LCC Evaluation Method regarding the Anticorrosion of Steel Bridge in a Highly Corrosive Environment

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Nowadays, in steel railway bridges that have been used for a long period of time under a highly corrosive environment, corrosion beneath the coating film progresses at an early stage of their use. Thus, it is necessary to select a high-quality surface preparation method. However, the cost of high-quality base adjustment is high. Therefore, it is essential to establish not only a method for selecting the steel bridge that requires high quality repainting but also a re-painting method in consideration of life-cycle cost (LCC evaluation method). The authors examined a method for selecting the steel bridge to be subjected to the LCC evaluation method, and prepared a LCC evaluation method in consideration of the cost of surface preparation. Based on the trial calculation of the LCC made on model steel bridges with typical structure, an appropriate re-painting method is proposed.