**Study on Abrasion Property of Prestressed Concrete Sleeper and its Influence on Loading Capacity**

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In this study, a survey of the bottom wear of prestressed concrete sleepers (PC sleeper) used in conventional lines was conducted. The survey revealed that the abrasion of PC sleepers can be classified into five patterns and the wear amount is increased with the gross passing tonnage and aging. In addition, numerical analysis was executed to clarify the effects of the loading capacity of PC sleepers. The result of the analyses shows that abrasion reduces the loading capacity of negative bending at the cross-section of the center of the sleeper. Furthermore, the loading capacity is strongly affected by the number of valid prestressing steel wires and the effective prestressing force.