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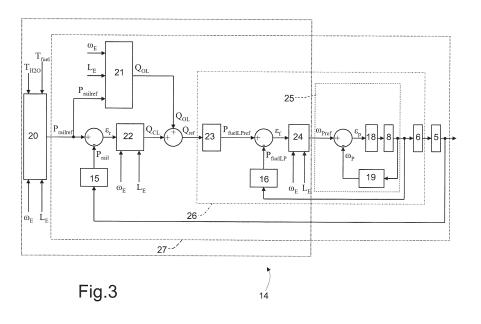
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(54)Method for controlling the common rail pressure of a direct injection engine

(57)A method for controlling a direct injection system (1) of common-rail type of an internal combustion engine (2); the direct injection system (1) has: a fuel tank (10), a low pressure pump (8) which draws from the tank (10), and a high pressure pump (6) which receives the fuel from the low pressure pump (8) and feeds the pressurized fuel to a common rail (5) connected to a number of injectors (4); the control method includes the steps of: determining a desired pressure ($P_{railref}$) of the fuel inside the

common rail (5); and regulating the delivery of the low pressure pump (8) towards the high pressure pump (6) to pursue the desired pressure

(P_{railref}) of the fuel inside the common rail (5) and so as to obtain a corresponding regulation of the delivery of the high pressure pump (6) towards the common rail (5). The method involves determining closed loop contribution, open loop contribution (feedforward) and the use of nested control loops.





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