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Characterization of soil mixtures and waste foundry sand

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Abstract

The application of waste in several areas of the productive sector demands urgency in the application of sustainability concepts. Waste Foundry Sand (WFS), used for the granulometric stabilization of clay soils, is one of the residues with promising results to overcome the demand for reuse and sustainability in the transportation sector. This experimental work studies soil mixtures + WFS with the objective of verifying physical characteristics and mechanical behavior, aiming the application in structural layers of flexible pavements. Therefore, granulometry, plasticity, ultrasound and unconfined axial compression tests were performed. We conclude that the incorporation of up to 40% of ADF is indicated to compose the layers of base and sub-base of paving, besides the ultrasound technique is a promising tool for technological control of compacted soils.

Keywords: *Geotechnics, technological control, solid waste, sustainability*
