

Title (en)

Drill bit assembly having improved operational life.

Title (de)

Bohrmeisselanordnung mit längerer Lebensdauer.

Title (fr)

Ensemble de trépan de forage à durée de vie prolongée.

Publication

**EP 0106702 A2 19840425 (EN)**

Application

**EP 83306326 A 19831018**

Priority

- US 43523982 A 19821019
- US 50326583 A 19830610

Abstract (en)

A drill bit assembly has an elongated housing in which a drill is provided with a generally cylindrical shape for receiving an enlarged tool end with somewhat greater diameter, the tool having cutting cones for cutting a drill hole in material to be drilled. Air is fed to a plenum chamber within the housing out of which are fed two air flows. The first flow is directed to the region of the cutting cones and is of reduced magnitude sufficient only for removing dust and cuttings away from the bit assembly up along the sides of the bit. A plurality of vanes are provided on the housing to direct the first flow into a helical path the general pitch of the vanes. The vanes are caused to overlap one another in the direction of flow. A plurality of jet nozzles are provided from the plenum chamber at the side of the housing intermediate each pair of vanes and aligned so that the second flow will be in line with the first flow and generally parallel to the vanes in the general direction of the drill end and away from the cutting cones. Centrifugal force thus imparted keeps particles away from the drill bit and the pipe extensions and thereby reduces wear.

IPC 1-7

**E21B 10/18**; **E21B 10/44**; **E21B 17/22**; **E21B 21/00**

IPC 8 full level

**E21B 10/18** (2006.01); **E21B 10/24** (2006.01); **E21B 10/44** (2006.01); **E21B 17/22** (2006.01); **E21B 21/00** (2006.01); **E21B 21/16** (2006.01)

CPC (source: EP US)

**E21B 10/18** (2013.01 - EP); **E21B 10/44** (2013.01 - EP); **E21B 17/22** (2013.01 - EP); **E21B 21/00** (2013.01 - EP US); **E21B 21/16** (2013.01 - EP)

Cited by

EP0257944A3; US4765416A; GB2474148A; WO2009140006A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

**EP 0106702 A2 19840425**; **EP 0106702 A3 19860205**

DOCDB simple family (application)

**EP 83306326 A 19831018**