

Title (en)

Downhole tool with hydraulic actuating system.

Title (de)

Bohrlochwerkzeug mit hydraulischer Betätigungseinrichtung.

Title (fr)

Outil de fond de puits avec système d'actionnement hydraulique.

Publication

EP 0500343 B1 19951102 (EN)

Application

EP 92301364 A 19920219

Priority

US 65848591 A 19910220

Abstract (en)

[origin: EP0500343A1] A downhole tool apparatus which is operable on a pressure differential between the well annulus and a substantially atmospheric pressure dump chamber defined in the tool, comprises a housing (102) having a power chamber (104), a high pressure source chamber (106) and a low pressure dump chamber (108) defined therein, said housing having a power port means (110) defined therein for communicating said high pressure source chamber with a well annulus (40) surrounding said housing; a power piston (112) slidably disposed in said power chamber (104) and dividing said power chamber into first (114) and second (116) power chamber portions; a pressure transfer piston (118), slidably disposed in said high pressure source chamber (106) and dividing said high pressure source chamber into a well side chamber portion (120) and a tool side chamber portion (122), said well side chamber portion being in fluid flow communication with said power port means (110); said housing further includes power passage means (124) defined therein whereby there is fluid pressure communication between said power chamber (104) and each of said well side chamber portion (120) and said low pressure dump chamber (108); electric solenoid control valve means (126) for selectively controlling fluid pressure communication between said power chamber (104) and each of said tool side chamber portion (122) and said low pressure dump chamber (108), said electric solenoid control valve means having a first position wherein said first power chamber portion (114) is communicated with said tool side chamber portion (122) and said second power chamber portion (116) is communicated with said low pressure dump chamber (108), so that a pressure differential between said well annulus (40) and said low pressure dump chamber (108) acts in a first direction across said power piston (112); and a second position wherein said first power chamber portion (114) is communicated with said low pressure dump chamber (108) and said second power chamber portion (116) is communicated with said tool side chamber portion (122) so that said pressure differential between said well annulus (40) and said low pressure dump chamber (108) acts in a second direction across said power piston (112); and pressure regulator means (146) for regulating the fluid pressure supplied from said high pressure source chamber (106) to said electric solenoid control valve means (126). <IMAGE>

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EP2460973A3; GB2567727A; GB2567727B; GB2344122A; GB2344122B; GB2401620A; US6717283B2; GB2435277A; GB2463979A; GB2435277B; GB2463979B; US8151888B2; US6289999B1; US7562713B2; US10704363B2; US7552773B2; US7921876B2; US8087463B2; US8118105B2; US8127834B2; US7201230B2; US7730954B2

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