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**Recovery of traction battery used in electric vehicle - General
requirements**

车用动力电池回收利用 通用要求

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Table of Contents

Foreword	3
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
3.1 Traction battery	2
3.2 Take-back	3
3.3 Recovery	4
3.4 Green production	6
4 Principles for recovery	7
4.1 Safety principle	7
4.2 Green and low-carbon principle	7
4.3 Reuse principle	7
4.4 Whole-life-cycle principle	7
5 Basic requirements	7
5.1 General requirements	7
5.2 Requirements for traction battery products	8
5.3 Requirements for traceability management	8
5.4 Safety requirements	8
5.5 Environmental protection requirements	8
5.6 Requirements for emergency management of recovery	9
6 Take-back requirements	9
6.1 Requirements for removal	9
6.2 Requirements for collecting	9
6.3 Requirements for classification	9
6.4 Requirements for packing and transporting	9
6.5 Requirements for loading, unloading and handling	9
6.6 Requirements for storage	10
7 Requirements for comprehensive use	10
7.1 Requirements for echelon use	10
7.2 Requirements for recycling	11
Annex A (normative) Calculation method for the use rate of recycled materials	13
Bibliography	14

1 Scope

This document defines the terms used in the recovery of traction batteries for vehicles and specifies the recovery principles, the basic requirements, the take-back requirements and the comprehensive-use requirements.

It applies to the recovery of lithium-ion traction batteries and nickel-metal-hydride traction batteries. The recovery of other types of battery may follow it by reference.

2 Normative references

The contents of the following documents constitute indispensable provisions of this document through normative reference in the text. For dated references, only the edition corresponding to that date applies. For undated references, the latest edition, including all amendments, applies.

GB/T 19001 Quality management systems - Requirements · GB/T 19596-2017 Terminology of electric vehicles · GB/T 23331 Energy management systems - Requirements with guidance for use · GB/T 24001 Environmental management systems - Requirements with guidance for use · GB/T 26008 Battery grade lithium hydroxide monohydrate · GB/T 26300 Nickel cobalt manganese hydroxide · GB/T 26493 Code for storage and transportation of battery scrap · GB/T 26989-2011 Automotive recycling - Terminology · GB/T 33062-2016 Treatment methods for recycling of nickel metal hydride battery material wastes · GB/T 33598 Recycling of traction battery used in electric vehicle - Dismantling specification · GB/T 33598.2 Recycling of traction battery used in electric vehicle - Part 2: Requirements of material recovery · GB/T 33598.3 Recycling of traction battery used in electric vehicle - Part 3: Discharging specification · GB/T 34014 Coding regulation for automotive traction battery · GB/T 34015 Recycling of traction battery used in electric vehicle - Test of residual capacity · GB/T 34015.2 Recycling of traction battery used in electric vehicle - Echelon use - Part 2: Requirements of removal · GB/T 34015.3 Recycling of traction battery used in electric vehicle - Echelon use - Part 3: Requirements of echelon use · GB/T 34015.4 Recycling of traction battery used in electric vehicle - Echelon use - Part 4: Marking of echelon use battery products · GB/T 36132-2018 General principle for green factory assessment · GB/T 36276 Lithium ion battery for electrical energy storage · GB/T 36672 Lithium-ion batteries for electric motorcycles and electric mopeds · GB/T 36972 Lithium-ion batteries for electric bicycle · GB/T 38698.1-2020 Recovery of traction battery used in electric vehicle - Management specification - Part 1: Packing and transporting · GB/T 38698.2-2023 Recovery of traction battery used in electric vehicle - Management specification - Part 2: Take-back service network · GB 39800.1-2020 Specification for provision of personal protective equipment - Part 1: General requirements · GB 40165 Safety technical specification for lithium-ion cell and battery used in stationary electronic equipment · GB/T 45001 Occupational health and safety management systems -

