

Title (en)
Roller cone drill bit, method of designing the same and rotary drilling system

Title (de)
Rollenbohrmeissel, zugehöriges Entwurfsverfahren und Drehbohrsystem

Title (fr)
Trépan à cônes, procédé pour sa conception et système de forage rotatif

Publication
EP 1371811 A2 20031217 (EN)

Application
EP 03021139 A 19990831

Priority
• EP 99945376 A 19990831
• US 9844298 P 19980831

Abstract (en)
A method of designing a roller cone bit is disclosed. The method comprises the steps of: calculating the trajectory of at least one tooth on each cone through formation material at the cutting face; and jointly optimising both the orientations of said teeth and the width of uncut rings on said cutting face, in dependence on said trajectory. <IMAGE>A method of designing a roller cone bit is disclosed. The method comprises the steps of: calculating the trajectory of at least one tooth on each cone through formation material at the cutting face; and jointly optimising both the orientations of said teeth and the width of uncut rings on said cutting face, in dependence on said trajectory. <IMAGE>

IPC 1-7
E21B 10/16

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)

Citation (applicant)
US 5372210 A 19941213 - HARRELL PATRICIA N [US]

Cited by
US8386181B2; WO2012024073A1

Designated contracting state (EPC)
GB IT

DOCDB simple family (publication)
WO 0012860 A2 20000309; WO 0012860 A3 20000608; WO 0012860 A9 20001123; AU 5798499 A 20000321; EP 1117894 A2 20010725; EP 1117894 A4 20020814; EP 1117894 B1 20031203; EP 1117894 B2 20100303; EP 1371811 A2 20031217; EP 1371811 A3 20040102; EP 1371811 B1 20110330; EP 1498572 A2 20050119; EP 1498572 A3 20060412; EP 1500781 A2 20050126; EP 1500781 A3 20060412; EP 1500782 A2 20050126; EP 1500782 A3 20060412; EP 1500783 A2 20050126; EP 1500783 A3 20060412; ID 28893 A 20010712; MX PA01002208 A 20030327

DOCDB simple family (application)
US 9919992 W 19990831; AU 5798499 A 19990831; EP 03021139 A 19990831; EP 04025232 A 19990831; EP 04025560 A 19990831; EP 04025561 A 19990831; EP 04025562 A 19990831; EP 99945376 A 19990831; ID 20010732 A 19990831; MX PA01002208 A 19990831