

Title (en)  
HYDRAULIC OIL WELL PUMPING APPARATUS

Title (de)  
HYDRAULISCHE PUMPVORRICHTUNG FÜR ÖLBOHRUNGEN

Title (fr)  
APPAREIL DE POMPAGE HYDRAULIQUE DE Puits DE PÉTROLE

Publication  
**EP 2250340 A2 20101117 (EN)**

Application  
**EP 09705617 A 20090128**

Priority  
• US 2009032248 W 20090128  
• US 2402008 P 20080128  
• US 11916008 P 20081202

Abstract (en)  
[origin: WO2009097338A2] A hydraulic oil well pumping apparatus, preferably includes a hydraulic cylinder having a rod that is movable between a upper and lower rod positions; a pumping string that extends downwardly from the rod, the string being configured to extend into an oil well for pumping oil from the well; a prime mover; a hydraulic pump that is powered by the prime mover, said pump having a compensator that regulates pump flow and pump pressure; a directional control valve that moves between open flow and closed flow positions; an accumulator in fluid communication with the pump and directional control valve; a flow line connecting the pump and the accumulator, the directional control valve being positioned in the flow line so that it can control flow between the accumulator and hydraulic cylinder; a proportioning valve; a hydraulic fluid reservoir for containing hydraulic fluid to be supplied to the hydraulic pump; a flow line that transmits hydraulic fluid from the hydraulic cylinder to the reservoir via the proportioning valve; and an electronic control system that controls movement of the rod as it moves between the upper and lower positions by controlling the control valve and the proportioning valve, wherein the control system includes an electrical signal that opens or closes the proportioning valve so that a control of rod movement is enabled when the rod changes direction at the lower position of the rod, and wherein the proportioning valve is choked to lower flow through it as the rod is descending from the upper toward the lower position.

IPC 8 full level  
**E21B 43/00** (2006.01); **F04B 9/08** (2006.01); **F04B 47/04** (2006.01)

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Citation (search report)  
See references of WO 2009097338A2

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