

Title (en)
METHOD AND APPARATUS FOR ADJUSTING THE PERCUSSION PARAMETERS OF THE IMPACTING PISTON OF A NON COMPRESSIBLE FLUID-ACTUATED DEVICE

Publication
EP 0256955 B1 19901107 (FR)

Application
EP 87420203 A 19870727

Priority
FR 8611710 A 19860807

Abstract (en)
[origin: US4800797A] A hydraulic percussion device comprises a housing defining a longitudinal cylinder, a piston longitudinally reciprocal in the cylinder and subdividing same into a front compartment and a rear compartment, and a tool engageable longitudinally with the piston at the front compartment. The compartments are alternately and oppositely hydraulically pressurized to move the piston forward to strike the tool while traveling at an end speed and to move the piston backward away from the tool, the rate of alternation being a frequency parameter and the speed being a force parameter. A controller varies at least one of the parameters by detecting how much the piston rebounds from the tool after striking same and operating the control means in accordance with how much rebound is detected. How much the piston rebounds can be detected by sensing the pressure in one of the compartments immediately after the piston strikes the tool. As rebound increases the pressure in the rear compartment increases relative to a set point or pressure in the front compartment decreases relative to a set point, and vice versa. Rebound can also be detected by sensing the pressure in one of the compartments and at one of the sides of the source and operating the control means in accordance with the differential between these sensed pressures.

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IPC 8 full level
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CPC (source: EP US)
B25D 9/145 (2013.01 - EP US); **B25D 9/26** (2013.01 - EP US)

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EP 0214064 A1 19870311 - MONTABERT ETS [FR]

Cited by
EP0715932A1; CN111433466A; EP0461565A1; US5890548A; EP0752297A3; EP0527395A3; EP0457251A1; DE4036918A1; EP0486898A1; EP0516561A1; FR2676953A1; US5392865A; EP0426928A1; FR2727891A1; US5669281A; ES2065806A2; US8151900B2; WO2013083903A1; US9981371B2; WO2019158849A1

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