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Assessment of annoyance caused by different types of construction noises

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ABSTRACT

In the present study, annoyance caused by diverse construction noises was evaluated through surveys and laboratory experiments. A survey with a total of 100 construction workers was carried out to investigate annoyance from construction noises at different construction phases. Then, a number of noises from machinery that were evaluated in the survey as highly annoying were recorded from construction sites in Korea. Recorded construction noises were classified into four groups: stationary, fluctuating, intermittent, and impulsive, according to the temporal, psychoacoustical and spectral characteristics of the noises. A laboratory auditory experiment was then performed in order to quantify the total annoyance caused by individual construction noise and multiple construction noises. From the experiment, synthesis curves were derived for the relationship between noise levels and the percentage of highly-annoyed (%HA) and the percentage of annoyed (%A) for the combined noise sources.