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Original Scientific Paper

RESEARCH REGARDING THE LIQUEFACTION OF SANDY SOILS

Summary: *The liquefaction process, caused by a large diversity of cyclical loads, leads to different responses of soil massifs. In order to characterize the dynamic behavior of soil during liquefaction is necessary to know the condition of deformability parameters (stiffness) and their resistance, and the manner of cyclic loads variation can influence parameters value. Dynamic soil characteristics are required to seismic design of civil and industrial buildings, especially on important buildings category. The analysis of factors which determine soil liquefaction susceptibility depends on local site conditions, foundation conditions on construction sites regardless of important buildings category and also on particular environmental conditions in the unstable areas affected by seismic risk. The paper presents the analysis of significant geotechnical parameters that influence sandy soil behavior during dynamic loads. For the evaluation of soil liquefaction resistance, the tests were performed on two soil types, in order to calculate the liquefaction potential due to dynamic loads, by using the triaxial apparatus. The results of laboratory test performed for the analyzed soils are expressed in terms of the factor of safety against its occurrence.*

Key words: *sands, dynamic loads, liquefaction*

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