## Estimation Method of Short Wave Length Track Irregularity with Short Length Chord Versine

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For evaluation of local track irregularities such as dipped or kinked rail joints, a versine of which chord length is shorter than 10m, that is the normal length in Japan, is suitable. From the view point of the evaluation accuracy, we have shown that 4m chord is the optimum length of versine which is converted from asymmetric chord versine measured by a track inspection car. In addition, we have shown that the geometry of dipped or kinked rail joints is more fitted to the form of the probability density function of the logistic distribution compared with forms of other functions. Finally we have estimated threshold of track irregularities measured by 4m chord versine. As a result, we have obtained as the control values, for maintenance, 14mm for longitudinal level and 8mm for alignment.