

Title (en)
Rotary drag-type drill bits and methods of designing such bits

Title (de)
Drehbohr-Fräsmessel und Verfahren zu deren Entwicklung

Title (fr)
Trépanrs racleurs rotatifs et méthodes pour leur conception

Publication
EP 1008718 B1 20040915 (EN)

Application
EP 99309759 A 19991203

Priority
US 21051898 A 19981211

Abstract (en)
[origin: EP1008718A2] The invention provides a rotary drag-type drill bit in which the relationship of torque to rotary bit speed is such that torque generally increases with bit speed. Such a bit has a reduced tendency to exhibit the phenomenon known as "stick-slip" while drilling, when compared with bits having a different torque /speed characteristic, as a result of the positive damping effect of the torque/speed relationship. One method of designing such a drill bit comprises ascertaining the torque/rotary bit speed relationship, or other correlated relationships, for a number of different drill bit designs and then selecting from those designs a design having the desired type of relationship. Examples of drill bit structures specifically designed to achieve the desired torque/speed relationship are also disclosed. <IMAGE>

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EP 1008718 A2 20000614; **EP 1008718 A3 20010411**; **EP 1008718 B1 20040915**; DE 69920145 D1 20041021; DE 69920145 T2 20050922

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