
Thermal Condition Mathematical Modeling for Spatial Frame Structures: Stationary Problems

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The paper presents the construction features of the main matrix relations in the context of the finite element technology for stationary temperature problems relating to frame structures with complex spatial design. A set of applications based on this technology that allows one to solve a wide class of scientific and applied problems and to examine the effect of different design, technological and operational factors on the thermal state of frame structures is developed. The solution of some temperature problems is presented as an example of the finite element technology application and the capabilities of this applications set.

Keywords: *frame structure, stationary temperature problem, finite-element technology, set of applied programs.*

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