

Study about pavement structure that contributes to alleviation of traffic vibration (2)

[Point]

This study is conducted for the review of vibration alleviating pavement that has alleviation effect of traffic vibration, and for the review of prediction method of traffic vibration by modeling pavement structure, and it was conducted by cooperating with pavement team. The pavement team aims for exemplification of analysis method of vibration propagation mechanism with consideration to pavement structure. Analysis model was created based on vibration test for 4 types of vibration alleviating pavements that were conducted in pavement team, and time history response analysis was conducted with consideration to input load in a test in which vibration was added by a blow. As a result, it was confirmed that experimental value generally conformed to analytic value, regarding the relationship between distance from vibration adding point and vibration acceleration level. Regarding the structure that supported PC, one of the 4 types, by rubber bearings, it was confirmed that vibration alleviation effect was the highest in the case with both experimental value and analytic value.

Keywords: pavement, traffic vibration, FEM (finite element method), mode synthetic method, vibration alleviating pavement, vibration acceleration level