

Title (en)
DEVICE FOR GENERATING PRESSURE PULSES IN DRILLING FLUIDS

Publication
EP 0290939 B1 19920304 (DE)

Application
EP 88107135 A 19880504

Priority
DE 3715514 A 19870509

Abstract (en)
[origin: EP0290939A2] The device for generating pressure pulses in a drilling fluid flowing down through a drill-pipe string (1) comprises a valve (V) arranged in the drill-pipe string (1) and having a tubular outer part (3) supported in a fixed position, a tubular main valve body (4) which can be displaced from a bottom initial position against the flow direction (2) of the drilling fluid into a top end operating position, a fixed, tubular support body (5) arranged coaxially in the main valve body (4), and an auxiliary valve (13, 14) which can be actuated by means of a drive (15). The outer part (3) and the main valve body (4) define between them a restriction section (29) with a cross-section of flow which can be varied as a function of the position of the main valve body (4), and the main valve body (4) and the support body (5) surround an inner flow passage (21, 12, 10) whose outlet opening (13) can be cleared and closed by means of the main valve body (4). The sum of the hydraulic forces, directed downwards and exerted by the drilling fluid on the main valve body (4) located in its initial position when auxiliary valve (13, 14) is open, and the gravitational forces exceeds that of the hydraulic forces directed upwards, and this force relationship is reversed by closing the auxiliary valve (13, 14). Here, in the end operating position of the main valve body (4), the sum of all forces acting on the main valve body (4) is zero, and the main valve body (4) is suspended free of striking in the drilling fluid. <IMAGE>

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