# CONTROL OF GAS FLOW IN THE MAIN PIPE-LINE BY BOUNDARY CONDITIONS

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*Abstract*

The mathematical model of filtration including low-order derivatives towards spatial coordinates is considered. A problem of gas flow control by means of gas flux at the beginning of the pipe-line is studied.

Relying on the method of variational inequalities, the existence of the solution and convergence of approximate solutions are established.

*Key words and phrases*: Gas filtration, optimal control, variational inequalities.

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