

MEASUREMENT OF STRAINS OF SOIL BASE UNDER SHORT-TIME LOADS

Measurements of soil strains under loads are of importance in resolving various problems pertaining to national economy. Until the present time the solution of the problem on measurements of complete and elastic settlements of a soil bed under dynamic short-time loads is little investigated. The work objective is to develop a mathematical strain model of the soil base that on the one hand is simplified, and on the other hand allows measurements of complete and residual strains of the soil base under dynamic short-time loads exposed to its surface. Methods of mathematical modelling and a numerical integration are employed. The possibility of applying of the model proposed to measure settlements of a multi-layer soil base is discussed. The results of the solution of a number of test examples are reported.

Keywords: *strains of soil, short-time load, viscous elastoplastic medium, multilayer soil base.*

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