

Title (en)

Device for drilling boreholes with single and double drilling tubes

Title (de)

Vorrichtung zur Herstellung von Bohrlöchern mit Einzel- oder Doppelgestänge

Title (fr)

Dispositif pour forer des trous avec des tiges simples et doubles

Publication

EP 0942146 B1 20040707 (DE)

Application

EP 99104430 A 19990305

Priority

DE 19810707 A 19980312

Abstract (en)

[origin: EP0942146A2] A grip clamp (10) at the lower end (15) of the slide mounting (2) travels longitudinally over the axis (17), and is arranged to operate with the swinging, rotatable drum magazine (6). The inner (9) and outer (8) tubes can be removed radially from the magazine, where they are held by clamps. The magazine includes a clamping roller assembly to raise and lower the inner tube. Preferred features: The clamp on the slide mounting is guided along a vertical path of 1-2 m, preferably 1 m. Clamps holding the drilling rod (7) in the drum magazine are so arranged and constructed that inner and outer tubes seen radially, are distributed separately or in groups over the drum circumference. The traveling clamp (10) is operated by parallel cylinders, one being pivoted. The pivoting unit articulation with the clamping cylinder is described, and includes a slotted guide for the clamping jaws. Simultaneous clamping pressure is produced on the drill string. There is a holding clamp for the inner tube at the top of the drum magazine, having a cylinder and spring-loading system. The piston rod has end rollers pressing on suitably curved surfaces, for opening and closing. The drum axis can be moved. There is a lead-in funnel (13) for the inner tube to be lifted by the clamping roller assembly. The clamping rollers both grip the inner tube, and rotate. The rollers are sigma rollers, adapting to the tube profile. They have pivoting overslung mountings and a holder, with corresponding spaced connection. Drum magazine guide mandrels are provided for the outer tubes, their lengths corresponding with the fixing length of the grips. The inner tube has a welded-on end section with internal or external thread, and collar formation with lead-in angles. Outer and inner threads end before the lead-in angles. The end sections are constructed for an inner channel diameter of at least 30 cm, with constant wall thickness.

IPC 1-7

E21B 19/20; **E21B 19/14**

IPC 8 full level

E21B 19/14 (2006.01); **E21B 19/20** (2006.01)

CPC (source: EP US)

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Cited by

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