

Title (en)
VALVE ASSEMBLY AND FLUID INJECTION VALVE

Title (de)
VENTILANORDNUNG UND FLÜSSIGKEITSINJEKTIONSVENTIL

Title (fr)
ENSEMBLE DE SOUPAPE ET SOUPAPE D'INJECTION DE FLUIDE

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EP 17157333 A 20170222

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Abstract (en)
[origin: EP3339627A1] A valve assembly (3) for a fluid injection valve (1) is disclosed. It comprises a valve needle (11) and an armature (23). The armature (23) comprises a recess (33) at an upper side (27), the recess (33) having a first circumferential surface (231) and a first bottom surface (233). A second circumferential surface (341) of the armature (23) defines a central bore (34) which extends from the first bottom surface (233) to a lower side (41) of the armature (23), opposite of the upper side (27). The valve needle (11) comprises a retaining element (24) fixed to a shaft (13) of the valve needle (11), the retaining element (24) having a first external circumferential surface (241) and a second bottom surface (243) and the shaft having a second external circumferential surface (131). At least a portion of the retaining element (24) is arranged in the recess (33) so that the first bottom surface (233) opposes the second bottom surface (243) and the shaft (13) extends through the central bore (34). The recess (33) and the retaining element (24) are dimensioned such that a radial gap (G1) is established between the first circumferential surface (231) and the first external circumferential surface (241) for establishing a fluid leakage path from the upper side (27) to the first bottom surface (233). The shaft (13) and the central bore (34) are dimensioned such that a radial gap (G2) is established between the second circumferential surface (231) and the second external circumferential surface (241) for establishing a fluid leakage path from the lower side (41) to the first bottom surface (233).

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