

Development of Longitudinal Sleeper of Reasonable Cost Based on Survey of Wheel Load Condition

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In this research, the variable wheel load factors for locomotive and commuter train were proposed from the field test of wheel load on the continuous welded rail section. Concretely, in the section where the locomotives run, the proposed factor is 2.0 and in the section where the only commuter trains run, that is 1.6. Based on these factors, new type of longitudinal sleeper was developed. The section height of the sleeper is 10~20mm thinner than conventional “Ladder sleeper” . In addition, we conducted full-scale train running tests, and clarified that the sleeper has an effect of suppressing the dynamic vertical displacement by 25% compared with JIS type 3 sleeper.