

Title (en)

Method for designing a roller-cone bit

Title (de)

Entwurfsverfahren für einen Rollenbohrmeissel

Title (fr)

Procédé de conception d'un trépan à cônes

Publication

**EP 1498573 A2 20050119 (EN)**

Application

**EP 04025233 A 19990831**

Priority

- EP 03021140 A 19990831
- EP 99945375 A 19990831
- US 9846698 P 19980831

Abstract (en)

Disclosed herein is a method for designing a roller cone drill bit, comprising simulating the bit drilling through an earth formation wherein the simulating comprises determining an axial force on a cutting element, based on a means for determining an axial force, determining an axial force on the roller cones, based on the axial forces on the cutting elements, and angularly rotating the bit; adjusting at least one design parameter of the bit; repeating the simulating the bit drilling; and comparing a distribution of axial forces among the roller cones prior to the adjusting the at least one design parameter with a distribution of axial forces among the roller cones after adjusting the at least one design parameter.

IPC 1-7

**E21B 10/16**; **E21B 41/00**

IPC 8 full level

**E21B 10/08** (2006.01); **E21B 10/16** (2006.01); **E21B 41/00** (2006.01)

CPC (source: EP)

**E21B 10/08** (2013.01); **E21B 10/16** (2013.01)

Cited by

WO2007056554A1

Designated contracting state (EPC)

GB IT

DOCDB simple family (publication)

**EP 1498573 A2 20050119**; **EP 1498573 A3 20060524**; EP 1498574 A2 20050119; EP 1498574 A3 20060517; EP 1498575 A2 20050119; EP 1498575 A3 20060517

DOCDB simple family (application)

**EP 04025233 A 19990831**; EP 04025234 A 19990831; EP 04025235 A 19990831