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The L_2 -theory of the generalized solutions of general linear parabolic boundary value problems. (Russian) [Zbl 0825.35060](#)

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The parabolic boundary value problem $\mathcal{L}u = f$, $Bu_s = \varphi$, $Cu_{t=0} = \psi$, where \mathcal{L} , B , and C are general linear matrix differential operators, is studied in the cylindrical domain $\Omega = G \times [0, T)$ with the side surface $S = \partial G \times [0, T)$. The well-posedness of the parabolic boundary value problem in spaces of the generalized functions is indicated. Its solvability in the anisotropic spaces $\tilde{\mathcal{H}}^s(\Omega)$, $s \in \mathbb{R}^1$, of the generalized Sobolev-Slobodetskij functions is proved.

MSC:

35K50 Systems of parabolic equations, boundary value problems (MSC2000)

35D05 Existence of generalized solutions of PDE (MSC2000)

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