

Optimization of the resistance structure depending on the elevation regime of the buildings in the seismic areas

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Abstract:

The design of a building requires ensuring the safety of its operation and compliance with optimal economic conditions. Obtaining the optimal structural solution involves the rational combination of these two aspects. In this paper, the authors analyze the influence of the number of floors of construction on the optimization of the structural stability of the buildings. Of the two types of structures examined, the structure made of confined masonry is more economically optimal by 15% than that of framework structures with diaphragms for constructions of any number of floors. The dynamic behavior of structures facilitates the framework structure with diaphragms for constructions with several floors, greater than 10.

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