1. Record Nr. UNISA996559972003316

Titolo	2752-2023 - IEEE Guide for Multi-Point Grounding System of Trains in Electrified Railway / / IEEE
Pubbl/distr/stampa	New York, USA : , : IEEE, , 2023
ISBN	9798855701531
Descrizione fisica	1 online resource (28 pages) : illustrations
Disciplina	388.3
Soggetti	Traffic engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Multi-point mobile grounding system plays a critical role in providing safer power supply for electrified railway as the unique pathway of traction power reflux. The multi-point mobile grounding system of electrified railway contains two types of grounding modes--working grounding and protective grounding. However, along with the traction power increasing, it is possible that the traction current discharged by the working grounding flows through the neighboring protective grounding points and back to the vehicle bodies. This vehicle body (VB) current may flee through other protective grounding points back to the rail again during the dynamic process of the vehicles, forming as the current reflux phenomenon. This VB current reflux may directly result in thermal surge in the partial part of train bodies, or cause the contact potential of vehicle bodies, which may interfere or even burn the low-voltage control systems or on-board sensors. Apart from threatening the on-board equipment, the uneven distribution of reflux locating at each wheel set of carriage may also result in the erosion of the isolated joint of rail or even shorten the life span of carbon brush contacting with the axles of grounding wheels. The design and requirement of grounding system for vehicles operation in electrified railway is applied in this guide.