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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 46740-2025

Urban rail transit - General technical specification for medium and low speed maglev vehicles

城市轨道交通 中低速磁浮车辆通用技术条件

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Foreword

This document is in accordance with GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting is scheduled. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the Ministry of Housing and Urban-Rural Development of the People's Republic of China. This document is under the jurisdiction of the National Technical Committee on Standardization of Urban Rail Transit (SAC/TC 290). This document was drafted by: Tongji University, CRRC Zhuzhou Electric Locomotive Co., Ltd.,

CRRC Tangshan Locomotive & Rolling Stock Co., Ltd., and CRRC Changchun. Rail Transit Vehicle Co., Ltd., CRRC Zhuzhou Times Electric Co., Ltd., National University of Defense Technology, Southwest Jiaotong University, Hunan Maglev Train Co., Ltd. Tongfa Development Co., Ltd., Beijing Subway Operation Co., Ltd., Hunan Rail Transit Holding Group Co., Ltd., and China Railway Maglev Transportation Investment Co., Ltd. Construction company. The main drafters of this document are. Xu Junqi, Tong Laisheng, Yang Jun, Yu Qingsong, Lin Guobin, Zhou Xiaoming, Long Zhiqiang, Xu Yijing, and Liang Xiao. Wu Chunhui, Wang Ying, Sun Guoxin, Wang Yonggang, Luo Huajun, Liang Shikuan, Xie Hailin, Huang Haitao, Li Jie, Ren Jingdong, Li Xi, Gao Dinggang Yuan Wenye, Chen Feng, Liao Zhiming, Wu Zhihui, Ren Zhonghua, Li Xiaolong, Xiang Xianglin, Gao Lihua, Guo Leyang, Hu Jie, Yuan Hongkai Zhu Yueou, Liu Shuai, Zhai Mingda, Ji Wen, Dong Jinwen, Rong Lijun, Zhang Wenhui, Sun Yougang, Zong Lingxiao. Urban rail transit low-speed maglev vehicles General technical conditions

1 Scope

GB/T 46740-2025 is the Chinese national standard covering the medium and low speed maglev vehicle - the electromagnetic suspension that holds it a few millimetres above the rail, the linear induction motor, the behaviour when levitation is lost, and the ride, noise and interference requirements of a vehicle running through a city. First edition, under the Ministry of Housing and Urban-Rural Development. Issued on 2 December 2025, it has been in force since 1 July 2026.

This document specifies the operating conditions, main technical specifications, general requirements, and vehicle types for low-speed maglev vehicles used in urban rail transit. Including train formation, car body and its internal equipment, suspension frame, electrical system, traction system, suspension and guidance system, braking system, air supply and hydraulic system. Pressure systems, control and diagnostic systems, speed measurement systems, air conditioning and ventilation systems, communication and passenger information systems, safety facilities, testing and verification. Receipt, labeling and accompanying documents, shipping and quality guarantee period. This document applies to low-speed maglev vehicles for urban rail transit with a maximum operating speed of no more than 120 km/h (hereinafter referred to as "vehicles"). (Vehicles). Other short-stator maglev vehicles of different speed levels can refer to this.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. For references to documents, only the version corresponding to that date applies; for undated references, the latest version (including all amendments) applies. In this document.

GB/T 3449 Acoustic Measurement of Interior Noise in Rail Vehicles

GB/T 4208 Degrees of protection provided by enclosures (IP code)

GB/T 5111 Acoustic Measurement of Emission Noise from Railcars and Rolling Stock

GB/T 5599 Standard for Evaluation and Testing of Dynamic Performance of Locomotives and Rolling Stock

GB/T 6769 Locomotive Driver's Cab Layout Rules

GB/T 10411 DC Traction Power Supply System for Urban Rail Transit

GB/T 14894 Rules for Inspection and Testing of Urban Rail Transit Vehicles After Assembly

GB/T 17626.2 Electromagnetic compatibility testing and measurement techniques - Electrostatic discharge immunity test

GB/T 17626.3 Electromagnetic compatibility testing and measurement techniques - Part

3 Radio frequency electromagnetic field radiated immunity testing

GB/T 17626.4 Electromagnetic compatibility testing and measurement techniques - Electrical fast transient/burst immunity test

GB/T 17626.5 Electromagnetic compatibility testing and measurement techniques - Surge (impulse) immunity test

GB/T 17626.6 Electromagnetic compatibility testing and measurement techniques - Conducted disturbance immunity induced by radio frequency fields

GB/T 19842 Air Conditioning Units for Rail Vehicles

GB/T 21413 (All Parts) Electrical Equipment for Rail Transit Locomotives and Rolling Stock

GB/T 21414 Regulations for the Protection of Electrical Hazards in Rail Transit Locomotives and Rolling Stock

GB/T 21562 Standards and Examples for Reliability, Availability, Maintainability and Safety of Rail Transit

GB/T 21563 Shock and vibration tests on rail transit locomotives and rolling stock

GB/T 24338.3 Electromagnetic compatibility of rail transit - Part 3-