

Title (en)

Profiled element for a rotary drilling device and drill string having at least one of said elements

Title (de)

Profiliertes Element für eine Drehbohrvorrichtung und Bohrgestänge mit mindestens einem solchen Element

Title (fr)

Élément profilé pour un équipement de forage rotatif et tige de forage comportant au moins un tronçon profilé

Publication

**EP 1026364 B1 20050608 (FR)**

Application

**EP 00400190 A 20000125**

Priority

FR 9901391 A 19990205

Abstract (en)

[origin: EP1026364A1] The drill (1) has an overall shape of revolution, an axis (4) parallel to the drill axis, and radial projections (15, 20) and hollows (16, 19) on the external surface forming helices around the axis of rotation of the drill. Over at least part of the length of the element (3), at least one geometrical and dimensional characteristic of the hollows and protrusions varies along the element. The element is a section of a drill string and the hollows or grooves of the helix provide a transverse passage in a plane perpendicular to the axis of the drill, decreasing in the axial direction and the direction of flow of the drilling fluid in an annulus between the drill and the hole. The grooves have a decreasing size and/or depth in the circumferential direction of the drill, in the direction of flow of the drilling fluid. Similarly, the protrusions increase in size in the direction of drilling and from bottom to top. Upstream of the section with variable profile is a section (10) of uniform profile also containing grooves (13) forming helices around the axis of the drill. The grooves on the variable profile section are extensions of the grooves on the uniform profile section. Drill string containing one, two or three such elements.

IPC 1-7

**E21B 17/10**; **E21B 17/22**

IPC 8 full level

**E21B 17/10** (2006.01); **E21B 17/22** (2006.01)

CPC (source: EP US)

**E21B 17/10** (2013.01 - EP US); **E21B 17/22** (2013.01 - EP US)

Cited by

FR2824104A1; RU2631059C2; FR2997439A1; CN104755694A; US6732821B2; WO2013190219A1; WO0250397A1; WO2014067730A1

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