

Title (en)

PLUNGER TIP GEOMETRY FOR A PRESSURE RELIEF VALVE

Title (de)

STÖSSELSPITZEN-GEOMETRIE FÜR EIN DRUCKREGELVENTIL

Title (fr)

GÉOMETRIE D'UN EMBOUT D'UN POUSSOIR POUR UNE SOUPAPE DE DÉCHARGE DE PRESSION

Publication

EP 3019736 A1 20160518 (DE)

Application

EP 14736826 A 20140708

Priority

- DE 102013213419 A 20130709
- EP 2014064622 W 20140708

Abstract (en)

[origin: WO2015004140A1] The invention relates to a tappet element (2), in particular for a pressure control valve (4), comprising a tappet body (2a), in particular an elongated tappet body. The tappet body has a first side (2b), a second side (2c), and a centre axis (2d). A tappet tip (14) is formed on the first side (2a), which tappet tip is designed to contact a valve ball (6). A driving device (10) for the tappet element (2) can be provided on the second side (2c). The tappet tip (14) has a recess (12) for contacting a valve ball (6). The tappet element is characterised in that the recess (12) has a first region (16a) and a second region (16b), the two regions (16a, b) being arranged concentrically with respect to the centre axis (2d); and a valve ball (6) being movable (18a) on the surface (22a) of the recess (12) substantially in a radial direction (20a) perpendicular to the centre axis (2d) in the first region (16a); and a valve ball (6) being movable (18b) on the surface (22b) of the recess (12) substantially in a combined motion both in the radial direction (20a) and in an axial direction (20b) in the second region (16b).

IPC 8 full level

F02M 63/00 (2006.01); **F01L 1/14** (2006.01); **F16K 17/04** (2006.01); **F16K 31/06** (2006.01)

CPC (source: EP US)

F01L 1/14 (2013.01 - EP US); **F02M 63/0036** (2013.01 - EP US); **F02M 63/0052** (2013.01 - EP US); **F16K 1/36** (2013.01 - EP US); **F16K 17/0406** (2013.01 - US); **F16K 31/0665** (2013.01 - EP US)

Citation (search report)

See references of WO 2015004140A1

Citation (examination)

JP 2008175085 A 20080731 - DENSO CORP

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102013213419 A1 20150115; CN 105358820 A 20160224; EP 3019736 A1 20160518; JP 2016520766 A 20160714; US 2016153319 A1 20160602; WO 2015004140 A1 20150115

DOCDB simple family (application)

DE 102013213419 A 20130709; CN 201480038667 A 20140708; EP 14736826 A 20140708; EP 2014064622 W 20140708; JP 2016518536 A 20140708; US 201414903929 A 20140708