

عنوان مقاله:

Development of a vibration monitoring system for preserving monumental buildings against subway induced vibration

محل انتشار:

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نویسندگان:

Mohammad Hasan Esmaeili \* - Department of Railway Engineering and Transportation Planning, Faculty of Civil Engineering and Transportation, University of Isfahan, Isfahan, Iran

Hamid Hadavand - Department of Railway Engineering and Transportation Planning, Faculty of Civil Engineering and Transportation, University of Isfahan, Isfahan, Iran

خلاصه مقاله:

Monumental buildings are of great importance because they are remainders of culture and history of every country. These structures need special attention, particularly when a new project is going to be constructed close to these buildings. Subways, are among those constructions that generate noticeable vibration during passing of trains. This vibration can have negative effect on historical buildings. This paper aims to develop a new continues monitoring system for gathering and analyzing vibrations from historical building when a subway train passes close to these monuments. The vibrations are then compared with allowable vibration limits. The monitoring system developed here is installed in three valuable monuments located in Isfahan. The data is accessible online in the form of a website (www.imvms.ir). In this website the time-history and frequency content of vibrations are accessible during ۲۴ hours a day. Monumental buildings are of great importance because they are remainders of culture and history of every country. These structures need special attention, particularly when a new project is going to be constructed close to these buildings. Subways, are among those constructions that generate noticeable vibration during passing of trains. This vibration can have negative effect on historical buildings. This paper aims to develop a new continues monitoring system for gathering and analyzing vibrations from historical building when a subway train passes close to these monuments. The vibrations are then compared with allowable vibration limits. The monitoring system developed here is installed in three valuable monuments located in Isfahan. The data is accessible online in the form of a website (www.imvms.ir). In this website the time-history and frequency content of vibrations are accessible during ۲۴ hours a day.

کلمات کلیدی:

Vibration monitoring, subway, monumental buildings, sensors, data loggers

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