Análisis comparativo de mezclas suelo cemento modificadas con materiales no biodegradables. Metodología de la portland cement association [

2017

text (article)

Analítica

This article presents the comparative analysis of research carried out at the La Salle University - Colombia since the year 2012, regarding modified cement mixtures designed with the Portland Cement Association (PCA) methodology (ACI, 1997) and guided by the Article 350 of the National Institute of Roads [Invías] of the year 2013, which refers to the characteristics that must be met by an improved granular mixture with cement for quality control on site, of national application in Colombia. Initially, information is collected and organized to identify comparative criteria for the results obtained from cement-based mixtures modified with non-biodegradable materials such as tempered glass, expanded polystyrene [EPS], polyethylene terephthalate [PET], high density polyethylene [PEHD] and rubber grain. The results obtained from this comparative analysis were then evaluated, whose variations in the optimal cement contents differ from the suggested ranges of the PCA, which leads to a discussion on the application of this methodology for modified cement mixtures, proposing new ranges Of control parameters for future research, which will serve as a starting point for proposing a new design methodology in cement soil mixtures using such materials. However, the analysis presented here evidences the need to enrich the recommendations that are presented with a greater number of data, to give validity supported in sufficient statistical processing
This article presents the comparative analysis of research carried out at the La Salle University - Colombia since the year 2012, regarding modified cement mixtures designed with the Portland Cement Association (PCA) methodology (ACI, 1997) and guided by the Article 350 of the National Institute of Roads [Invías] of the year 2013, which refers to the characteristics that must be met by an improved granular mixture with cement for quality control on site, of national application in Colombia. Initially, information is collected and organized to identify comparative criteria for the results obtained from cement-based mixtures modified with non-biodegradable materials such as tempered glass, expanded polystyrene [EPS], polyethylene terephthalate [PET], high density polyethylene [PEHD] and rubber grain. The results obtained from this comparative analysis were then evaluated, whose variations in the optimal cement contents differ from the suggested ranges of the PCA, which leads to a discussion on the application of this methodology for modified cement mixtures, proposing new ranges Of control parameters for future research, which will serve as a starting point for proposing a new design methodology in cement soil mixtures using such materials. However, the analysis

presented here evidences the need to enrich the recommendations that are presented with a greater number of data, to give validity supported in sufficient statistical processing

---

Título: Análisis comparativo de mezclas suelo cemento modificadas con materiales no biodegradables. Metodología de la portland cement association electronic resource]

Editorial: 2017

Tipo Audiovisual: Suelo cemento modificadas materiales no biodegradables porcentaje óptimo Modified ground cement mixtures methodology PCA non-biodegradable materials optimal percentage of cement

Documento fuente: Infraestructura Vial, ISSN 2215-3705, Vol. 19, Nº. 33, 2017, pags. 5-14

Nota general: application/pdf

Restricciones de acceso: Open access content. Open access content star

Lengua: Spanish

Enlace a fuente de información: Infraestructura Vial, ISSN 2215-3705, Vol. 19, Nº. 33, 2017, pags. 5-14
