Calculation by numerical methods of shell polygonal foundations

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Practical methods for calculating casing conical and other shaped bases have been developed; A mathematical model of the numerical solution is constructed and, accordingly, a computational algorithm is constructed. Modern computer implementation programs are written that are implemented on the solution of practical types of practical types of different types. Computational algorithms and programs for selecting technological resources for computers used in the design of building foundations.

The experiment is completed and on its basis the reliability of the theoretically obtained results is established; A new method for calculating the bending of a slab of complex section has been adopted; Approximation of systems of equations by the finite difference method, which is used to compile the program, is given, and examples of calculation of real foundations are given.

A computational algorithm has been developed that has the form of a batch program that does not require highly skilled users. In practice, the method of integral equations is used to solve boundary value problems, in particular, in singular integral equations. This method has many advantages over classical (finite element, dispersion-dispersive, etc.) methods. First of all, it reduces the solution by one. It is known that the method of boundary integral equations is one of the most effective methods for studying and solving many applied problems. In numerous well-known monographs of the latter direction, along with individual works, numerical solutions of many particular problems of structural mechanics, mechanics of solid bodies and the theory of elasticity, based on singular integral equations, are discussed. Problems such as, for example, the calculation of the stress state of a body with cracks of any shape, as well as problems with intermittent initial data.

Расчет численными методами оболочечных многоугольных фундаментов

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