 19980318 (FR)

Application
EP 97402073 A 19970905

Priority
FR 9610978 A 19960909

Abstract (en)
Process for drilling a horizontal shaft in a soil from a departure zone using a drill train (6) comprising a series of drill elements (7) placed end to end along the drilling axis and able to be displaced forwards in the soil by a drill driving device (9), with the following stages: the departure zone is formed as an open vertical shaft with a horizontal section which is preferably constant over the depth of the shaft and insufficient for a man to reach the bottom. To drill the hole, the drill train is moved in the hole by elements following the direction of the hole starting from an opening in the side of the shaft. Elements of the train are chosen with an axial length less than the distance separating the opening in the shaft and the opposite wall of the shaft. Apparatus for achieving the above process, comprising a frame which can be lowered into at least part of the shaft; drill train elements which can be placed end to end and with an individual length L1; means of driving the drill train which can be moved between two positions to drive the elements and to produce a relatively rigid drill train along a horizontal drilling axis;. The length L1 of the elements is less than a dimension L2 of the frame in the drill train axis.

Abstract (fr)
Il s'agit de réaliser un trou de forage (1) au moyen d'un train de tiges de forage comprenant une succession d'éléments de tiges (7d) à disposer bout à bout. Pour cela, on réalise un puits (2) vertical dans le sol, de section horizontale constante et de préférence insuffisante pour qu'un homme puisse travailler vers son fond, on y déplace horizontalement le train de tiges à partir d'une ouverture située dans une paroi avant du puits et on sélectionne les éléments (7d) du train de tiges pour qu'ils présentent une longueur axiale inférieure à la distance séparant ladite ouverture dans la paroi avant du puits, de la paroi arrière en regard. <IMAGE>

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E21B 7/046 (2013.01 - EP US); **E21B 19/20** (2013.01 - EP US)

Citation (search report)
• [XY] GB 2276895 A 19941012 - NODIG PIPELINES LTD [GB], et al
• [Y] US 3834668 A 19740910 - CASEY J
• [X] US 4542796 A 19850924 - DELBARRE JEAN [FR]
• [A] US 4748563 A 19880531 - ANTHOINE GILLES G [FR]
• [A] US 5014781 A 19910514 - SMITH MICHAEL L [US]

Cited by
EP0984132A3; US6550547B1; WO0151760A3

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