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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/Z 18029.3-2021

**Wheelchairs - Part 3: Determination of effectiveness of brakes
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" drafted:

This document is part 3 of GB/T 18029 "Wheelchair Vehicles": GB/T 18029 has released the following parts:

- Part 1: Determination of static stability;
- Part 2: Determination of dynamic stability of electric wheelchairs;
- Part 3: Determination of braking performance;
- Part 4: Determination of theoretical energy consumption of electric wheelchairs and electric scooters;
- Part 5: Determination of dimensions, mass and operating space;
- Part 6: Determination of the maximum speed, acceleration and deceleration of electric

wheelchairs;

- Part 7: Measurement of seat and wheel dimensions;
- Part 8: Requirements and test methods for static strength, impact strength and fatigue strength;
- Part 9: Electric wheelchair climatic test method;
- Part 10: Determination of the obstacle-surmounting ability of electric wheelchairs;
- Part 11: Test dummies;
- Part 13: Determination of the coefficient of friction of the test surface;
- Part 14: Requirements and test methods for power and control systems for electric wheelchairs and electric scooters;
- Part 15: Requirements for information release, document issuance and identification;
- Part 16: Flame retardancy of postural fixation devices;
- Part 19: Wheeled mobile devices that can be used as motor vehicle seats;
- Part 21: Electromagnetic compatibility requirements and test methods for electric wheelchairs, electric scooters and battery chargers;
- Part 22: Adjustment procedures;
- Part 26: Terminology;
- Part 28: Requirements and test methods for stair climbing appliances;

This document replaces GB/T 18029.3-2008 "Wheelchairs - Part 3: Determination of Brakes", which is consistent with GB/T 18029.3-2008 in addition to structural adjustments and editorial changes, the main technical changes are as follows:

--- Delete the wheelchair parking brake fatigue test requirements (see Chapter 8 of the:2008 edition):

This document is equivalent to ISO 7176-3:2012 "Wheelchairs - Part 3: Determination of Braking Performance", the document type is ISO standard Adjusted to my country's guiding technical documents:

The following minimal editorial changes have been made to this document:

--- 5:8 in b) of Appendix A is changed to 5:6:

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

According to the document user principle, GB/T 18029 "Wheelchair Vehicles" stipulates that wheelchair users, manufacturers, testing institutions and other relevant parties should pay attention requirements for the design, performance, testing, infrastructure, and information release of wheelchair vehicles: GB/T 18029 is intended to consist of 22 parts:

- Part 1: Determination of static stability;
- Part 2: Determination of dynamic stability of electric wheelchairs;
- Part 3: Determination of braking performance;
- Part 4: Determination of theoretical energy consumption of electric wheelchairs and electric scooters;
- Part 5: Determination of dimensions, mass and operating space;
- Part 6: Determination of the maximum speed, acceleration and deceleration of electric wheelchairs;
- Part 7: Measurement of seat and wheel dimensions;
- Part 8: Requirements and test methods for static strength, impact strength and fatigue strength;
- Part 9: Electric wheelchair climatic test method;
- Part 10: Determination of the obstacle-surmounting ability of electric wheelchairs;
- Part 11: Test dummies;
- Part 13: Determination of the coefficient of friction of the test surface;
- Part 14: Requirements and test methods for power and control systems for electric wheelchairs and electric scooters;
- Part 15: Requirements for information release, document issuance and identification;
- Part 16: Flame retardancy of postural fixation devices;
- Part 19: Wheeled mobile devices that can be used as motor vehicle seats;
- Part 21: Electromagnetic compatibility requirements and test methods for electric wheelchairs, electric scooters and battery chargers;
- Part 22: Adjustment procedures;
- Part 25: Batteries and chargers for electric wheelchairs;
- Part 26: Terminology;

--- Part 28: Requirements and test methods for stair climbing appliances;

--- Part 30: Wheelchair test methods and requirements for changing the occupant's posture:

Among them, Part 26 is the term; Part 11, Part 13 stipulates the infrastructure requirements for wheelchair testing; Part 22 stipulates Sets test preparation requirements; Part 15 sets out information release requirements; Parts 1, 3, 5, 7, 8 Part, Part 10, Part 16 specifies the general requirements and test methods for all wheelchairs (including manual and electric); Part 2, Part 4, Part 6, Part 9, Part 14, Part 21, Part 25 set out the requirements and Test methods; Parts 19, 28, and 30 specify requirements for special functional wheelchairs:

The braking performance of a wheelchair is critical to safety: The tests specified in this document determine the safety of wheelchairs on level surfaces and slopes the ability to park and determine the ability of the wheelchair to remain stationary when parked:

Wheelchairs - Part 3: Determination of braking performance

1 Scope

This document specifies manual wheelchairs and single-use electric wheelchairs with a maximum speed of not more than 15km/h (including electric mobility Vehicle) test method for brake performance: This document also specifies requirements for the release of manufacturer information:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document:

ISO 7176-6 Wheelchairs Part 6: Determination of the maximum speed of electric wheelchairs (Wheelchairs-Part 6:

Determinationofmaximumspeedofelectricallypoweredwheelchairs) Note: GB/T 18029.6-2009 Wheelchairs - Part 6: Determination of the maximum speed, acceleration and deceleration of electric wheelchairs (ISO 7176-6:2001, IDT) ISO 7176-11 Wheelchairs - Part 11: Test dummies (Wheelchairs-Part 11: Testdummies) Note: GB/Z 18029.11-2021 Wheelchair Part 11: Dummy for testing (ISO 7176-11:2012, IDT) ISO 7176-13 Wheelchair Part 13: Determination of the coefficient of friction of test surfaces (Wheelchair-Part 13:

Determinationofcoefficientoffrictionoftestsurfaces) Note: GB/T 18029.13-2008 Wheelchair Part 13: Determination of the coefficient of friction of the test surface (ISO 7176-13:1989, IDT) ISO 7176-15 Wheelchairs Part 15: Requirements for information release, documentation and marking (Wheelchairs-Part 15:Re-requirementsforinformationdisclosure,documentationandlabeling) Note: GB/T