DESCRIPTION OF SOLUTIONS OF WAVE EQUATION ON FINITE AND BOUNDED GEOMETRICAL GRAPH WITH TRANSMISSION CONDITIONS OF "LIQUID" FRICTION TYPE

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We consider the wave equation $u_{xx}(x,t)=u_{tt}(x,t),$ in which x - a point of the geometrical graph Γ, $t>0$, with the transmission conditions modelling "liquid" friction in nodes of oscillating strings network. Using the D'Alambert formula the description solutions is reduced to the description of solutions of some vector functional-differential equation, which coordinates are the boundary behaviors for the wave equations on edges of geometrical graph. For the case of unit length edges the description of the functional-differential equation solution is obtained. We demonstrate some examples uses of this description for research in the question on stabilization solutions of the specified wave equation.