

The invention relates to space engineering and can be used as propulsion system of upper stages of rockets, acceleration blocks and spacecrafts. A rocket propulsion system on paste-like propellant with detonation jet comprises a tank with paste-like propellant, pressurization system for its supply to combustion chamber through supply-distribution head, combustion chamber, nozzle block for organization of flow of combustion products, system for control of flow rate of fuel to combustion chamber, system of multiple start and switch off of the engine. To form more durable traction pulse and for multiple switch on of the engine a chamber for knocking combustion is installed and supply-distribution head is arranged as honeycomb construction with disc or strip mechanism for fuel supply, through that one in pulse way fuel is supplied to the combustion chamber. A system of sequential initiation (e.g., thermal, electric, mechanical or laser ones) of detonation of fuel portions is included to the system of pulse supply of fuel portions. To increase the engine efficiency the nozzle of the engine chamber is arranged by known classical design as cone-like shell with length about one third of diameter of combustion chamber connected by small diameter to the chamber for detonation combustion that is arranged as cylindrical shell with same length. To control traction vector of the engine the nozzle is connected by articulated joint to cylindrical body of the combustion chamber and to drives for its swinging.