

Lifetime Evaluation Method for Electronic Equipment of Wayside Signalling Systems

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It is often difficult to set the proper replacement period of introduced electronic equipment in railway signalling system. In a previous study, Fujita et al. proposed a life-time evaluation method for electronic interlocking equipment installed in indoor environment. In this paper, the authors focus on the electronic equipment on wayside signalling systems, which is placed in severer environment. We evaluate the lifetimes not only of electronic components but also of substrates. The results of a case study using developed evaluation method are also reported. The lifetime depends on operating environment stress factors, especially temperature changes. We recommend that replacement period should be changed depending on the operating environment.