

عنوان مقاله:

One Technically and Economically Optimized Solution for that by Superfast Trains Generated Ground Vibrations
Problem of the Intercity Experimental Station Airport Frankfurt/Main

محل انتشار:

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خلاصه مقاله:

In the course of the new building of the intercity experimental station at the "Rhein-Main" airport is for the 2. section in covering among other things a hotel planned. From this planning intention the necessity for an investigation results about the vibration protection according to the requirements on the basis of the relevant standards and sets of rules. For the decrease of the vibrations at the "UFO" (Unbegrenzte Freizeit Objekt: unlimited freetime object) by the author the new technically and economically optimized system "concrete louver sheet pile wall" developed. In addition a screen is obtained by means of a soft layer between concrete and foundation/sheet pile wall. This contribution is concerned with the effectiveness for the above mentioned intends by the author recommended vibration-reducing measures. The extensive soildynamic investigations show that for the examined system very favorable KB-values result. Compared with originally planned "mass-spring-mass-system" with a tuning frequency of approx. 8 Hz lower vibrational speed amplitude at the foundations result and concomitantly on the floor covers of covering. The costs of the production and particularly for the maintenance of the system fail incomparably smaller, so that the owner decided among other things also for this reason for this construction. The available contribution shows the fact that measures directly at the emission place or direct proximity of the same with which most economical means is to be realized

کلمات کلیدی:

Ground vibration, soil dynamic, numerical Methods, superfast trains

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