Rail Deterioration Detection Method by Image Spectral Analysis

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Most of Railway facilities are visually inspected, so the use of images is being promoted to improve inspection efficiency. A hyperspectral camera can acquire two-dimensional spatial information of a photographed object and spectral information spectroscopically divided into several tens or more wavelengths. Using this camera, we expect to be able to capture changes in materials that are difficult to visually defect, according to changes in wavelength distribution and intensity of specific wavelengths. In this paper, in order to examine the application method of a hyperspectral camera for rail deterioration detection, we conducted basic tests and report the results.