

The experimental investigation of behaviour of expanded polystyrene (EPS)

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Abstract:

Low-strength substrates and anthropogenic soils are always an issue in civil engineering. Based on the soil layer types, several methods could be used to improve the basic/foundation layer however it would be difficult to make sure if the specified requirements are achieved. Nowadays, Expandable Polystyrene (EPS) as a lightweight material found as a substitution for traditional methods like soil replacement, soil mixing, using piles driving and other treatment techniques. This paper will demonstrate the static properties of EPS foams in a view point of construction material which will be a key for the future study of these materials. A series of compression tests were carried out on different types of EPS foam to study the effect of EPS geof foam density on the mechanical behaviour of these materials.

Key words:

Expanded Polystyrene (EPS), Geof foam, Strain rate, Uniaxial loading