Requirements with guidance for use · GB 50016 Code for fire protection design of buildings · DL/T 2315 Technical guide for echelon use lithium-ion battery systems in electric energy storage · HG/T 2824 Industrial nickel sulphate · HG/T 4701 Iron phosphate for battery · HG/T 4822 Industrial cobalt sulphate · HG/T 5740 Crude cobalt carbonate · HG/T 5741 Crude nickel carbonate · HG/T 5918 Cobalt sulphate for battery · HG/T 5919 Nickel sulphate for battery · HJ 348 Technical specifications of pollution control for end-of-life vehicle dismantling enterprises · HJ 1186-2021 Technical specifications for pollution control of waste lithium-ion power battery treatment · JT/T 617.5-2018 Rules for road transportation of dangerous goods - Part 5: Consignment requirements · JT/T 617.6 Rules for road transportation of dangerous goods - Part 6: Loading and unloading conditions and operating requirements · QC/T 1156 Recovery of traction battery used in electric vehicle - Technical specification for cell dismantling · YD/T 3768.1 Technical requirements and test methods of echelon use traction battery for communication base station - Part 1: Lithium iron phosphate battery · YS/T 582 Battery grade lithium carbonate · YS/T 1174 Technical specification for shredding and separation of waste batteries · YS/T 1460 Crude nickel cobalt hydroxide · YS/T 1552 Crude lithium carbonate · YS/T 1568 Battery grade anhydrous lithium hydroxide

3 Terms and definitions

The terms and definitions given in GB/T 19596-2017, GB/T 26493, GB/T 26989-2011, GB/T 33598, GB/T 33598.2, GB/T 33598.3, GB/T 34015, GB/T 34015.2, GB/T 34015.3, GB/T 34015.4, GB/T 38698.1-2020 and GB/T 38698.2-2023, together with the following, apply to this document.

3.1 Traction battery

traction battery: secondary battery that supplies energy to the power system of an electric vehicle.

secondary cell: basic unit device that converts chemical energy and electrical energy into each other. Note: also called a cell; it normally comprises electrodes, separator, electrolyte, case and terminals, and is designed to be rechargeable.

battery module: assembly of more than one secondary cell connected in series, in parallel or in series-parallel and used as a power source. Note: also called a battery group.

battery pack: unit that normally comprises the battery group, the battery management system, the battery case and the corresponding accessories (cooling components, connecting cables and the like), and that can take in electrical energy from outside and deliver electrical energy to the outside.

retired traction battery: traction battery removed from an electric vehicle because its residual capacity or other charge-discharge performance, or another cause, makes it unfit

for further use in the vehicle.

waste and used traction battery: traction battery cell, module or pack scrapped during development, production, testing, storage, transport, use, maintenance, vehicle scrapping, echelon use and similar processes, and having lost its original use value.

3.2 Take-back

take-back: general term for the collecting, classification, storage and transport of waste and used traction batteries.

collecting: process of gathering and sorting waste and used traction batteries.

take-back service network: site where waste and used traction batteries are placed during collecting, classification, storage and packing. Note: according to scale, facilities and equipment, storage time and management requirements, take-back service networks are divided into collecting type, centralised-storage type and other types.

classification: process of distinguishing and grouping waste and used traction batteries according to product type, material system, degree of hazard and similar characteristics.

storage: activity of placing waste and used traction batteries during take-back, echelon use, recycling and similar processes.

packing: general name for the containers, materials and auxiliary items adopted by a defined technical method to protect the product and facilitate storage and transport during the circulation of waste and used traction batteries. Note: it also denotes the operation of applying those technical methods.

handling: activity of moving waste and used traction batteries a short distance from one place to another, outside the transport and the loading and unloading stages.

transportation: process of conveying waste and used traction batteries to a take-back service network or to a comprehensive-use enterprise.

loading and unloading: operation of loading properly packed waste and used traction batteries onto a transport vehicle, or unloading them from it, using a forklift, a crane or similar equipment.

safety case for waste and used traction battery: container used to store and transport waste and used traction batteries and to reduce their safety hazard.

discharge cabinet for waste and used traction battery: equipment used to discharge waste and used traction batteries.

3.3 Recovery

recovery: process of taking back and comprehensively using waste and used traction