

## **Estimation of Lightning Overvoltage on Signalling Equipment of Electrified Railway**

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Railway signalling systems have been damaged from lightning. Therefore, effective and economical lightning protection measures are necessary for railway signalling systems. For analysing the lightning risk and making a study of countermeasures against lightning damage, the authors therefore observed lightning overvoltage on electrified railway's signal cables, electrical power lines and rails. From the result, we acquired the correlation of lightning overvoltage with lightning conditions, methodology for estimating the possibility of lightning hazards, and the perception that it is more important to decrease ground voltage than to decrease line voltage for efficient countermeasures against lightning damage.