Title (en)

Overload protection device for a hydraulic cylinder.

Title (de)

Überlastungsschutz für hydraulische Zylinder.

Title (fr)

Protecteur de surcharge pour vérin hydraulique.

Publication

EP 0103549 A1 19840321 (EN)

Application

EP 83830172 A 19830905

Priority

IT 2320482 A 19820910

Abstract (en)

A device for protecting a hydraulic cylinder (1) against possible overloading is constituted by an auxiliary hydraulic cylinder (13) in which each working chamber (16, 17) is connected hydraulically by a respective duct (18, 19) to a corresponding working chamber (2, 3) of the protected cylinder (1). The piston rod (21) of the auxiliary cylinder (13) is connected to a spring (26) which yields in a direction opposite the direction of displacement of the rod (21) resulting from the surpassing of a compression force of a value greater than a limit which is predetermined in accordance with the value of the maximum pressure which can be borne by the protected cylinder (1). The device avoids failure of the cylinder (1) and any hydraulic apparatus connected thereto, and also returns the piston rod (6) of the protected cylinder (1) automatically to the initial position from which it was displaced as a consequence of the intervention of the protection device.

IPC 1-7

F15B 15/20

IPC 8 full level

F15B 1/02 (2006.01); **F15B 15/14** (2006.01)

CPC (source: EP)

F15B 1/02 (2013.01); **F15B 15/1447** (2013.01); **F15B 15/1457** (2013.01)

Citation (search report)

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- US 4007667 A 19770215 - ELIAS JACOB K, et al
- FR 2414130 A1 19790803 - LEDUC & FILS RENE [FR]
- WO 8103527 A1 19811210 - TAMPELLA OY AB [FI], et al
- FR 1347730 A 19640104
- OELHYDRAULIK UND PNEUMATIK, vol. 6, no. 10, October 1962, page 379, Mainz, DE.

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Designated contracting state (EPC)

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DOCDB simple family (publication)

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EP 83830172 A 19830905; IT 2320482 A 19820910