

Title (en)
Hydraulic force regulating system

Title (de)
Hydraulisches Kraft-Regelungssystem

Title (fr)
Système hydraulique de contrôle de force

Publication
EP 0713818 B1 19990407 (EN)

Application
EP 95118465 A 19951123

Priority
IT TO940957 A 19941125

Abstract (en)
[origin: EP0713818A1] A hydraulic force regulating system (10') presenting a hydraulic actuator (11) including a cylinder (15) housing a piston (16) movable in relation to the cylinder; a hydraulic circuit (12-14) in turn presenting a servovalve (12) for controlling supply to the actuator; a first force regulating loop (26-29) which, on the basis of the difference between the actual force (Fm) generated by the piston (16) and the required nominal force (Fr), regulates the current (I) supplied to the servovalve (12); and a second regulating loop (35) which, on the basis of the speed (V) of the piston (16) in relation to the cylinder (15), generates an additional current (I1) for the servovalve (12), to achieve a substantially elastic performance of the hydraulic system (10'). More specifically, the additional current (I1) opens the servovalve (12) by the exact amount required to permit the passage, in the presence of a desired pressure difference DELTA p, of the flow AV (product of piston area A and speed) produced by the movement of the piston (16) in relation to the cylinder (15). <IMAGE>

IPC 1-7
B61F 5/24

IPC 8 full level
B61F 5/24 (2006.01)

CPC (source: EP)
B61F 5/245 (2013.01)

Cited by
US6679565B2; WO2005053973A1; WO2011066114A3; US10974741B2

Designated contracting state (EPC)
CH DE ES FR LI SE

DOCDB simple family (publication)
EP 0713818 A1 19960529; EP 0713818 B1 19990407; DE 69508888 D1 19990512; DE 69508888 T2 19990909; ES 2131746 T3 19990801; IT 1267627 B1 19970207; IT TO940957 A0 19941125; IT TO940957 A1 19960525

DOCDB simple family (application)
EP 95118465 A 19951123; DE 69508888 T 19951123; ES 95118465 T 19951123; IT TO940957 A 19941125