

Title (en)  
**MUD PUMP**

Publication  
**EP 0205569 B1 19901010 (EN)**

Application  
**EP 86900453 A 19851211**

Priority  
US 68084984 A 19841212

Abstract (en)  
[origin: WO8603560A1] Improved mud pump comprised of plural cylinder pumping units, each cylinder unit consisting of a pumping compression chamber (81) and two or more hydraulically driven expansion chambers (96, 98), with one or more expansion chambers being employed to drive a pumping plunger (62) to cause fluid to be pumped through the compression chamber (81). Further, one or more of said expansion chambers (96, 98) are employed to return the plunger (62), the plunger (62) further being employed as the housing for one or more of said expansion chambers. The invention includes novel hydraulic drive circuitry and novel hydraulic distribution valving means for control of the hydraulic drive fluid that is utilized to drive the expansion chamber of each cylinder pumping unit. The invention also includes novel positioning means for the unit directional inlet and outlet mud pumping valves.

IPC 1-7  
**F04B 9/10**

IPC 8 full level  
**F04B 9/10** (2006.01); **F04B 9/117** (2006.01); **F04B 15/02** (2006.01); **F04B 53/12** (2006.01); **F04B 53/16** (2006.01)

CPC (source: EP)  
**F04B 9/1178** (2013.01); **F04B 15/02** (2013.01); **F04B 53/125** (2013.01); **F04B 53/164** (2013.01)

Cited by  
CN109058526A; CN105626627A; CN109058525A

Designated contracting state (EPC)  
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)  
**WO 8603560 A1 19860619**; AU 5207486 A 19860701; BR 8507113 A 19870331; CA 1255966 A 19890620; DE 3580105 D1 19901115; EP 0205569 A1 19861230; EP 0205569 B1 19901010; JP S62501020 A 19870423; MX 162460 A 19910513; NO 863230 D0 19860811; NO 863230 L 19861010

DOCDB simple family (application)  
**US 8502419 W 19851211**; AU 5207486 A 19851211; BR 8507113 A 19851211; CA 497527 A 19851212; DE 3580105 T 19851211; EP 86900453 A 19851211; JP 50021085 A 19851211; MX 91185 A 19851212; NO 863230 A 19860811