

Title (en)
Improvements in or relating to rotary drill bits and methods of manufacture thereof.

Title (de)
Drehbohrmeissel und Verfahren zu deren Herstellung.

Title (fr)
Trépan de forage rotatifs et leur procédé de fabrication.

Publication
EP 0197741 A2 19861015 (EN)

Application
EP 86302375 A 19860401

Priority
GB 8508622 A 19850402

Abstract (en)
A method of manufacturing a rotary drill bit at least partly from cast iron comprises forming a hollow mould in the configuration of at least a portion of the bit body, and casting said portion of the bit body in the mould by a casting process which includes the steps of pouring molten cast iron into the mould and then cooling in the mould so that the cast iron solidifies to form said portion of the bit body. The method includes the further step of subjecting the cast iron to treatment, during the casting process, which results in at least one surface portion of the cast iron bit body becoming hardened. The hardening treatment may comprise adding an iron carbide forming additive, such as boron or tellurium, to the cast iron before it is poured, or by chill hardening during solidification, or by coating the interior of the mould, before pouring, with a wash of iron carbide forming material, such as tellurium or by controlling the rate of cooling after solidification so as to effect the formation of martensite.

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Cited by
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