Abstract In the paper we consider a mixed problem for parabolic system with discon-

nected coefficients and with integro-differential "boundary" conditions. Therewith, the order of "boundary" conditions in space variable may exceed the order

with, the order of "boundary" conditions in space variable may exceed the order of the parabolic system. Under correct "boundary" conditions we apply finite integral transformation and obtain analytic representation of the solution of the problem under consideration.