

عنوان مقاله:

Experimental Investigation of Interface between Polymer Concrete and Sand

محل انتشار:

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خلاصه مقاله:

A good understanding of all parts of the structures is necessity for an accurate prediction of the behavior of complete structure. However, interface part is often neglected despite its significant role in the design and analysis of structures. In this research, mechanical properties of interface between polymer concrete and sand have been investigated experimentally. To study the characteristics of interface between polymer concrete and sand, a series of direct shear tests with modified sample sizes and different normal stresses were conducted. The polymer concrete specimens were made of epoxy resin and aggregates. The epoxy resins from three different manufacturers were investigated and based on tensile and compressive tests, the best was selected. Three percentages of epoxy resin in concrete mix were used and PC specimens were tested in tensile and compressive tests to determine optimum polymer percentage in polymer concrete mix design. The shear test results are used to obtain stress-tangential displacement curves of sand-polymer concrete interface and interface friction angle to describe behavior of interface between sand and polymer concrete

کلمات کلیدی:

Polymer Concrete; Interface; Epoxy Resin; Interface Friction Angle

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