Title (en)

INJECTION NOZZLE FOR INJECTING FUEL UNDER HIGH PRESSURE

Title (de)

EINSPRITZDÜSE ZUR EINSPRITZUNG VON KRAFTSTOFF UNTER HOHEM DRUCK

Title (fr)

BUSE D'INJECTION POUR L'INJECTION DE CARBURANT SOUS HAUTE PRESSION

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2021122166A1] The invention relates to an injection nozzle for injecting fuel under high pressure, comprising a nozzle body (2) in which a pressure chamber (9), which can be filled with fuel under high pressure, is formed and in which a conical body seat (25) is formed which opens into a blind hole (32), forming a transition edge (35), from which blind hole a plurality of injection holes (30) originate and the total of the flow cross-sections of all injection holes forms a total injection hole cross-section (ASL). A nozzle needle (14) is arranged in the pressure chamber (9) so as to be longitudinally movable, said nozzle needle interacting, by means of a conical sealing surface (27), with the body seat (25) in order to open and close a flow cross-section, wherein the nozzle needle (14) has, on the end thereof facing the body seat (25), a needle tip (28) which protrudes into the blind hole (32) when the sealing surface (27) contacts the body seat (25). A seat cross-section area (As) is formed between the sealing surface (27) and the transition edge (35) when the nozzle needle (14) is raised from the body seat (25), through which seat cross-section area fuel can flow from the pressure chamber (9) into the blind hole (32). The needle tip (28) is conical and has an opening angle (ß) that is smaller than the opening angle (α) of the conical sealing surface (27), and the blind hole (32) has a conical portion (132) having an opening angle (α) that is formed between the transition edge (35) and an intermediate edge (36), wherein the needle tip (28) is arranged in a partial stroke of the nozzle needle (14) at the height of the conical portion (132) of the blind hole (32).

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

See references of WO 2021122166A1

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