厚い制振層を有する乾式浮き床の検討 -模擬床と実現場における検討-

Study on Dry Floating Floor with Thick Sound Insulation Layer -Study on Mock Floor and Real Building-

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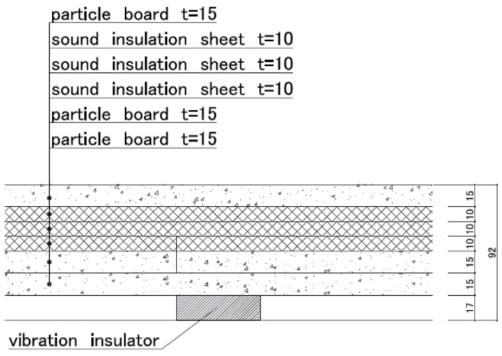
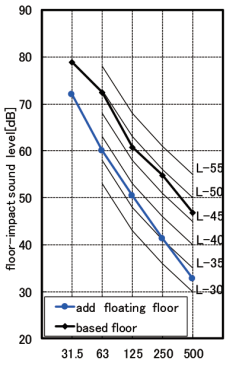


浮き床断面図



ボール衝撃源による重量床衝撃音レベルの測定結果

概　要

重量床衝撃音を改善させる手法の一つとして浮き床工法がある。一般的に重量床衝撃音に高い改善効果を有する浮き床として湿式工法を採用することが多いが,施工時にコンクリート打設の手間がかかることやテナント入替時の現状復旧の対応に難点がある。一方,乾式工法は一般的に改善効果が低いが,現状復旧の観点から選択せざるを得ない場合もある。また乾式工法では制振材,防振材等をチューニングするが,制振材を複数枚用いた工法の事例はほとんどない。本報では制振材を複数枚用いて厚い制振層を設けることで,湿式工法に引けを取らない遮音性能を有する乾式浮き床工法の検討結果について,実施例と併せて報告する。

本工法をローラースケート場の改修工事で採用した結果,重量床衝撃音レベルが3ランク改善し,LH-45の性能値となった。またインラインスケートの走行音は6ランク改善した。

Abstract

The floating floor construction method is one technique for improving heavy floor impact noise. In general, the wet construction method is often adopted for floating floors as it has a high improvement effect on heavy floor impact noise. However, its problem points include the time and effort of placing concrete during construction and restoring the original state when tenants are replaced. On the other hand, the dry construction method generally has a low improvement effect, but there are cases where it must be selected from the viewpoint of restoration of the original state. In the dry construction method, damping materials and vibration-isolating materials are tuned, but there are almost no examples of the construction method using multiple layers of damping materials. This paper reports the results of a study of a dry floating floor construction method, which has a sound insulation performance comparable with that of the wet construction method by providing a thick damping layer using multiple sheets of damping material, and describes an example.

Because of adopting this construction method in the renovation work of a roller skating rink, the heavy floor impact sound level was improved by 3 ranks, and the performance value was LH-45. Also, the running sound of inline skating has been improved by 6 ranks.

関連するSDGs

Related SDGs