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

GB/T 18029.21-2012

**Wheelchairs -- Part 21: Requirements and test methods for
electromagnetic compatibility of electrically powered
wheelchairs and scooters, and battery chargers**

轮椅车 第21部分：电动轮椅车、电动代步车和电池充电器的电磁兼容性要求和测试方法

(English Translation)

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Foreword

GB/T 18029 "wheelchair" or has plans to release the following sections.

--- Part 1. Determination of static stability Determination of dynamic stability of electric wheelchairs. --- Part 2

--- Part 3. Determination of brakes Determination of electric wheelchairs and electric scooters energy theory. --- Part 4

--- Part 5. Determination of dimensions, mass and turning space Determination of electric wheelchairs maximum speed, acceleration and deceleration. --- Part 6

--- Part 7. Measurement of seating and wheel sizes

--- Part 8. static strength, impact strength and fatigue strength requirements and test methods

--- Part 9. Test methods for electric wheelchairs climate Determination of electric wheelchair obstacle Ability. --- Part 10

- Part 11. Test dummies
- Part 13. Determination of the coefficient of friction of the test surface
- Part 14. electric wheelchairs and electric scooters and power control system requirements and test methods
- Part 15. information dissemination, and labeling requirements documents issued
- Part 16. Block (by) pad flame retardancy requirements and test methods Wheeled mobile device can be used for vehicle seats. --- Part 19
- Part 21. electric wheelchair, electric scooter and battery charger electromagnetic compatibility requirements and test methods
- Part 22. Adjusting program
- Part 23. Requirements and test methods for stair climbing device caregiver operation
- Part 24. Requirements and test methods occupant operated stair climbing device
- Part 26. Terminology this section GB/T 18029 part of 21.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses the translation method identical with ISO 7176-21:2009 "Wheelchairs - Part 21. electric wheelchairs, electric scooters and electric Electromagnetic compatibility requirements of the battery charger and test methods "(in English).

Correspondence between the consistency of the standards of international documents and normative references of the following documents.

- GB 4824 industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement (GB 4824-2004, CISPR11.2003, IDT)
- GB 17625.1 Electromagnetic Compatibility Limits for harmonic current emissions (equipment input current $\leq 16A$) (GB 17625.1-2003, IEC 61000-3-2:2001, IDT)
- Devices GB 17625.2 Electromagnetic compatibility limits of the rated current per phase $\leq 16A$ and unconditional access in public low-voltage supply Voltage electricity generated in the system, voltage fluctuations and flicker limits (GB 17625.2-2007, IEC 61000-3-3:2005, IDT)
- GB/T 17626.2 Electromagnetic compatibility Testing and measurement techniques - Electrostatic discharge immunity test (GB/T 17626.2-2006, IEC 61000-4-2:2001, IDT)
- GB/T 17626.3 electromagnetic compatibility test and measurement technology RFEMS test (GB/T 17626.3-2006, IEC 61000-4-3:2002, IDT)
- GB/T 17626.4 Electromagnetic compatibility Testing and measurement techniques -

Electrical fast transient burst immunity test (GB/T 17626.4-2008, IEC 61000-4-4:2004, IDT)

--- GB/T 17626.5 electromagnetic compatibility test and measurement technology surge (impact) immunity test (GB/T 17626.5-2008, IEC 61000-4-5:2005, IDT)

--- GB/T 17626.6 electromagnetic compatibility test and measurement technology RF field induced immunity to conducted disturbances (GB/T 17626.6-2008, IEC 61000-4-6:2006, IDT)

--- GB/T 17626.8 Electromagnetic compatibility Testing and measurement techniques - Power frequency magnetic field immunity test (GB/T 17626.8-2006, IEC 61000-4-8:2001, IDT)

--- GB/T 17626.11 Electromagnetic compatibility Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity test Test (GB/T 17626.11-2008, IEC 61000-4-11:2004, IDT)

--- GB/T 18029.5 Wheelchairs - Part 5. Dimensions, mass and turning space measurement (GB/T 18029.5-2008, ISO 7176-5:2008, IDT)

--- GB/T 18029.9 Wheelchairs - Part 9. electric wheelchairs climatic test methods (GB/T 18029.9-2008, ISO 7176-9:2001, IDT)

--- GB/T 18029.15 Wheelchairs - Part 15. release of information, documents and requirements issued identification (GB/T 18029.15-2008, ISO 7176-15:1996, IDT)

--- GB/T 18029.22 Wheelchairs - Part 22. Adjusting program (GB/T 18029.22-2009, ISO 7176-22:2000, IDT) this section proposed by the People's Republic of China Ministry of Civil Affairs.

This part of the National Rehabilitation and special equipment Standardization Technical Committee on Persons with Disabilities (SAC/TC148) centralized.

This section drafted by. National Research Center for Rehabilitation Technical Aids, orthopedic technology center in Beijing.

Introduction

With battery charger and run electric wheelchairs can not bring significant electromagnetic disturbance to the environment, on the contrary, in normal use Electromagnetic disturbance can not significantly reduce performance. Since the wheelchair often travel on roads, and therefore need to be fixed or mobile communication device RF fields and other sources of electromagnetic disturbance emitted by immunity. Wheelchairs accidental movement or change direction, can cause injury.

This section GB/T 18029 specifies the requirements and test methods wheelchairs and battery charger. In a typical environment of use, the wheel Chairs and car battery charger

can be exposed to a reasonably foreseeable risk of electromagnetic interference and electrostatic discharge-related, resulting in damage to other equipment or Risks associated with operation of the instruments to minimize electromagnetic fields.

According to the use of wheelchairs and related environmental risks, and to determine the upper frequency limit of RF radiation immunity test level requirements. To this end, Wheelchairs with requirements related to their use as medical devices consistent with the requirements, however, the charge is consistent with the requirements of used household appliances equipment.

Wheelchairs - Part 21. electric wheelchairs, Electromagnetic compatibility and electric scooter battery charger Requirements and test methods Warning. If adequate safety precautions are not taken, this section requires GB/T 18029 using the test procedure, things can cause harm it. This section refers only to technical suitability, does not relieve the manufacturer or testing laboratory health and safety related liability.

1 Scope

GB/T 18029 in the provisions of this section does not exceed the maximum speed of 15km/h for the disabled indoor and (or) outdoor electric wheelchairs and Requirements and test methods for electric scooter electromagnetic radiation and electromagnetic immunity. This section GB/T 18029 also applies to the external electric drive help Manual wheelchair force kit, do not apply to more than one person can take the load of the vehicle.

GB/T 18029 This part also provides electromagnetic compatibility and electric wheelchairs and electric scooters for use with the battery charger Requirements and test methods.

To facilitate performance comparison test results, adjusted for wheelchair and scooter, given the reference configuration.

Note: GB/T 18029 in this section the term "wheelchair" including electric wheelchairs, electric scooters and electric drive external power kit manual wheelchair.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

ISO 7176-5 Wheelchairs - Part 5. Dimensions, mass and turning space measurement (Wheelchairs-Part 5. Determination of dimensions, mass and manoeuvring space) ISO 7176-9 Wheelchairs - Part 9. electric wheelchairs climatic test methods (Wheelchairs-Part 9. Climatic tests for electric wheelchairs) ISO 7176-15 Wheelchairs - Part 15. release of information, documents and requirements issued identification (Wheelchairs-Part 15. Requirements for information disclosure, documentation and labeling) ISO 7176-22