

### **Fatigue Life Evaluation of PC Sleepers Based on Wheel Load Measurement Results**

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In this study, we evaluate the remaining life of PC sleepers from the viewpoint of the fatigue life of PC-steels of the PC sleepers. Specifically, we develop a method of acquiring the stress waveform of the PC-steels during train running. Furthermore, using this waveform, we calculate the fatigue strength of the PC-steels in consideration of the occurrence probability of wheel load in actual measurement, and quantitatively evaluate the fatigue life of the PC-steels. The result of this study shows that the PC-steels for post-tension type has a longer fatigue life than those for pre-tension type, and the PC-steels for both types have a fatigue life of over 300 years.