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MODELING OF MECHANICALLY STABILIZED EARTH RETAINING WALLS AND THEIR DYNAMIC ANALYSIS

Summary:

Geotechnical structures are an integral part and important part of infrastructure systems, in all countries around the world, and their application and existence is highly justified from the economic aspect. The availability of materials from which earth retaining walls are build gives them great advantage over other types of supporting structures. On the other hand, the intensity and frequency of natural disasters, such as earthquakes, floods and other hazards, are constantly increasing throughout the world, affecting the life span of earth retaining walls. Seismic hazard mitigation problem has become increasingly difficult for engineers due to complex infrastructural systems and at the same time for earth retaining walls. Devastating events such as earthquakes indicate the need for a new approach to mitigating the seismic hazard for the civil infrastructure system, in particular geotechnical structures. Bosnia and Herzegovina is now in the phase of extensive new construction and improvement of existing transport infrastructure, where mechanically and chemically stabilized earth retaining walls began to be used during the works. In this regard, the proposed paper covers very important research field for Bosnia and Herzegovina and the whole region. Through this paper two main issues are analyzed:

- (i) *modeling of mechanically and chemically stabilized earth retaining walls and*
- (ii) *dynamic behavior of modeled selected walls.*

Key words:

retaining walls, dynamic analysis, mechanical stabilization

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