

Application of Liquefied Stabilized Soil in Construction of Railway Earth Structures

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The authors propose a specification of the Liquefied Stabilized Soil (LSS) for use in parts of earth structures affected by repeated train loads on the basis of FEM analysis. This study also clarifies the required strength and deformation characteristics of LSS for railway embankments, having conducted a series of laboratory tests and test construction. The study found that LSS can be made stable under repeated train loads if sufficient density and stress ratio are achieved. Laboratory tests and long-term monitoring of the test constructed LSS also show that constructing a protective layer above the LSS layer is highly effective in maintaining the LSS in wet conditions and reducing the vertical stress acting on its surface in accordance with the proposed specification.