

Title (en)  
HIGH PRESSURE INJECTION SYSTEM WITH ULTRASONIC ATOMIZATION

Publication  
**EP 0068434 B1 19850918 (DE)**

Application  
**EP 82105522 A 19820623**

Priority  
DE 3124854 A 19810624

Abstract (en)  
[origin: US4466571A] The invention relates to a high-pressure injection system for delivering and atomizing liquids by means of ultrasonic energy and, more in particular, to a fuel injection system for diesel engines. Said system is operated in conjunction with electronic control means. The injection system comprises a housing defining a pumping chamber into which there extends the free end of an operating or pumping plunger adapted to be actuated by a vibrator. A slide valve is provided which extends through said pumping chamber and which is actuated by means of another vibrator. Together with a suction aperture and a discharge aperture, said slide valve defines a suction valve and a discharge valve, respectively, of the injection system. Under normal conditions, the vibrators associated with said plunger and said slide valve are operated in such a way that there exists a phase difference of 90 DEG therebetween, with the result that during a suction stroke of said plunger said discharge valve is maintained closed whereas said suction valve is open, and that, during a delivery stroke of said plunger, said discharge valve is opened whereas said suction valve is maintained closed. In a gap formed around said discharge valve the fuel is atomized to a high degree during the delivery stroke of said plunger.

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Citation (examination)  
• US 4000852 A 19770104 - MARTIN BARRIE JAMES  
• GB 2041249 A 19800910 - BOSCH SIEMENS HAUSGERAETE

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GB2185783A; US5064726A

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