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COMPRESSIVE STRENGTH ANALYSIS ON PROBLEMATIC SOILS STABILIZED WITH FLY ASH IN JORDAN

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Abstract

The paper analyses the compressive strength of problematic soils as marlstone, limestone, and brown clay in Jordan, considering the capacity to use the fly ash residue obtained from the combustion of oil shale as a cement-like material for building works contributing in minimizing the environmental impact of the expected huge output of solid waste resulting from the retort residue of the oil shale rocks. After blending soils collected from Jordan with both fly ash at different percentages (10%, 20%, 30%, 40%), and cement (5%, 10%, 15%, 20%) their compressive strength is compared. Mixtures of problematic Jordanian soils stabilized with 20-30% fly ash fulfil the acceptability conditions to be used as sub-base layers in road building works.

Key words: compressive strength, fly ash, Portland cement, problematic soil, oil shale

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