

Experimental Study on the Prediction Method of Transverse Crack Growth Rate in Rail Head

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The maintenance work on rail defects, especially squat, is very important to ensure railway safety. Transverse cracks branch from horizontal cracks of rail head and grow in a direction toward railbase. Clarification of the mechanism of crack growth is very helpful to make a maintenance plan. In this paper, the authors proposed a test method for crack growth with full-scale test rail. Also, comparing the results obtained by some crack growth models with the test results obtained by the proposed test method, the prediction method of transverse crack growth rate under various actual track conditions was developed.