

Title (en)
ELECTROMAGNETICALLY CONTROLLABLE FUEL INJECTION VALVE

Title (de)
ELEKTROMAGNETISCH BETÄTIGBARES BRENNSTOFFEINSPRITZVENTIL

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT COMMANDEE ELECTROMAGNETIQUEMENT

Publication
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Application
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Priority
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• DE 4229730 A 19920905

Abstract (en)
[origin: DE4229730A1] In known electromagnetically controllable injection valves, a valve seat support and a valve needle are made of the same material, for example chromium steel. When the fuel and the injection valve are heated, both valve components acquire the same temperature and their length is modified to the same extent, as they have similar thermal expansion coefficients. The valve stroke thus remains constant, but the gas bubbles formed by heating in the hot fuel reduce the fuel flow rate. A new injection valve should compensate said flow rate reduction by an appropriate choice of materials. By using a material having a very small thermal expansion coefficient for the valve needle (6), the valve needle (6) expands to a lesser extent than the valve seat support (1) when the temperature is increased, thus increasing the stroke and preventing the dosed fuel quantity from being reduced by gas bubble formation. This injection valve is particularly suitable for fuel injection systems of internal combustion engines with mixture compression and spark ignition.

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