Inspection Method of Track Facilities using Image Analysis of Images in Front of Trains

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Appropriate maintenance of tracks is vital for the safe operation of railways. Properly managing track facilities is necessary to prevent buckling of rails. Due to social backgrounds of a shortage of workers, a decrease in skilled engineers, and a decrease in passenger income, inspection methods with a low-cost and no need of experience are desired. Therefore, we have developed a method that estimates each image's kilometers, rail gaps, wooden sleeper deterioration, and ballast shape using only inexpensive camcorders. This paper describes the outline of the method and its application results.