Quality of Sea Sand Vs River Sand

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Abstract

Over the years, with increasing development activities of the country, demand for sand has reached to an exceptionally high level. Yet river sands and sea sands are virtually the main industry raw material source. Indiscriminate mining and extraction of river sand has led to severe environmental degradation. Therefore it is necessary to explore for alternative sources.The collected river and sea sand samples were tested for moisture content, organic matter content, pH value (acid demand), mechanical grain size analysis and specific gravity value. Comparison was made between the properties of the two sand varieties.The result that Specific gravity determination of samples value are between 2.62 – 2.74. This indicates that the Specific gravity determination of the tested dune sand sample is within that of t normal sands and therefore sands are suitable for construction purposes. From the Sieve analysis test, over 90% of the sand samplesare between 1.18 mm to 0.15 mm sieve size, while some 1% is coarse particles, and 3% is very fines (silt and clay). With the majority sand samples consisting of sandy particles. Therefore sands are for suitable for construction purpose. All the engineering properties of the sea sand closely match with river sand used in construction. Therefore use of sea sand will help mitigate the environmental degradation caused by excessive river sand extraction.