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

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**Electrically powered wheelchair
(English Translation)**

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1 Scope

This standard specifies the terminology and model naming-principle, surface requirements, assembly requirements, dimensional requirements, performance requirements, strength requirements, flame retardancy, climate, requirements of power and control system, corresponding test methods and inspection rules for electrically powered wheelchairs, requirements for the publication, marking and packaging of documentation data on wheelchairs.

This standard is applicable to all kinds of electrically powered wheelchairs (including scooters) driven by electric energy, which are used by disabled persons or elderly people, only accommodates one passenger whose mass does not exceed 100 kg, that is, the following electrically powered wheelchairs as classified according to GB/T 16432.

Manually-steering electrically powered wheelchairs (such as scooters);

Power-steering electrically powered wheelchair.

This standard does not apply to electrically powered manual wheelchair.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB/T 191 Packaging - Pictorial marking for handling of goods

GB/T 14729 Wheelchair - Terms

GB/T 16432 Technical aids for persons with disabilities - Classification and terminology

GB/T 18029.1-2008 Wheelchairs - Part 1.Determination of static stability (ISO 7176-1.1999, IDT)

GB/T 18029.2-2009 Wheelchairs - Part 2.Determination of dynamic stability of electric wheelchairs (ISO 7176-2.2001, IDT)

GB/T 18029.3-2008 Wheelchairs - Part 3.Determination of effectiveness of brakes (ISO 7176-3.2003, IDT)

GB/T 18029.4-2009 Wheelchairs - Part 4.Energy consumption of electric wheelchairs and scooters for determination of theoretical distance range (ISO 7176-4.1997, IDT)

GB/T 18029.5-2008 Wheelchairs - Part 5.Determination of overall dimension, mass and turning space (ISO 7176-5.1986, IDT)

GB/T 18029.7-2009 Wheelchairs - Part 7.Determination of seating and wheel dimensions (ISO 7176-7.1998, IDT)

GB/T 18029.8-2008 Wheelchairs - Part 8.Requirements and test methods for static impact and fatigue strengths (ISO 7176-8.1998, IDT)

GB/T 18029.9-2008 Wheelchairs - Part 9.Climatic tests for electric wheelchairs (ISO 7176-9.2001, IDT)

GB/T 18029.10-2009 Wheelchairs - Part 10.Determination of obstacle- climbing ability of electric wheelchair (ISO 7176-10.1988, IDT)

GB/T 18029.11-2008 Wheelchairs - Part 11.Test dummies (ISO 7176-11.1992, IDT)

GB/T 18029.14-2012 Wheelchairs - Part 14.Power and control systems for electrically powered wheelchairs and scooter - Requirements and test methods (ISO 7176-14.2008, IDT)

GB/T 18029.15-2008 Wheelchairs - Part 15.Requirement for information disclosure documentation and labelling (ISO 7176-15.1996, IDT)

GB/T 18029-2000 Wheelchairs - Resistance to ignition of upholstered parts
- Requirements and test methods (ISO 7176-16.1997, IDT)

3 Terms and definitions

The terms and definitions as defined in GB/T 14729, GB/T 18029.7-2009, GB/T 18029.8-2008, GB/T 18029.11-2008 and GB/T 18029.15-2008 as well as the following terms and definitions apply to this document.

3.1

Electrically powered wheelchair

A wheeled personal mobility device with seat support that can be operated by an occupant or caregiver, driven by one or more motors, with electrically

Supplementary weights

The object used, when the testing personnel is used instead of the test dummy, to increase the weight, so that the total load and load distribution of the wheelchair is consistent with the corresponding dummy (see 5.5 of GB/T

18029.3-2008).

4 Classification and model naming-principle

4.1

Electrically powered wheelchairs are divided into three categories according to the use requirements.

Electrically powered wheelchair for indoor use is represented by the uppercase Chinese pinyin letter N.

Electrically powered wheelchair for outdoor use is represented by the uppercase Chinese pinyin letter W.

Electrically powered wheelchair for road use is represented by the uppercase Chinese pinyin letter L.

Note: The scooter also includes the above three categories.

4.2

Model naming-principle can be carried out according to the manufacturer's corporate technical specifications, but the principles for model naming-principle must be stated in its product specification (see 3.7).

4.3

It shall indicate the type of product (indoor, outdoor or road type) in the model.

5.1 Surface requirements

5.1.1

The outer surface of the wheelchair's parts and all the parts that can be touched by the hand shall be flat and smooth, free from sharp edges, burrs, sharp corners, etc.

5.1.2

All soft packed parts of wheelchairs shall be soft and elastic, the seams shall be firm and tidy. There shall be no defects such as wrinkles, fading, jumpers and breakage on the outer surface.

5.2 Assembly requirements

5.2.1

After the wheelchair is assembled, its functions shall be able to be used normally according to the manufacturer's instructions. All rotating and moving

5.6.6 Overvoltage protection of controller

When charging, the battery's voltage may exceed its rated voltage. At this higher voltage, the wheelchair shall not malfunction.

5.6.7 Protection of motor stalling

Once the wheelchair is hitting an obstacle in the driving process (such as a higher curb stone of the sidewalk), the drive motor will stall. Therefore, wheelchairs shall have protective measures to prevent motor from overheating or permanent damage.

5.6.8 Insulation

The wheelchair's frame, motor's housing, battery's housing and controller's housing shall not be connected to any other live parts of the battery pack or electrical system. The DC current between them shall be not more than 5 mA.

5.6.9 Protection of non-insulated electrical components

Users and caregivers shall not be shocked or burnt by contact with non- insulated parts when using a wheelchair, meanwhile the wheelchair shall not malfunction due to this.

5.6.10 Circuit protection

All wires and connections of the wheelchair shall be properly protected from the overcurrent of the wheelchair's power supply or the externally connected power source.