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

GB/T 43657.1-2024

**Energy efficiency of industrial trucks - Test methods - Part 1:
General**

工业车辆能效 试验方法 第1部分：总则

(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 for standardization documents" Drafting.

This document is Part 1 of GB/T 43657 "Industrial Vehicle Energy Efficiency Test Method". GB/T 43657 has been published as follows part.

--- Part 1: General;

--- Part 2: Operator-controlled self-propelled vehicles, tractors and carriers;

--- Part 3: Container handlers.

This document is equivalent to ISO 23308-1:2020 "Energy efficiency test methods for industrial vehicles - Part 1: General".

Introduction

With the rapid growth of social economy, energy supply and demand are becoming increasingly tight, and the relationship between the energy consumption level of industrial vehicles and energy conservation work is becoming closer.

This document gives procedures for determining the energy consumption of industrial vehicles, the efficiency of traction batteries and battery chargers.

The test cycle for industrial vehicles is designed to provide a scientific method for evaluating the energy consumption of industrial vehicles.

GB/T 43657 "Test methods for energy efficiency of industrial vehicles" is planned to consist of three parts.

--- Part 1: General. The purpose is to specify the general test criteria and requirements for energy consumption testing of self-propelled industrial vehicles.

--- Part 2: Operator-controlled self-propelled vehicles, tractors and carriers. The purpose is to specify the operator-controlled self-propelled vehicles Energy consumption test methods for vehicles, tractors and carriers, including specific test cycles for different types of vehicles.

--- Part 3: Container Handlers. The purpose is to specify the energy consumption test method and specific test cycle for container handlers.

The content of this document is relevant to the following stakeholder groups.

- Industrial vehicle manufacturers;
- Market supervision department;
- Industrial vehicle users;
- Service providers, e.g. consulting agencies.

Test methods for energy efficiency of industrial vehicles Part 1: General

1 Scope

This document specifies general test criteria and requirements for measuring the energy consumption of self-propelled industrial vehicles (hereinafter referred to as "vehicles") during operation.

The vehicle also includes the efficiency of the battery and battery charger.

Specific requirements in ISO 23308-2 and ISO 23308-3 take precedence over the corresponding requirements of this document.

This document applies to the use phase of the product life cycle.

This document applies to the following types of vehicles as defined in ISO 5053-1.

- Counterbalanced forklift;
- Articulated counterbalanced forklift;
- Reach truck (with retractable mast or fork frame);
- Leg-type forklift;
- Pallet stacker;
- Pallet truck;
- Platform transporter;
- End-operated pallet trucks;
- Picking vehicle;
- Center-operated order pickers;
- Tractor, pusher and carrier;
- Traction stacker;
- Side-type forklift (single side);
- Telescopic arm container handler;
- Counterbalanced container stacker;

---Side stacking forklift (both sides);

---Three-way stacking forklift;

---Multi-directional forklift.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 10827.1-2014 Safety requirements and verification of industrial vehicles Part 1: Self-propelled industrial vehicles (except unmanned vehicles) Vehicles, telescopic forklifts and forklifts) (ISO 3691-1:2011, IDT) GB/T 10827.2-2021 Industrial vehicles safety requirements and certification Part 2: Self-propelled telescopic forklifts (ISO 3691-2:2016, IDT)