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从传播途径优化控制市区铁路噪声

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中文摘要

为控制市区铁路噪声污染,在对铁路噪声影响初步调查基础上,以杭州市区浙赣铁路沿线某拟建小区为例,结合小区规划、环境景观和配套工程设计,从传播途径上提出设置人工土坡、声屏障、绿化等多种降噪措施,合理组合形成若干典型降噪方案,应用Cadna/A软件对各方案的降噪效果做了模拟预测和比选.结果表明,不同方案对预测点的降噪效果最大相差19.4 dB,方案二降噪效果最佳,但若只考虑铁路噪声影响,则以方案一为佳.研究成果可为今后市区铁路沿线住宅等建筑的规划及其噪声控制提供参考.

英文摘要

In order to control railway noise pollution in urban areas, the residential district located near the Zhegan railway in Hangzhou urban was taken for example, and some controlling measures were proposed based on the investigation in railway noise impact as well as the planning of the district, the environmental scene and the project devises. The measures included setting man-made soil slopes, noise barriers and virescence. Combining some of them could be a typical noise reduction scheme. The professional software Cadna/A was used to predict the noise reduction results of every scheme. Results show that the maximal difference of noise reduction is 19.4 dB and the noise reduction effect of the second scheme is best. However, if only railway noise influence is considered, the first scheme is best. The research results can provide reference for residential districts planning and noise control near the railway in urban areas.

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