

Development of Earth Device for Freight Car's Plain Bearing

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Plain bearings equipped with railway freight cars frequently suffered from surface damage caused by electrical current. This paper describes a newly developed earth device as designed to prevent electrical conduction into freight-car plain bearings. The developed earth device is installable into existing axle box of freight cars, and readily assembled and removed from upon regular inspections. In a durability test for electrical conduction until 21,600km equivalent journey distance, electrical resistance of the earth device was 100 through 300m Ω . The earth device also satisfied the requirements under a durability test for mechanical vibration in accordance with JIS E 4031.