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Geotechnical Seismic Base Isolation Using Rubber Sand Mixtures - Review

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Abstract

Automobile industry has achieved an exponential increase in the sales of vehicles during the past decades. Consequently, the problem with the disposal of vehicle tires has become a potential threat especially among the developing countries. Geotechnical research community has resolved the problem by employing the tire shreds for vibration isolation applications, retaining wall construction, as a sound barrier, cushioning foams etc. Current work discussed the previous studies related to the historical background, engineering properties, mechanical behaviour, dynamic characteristics and numerical modeling of rubber sand mixtures. This review paper will provide the researchers a general insight towards the factors influencing the static and dynamic properties of rubber sand mixtures, advantages, disadvantages, contradictory results and the areas which require future studies.

Keywords: Automobile industry, Tire shreds, Vibration isolation, Dynamic properties, Rubber sand mixtures, Contradictory