



Análisis de la interacción humano-estructura en puentes peatonales de santiago de cali [

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Analítica

Modern footbridges are susceptible to vibration related problems due to the development of new materials with greater strength and the subsequent longer spans of these bridges. Unfortunately Colombian building codes are very limited when it comes to the design and retrofit of these structures. In this paper a classification is provided of the footbridges that exist in Santiago de Cali, and human-structure interaction effects, maximum accelerations and natural frequencies are compared with vibration design criteria specified by different building codes. Although measured accelerations in the 19 bridges considered in this study did not exceed the maximum values specified in the building codes for a person walking across the bridge, 16 of these bridges had vibration levels that caused discomfort in the pedestrians. Hence, it is recommended that future Colombian codes establish ranges of accelerations and natural frequencies in function of performance criteria that account for perceived comfort and safety

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Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es