

# **NUMERICAL SIMULATIONS OF HEXANE FLOW THROUGH THE INJECTOR**

Summary - Numerical simulations of a hexane flow through the injector with fully lifted needle are described in the paper. Presented simulations were done using the AVL Fire software. Hexane was supplied to the injector under the pressure of 30 MPa. Pressure at the outlets was of 12 MPa. Heat transfer between fluid and injector walls wasn't taken into account. Presented simulations were performed under steady state conditions. The main object of the simulation was to calculate the mass flow and find the area where the pressure reaches lowest value to check if there is a threat of cavitation. Simulations were conducted for two injectors, one equipped with nozzles of diameter 0.4mm and the second one equipped with nozzles of diameter 0.65mm.