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GB 10827.1-2014 / ISO 3691-1:2011

Replacing GB 10827-1999

**Industrial trucks - Safety requirements and verification -
Part 1: Self-propelled industrial trucks, other than
driverless trucks, variable-reach trucks and burden-
carrier trucks**

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Foreword

Clause 4 (except Subclauses 4.1.4, 4.2.2.4, 4.2.2.5, 4.6.3.5 and 4.1.11), Clause 5 and Subclause 6.3 of this Part are mandatory clauses, the rest are recommended clauses.

GB 10827 consists of the following parts, under the general title “Industrial trucks - Safety requirements and verification”:

- Part 1: Self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks;
- Part 2: Self-propelled variable-reach trucks;
- Part 3: Additional requirements for trucks with elevating operator position and trucks specifically designed to travel with elevated loads;
- Part 4: Driverless industrial trucks and their systems;
- Part 5: Pedestrian-propelled trucks;
- Part 6: Burden and personnel carriers;
- Part 7: Regional requirements for countries within the European Community;
- Part 8: Regional requirements for countries outside the European Community.

This Part is Part 1 of GB 10827.

This Part is drafted in accordance with the rules given in GB/T 1.1-2009.

This Part replaces GB 10827-1999 “Powered industrial trucks - Safety code”. Compared with GB 10827-1999, the main technical changes are as follows:

- ADJUST “Chapter 1 Safety codes for motorized industrial vehicle manufacturers, including safety requirements for operation, control and organization” TO “Clause 4 Safety requirements and/or protective measures” (see Clause 4 of this Part and Chapter 1 of 1999 edition);
- ADJUST “Chapter 2 Safety codes in use, operation and maintenance of motorized industrial vehicles” TO “Clause 6 Information for use” (see Clause 6 of this Part and Chapter 2 of 1999 edition);
- ADD “verification of safety requirements and/or protective measures” (see Clause 5 of this Part).

This Part uses translation method to equivalently adopt ISO 3691-1:2011 “Industrial trucks - Safety requirements and verification - Part 1: Self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks”.

This Part incorporates the amendments made in ISO 3691-1:2011/Cor.1:2013, the clauses involved are indicated by a vertical double-line (||) in the blank space on the outside margin.

China's national documents identical to the International documents normatively referenced in this Part are as follows:

- GB/T 5182 Fork-lift trucks - Fork arms - Technical characteristics and testing (GB/T 5182-2008, ISO 2330:2002, IDT)
- GB/T 6104 Powered industrial trucks - Terminology (GB/T 6104-2005, ISO 5053:1987, IDT)
- GB/T 20953 Tractors and machinery for agriculture and forestry - Determination of burning behavior of cab interior materials (GB/T 20953-2007, ISO 3795:1989, MOD)

This Part makes the following editorial modifications:

- DELETE all requirements for EU region in ISO/TS 3691-7 referenced in the original text;
- Directly write out the requirements for non-EU regions in ISO/TS 3691-8 referenced in the original text; and delete all regional requirements for North America, Australia, Japan and South Africa;
- ADD the bibliography, including other standards mentioned in the original text, but not in the “Normative reference” or in the “NOTE”.

This Part is proposed by China Machinery Industry Federation.

This Part is under the jurisdiction of National Technical Committee of Auto Standardization (SAC/TC 332).

Responsible drafting organizations of this Part: Anhui Heli Co., Ltd., Beijing Hoisting and Transportation Machinery Design and Research Institute, National Crane and Transportation Machinery Quality Supervision and Inspection Center.

Participating drafting organizations of this Part: Linde (China) Forklift Co., Ltd., Guangxi Liugong Machinery Co., Ltd., Ningbo Ruyi Co., Ltd., Hangzhou Forklift Group Co., Ltd., Dalian Forklift Co., Ltd., Zhejiang Noblelift Equipment Joint Stock Co., Ltd., Xiamen XGMA Machinery Co., Ltd., Fujian Special Equipment Inspection and Research Institute, Anhui JAC Heavy-duty Constriction Machine Co., Ltd.

Industrial trucks - Safety requirements and verification - Part 1: Self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks

1 Scope

This Part of the GB 10827 gives safety requirements and the means for their verification for the following types of self-propelled industrial trucks (hereafter referred to as trucks), as defined in ISO 5053:

- a) industrial counterbalanced trucks;
- b) reach trucks with retractable mast or retractable fork arm carriage;
- c) straddle trucks;
- d) pallet-stacking trucks;
- e) high-lift platform trucks;
- f) trucks with elevating operator position up to 1 200 mm;
- g) side-loading trucks (one side only);
- h) lateral-stacking trucks (both sides), and lateral- and front-stacking trucks;
- i) pallet trucks;
- j) bidirectional and multidirectional trucks;
- k) tractors with a drawbar pull up to and including 20 000 N;
- l) rough-terrain counterbalanced trucks;
- m) industrial trucks powered by battery, diesel, gasoline or LPG (liquefied petroleum gas).

NOTE 1: Trucks powered by CNG (compressed natural gas) are not dealt with. It is intended that CNG and other power sources be addressed in future revisions of this Part.

Bibliography

- [1] GB/T 16856.1-2008 Safety of machinery - Risk assessment - Part 1: Principles (ISO 14121-1:2007, IDT)
- [2] ISO 3691-2 Industrial trucks - Safety requirements and verification - Part 2: Self-propelled variable-reach trucks
- [3] ISO 3691-4 Industrial trucks - Safety requirements and verification - Part 4: Driverless industrial trucks and their systems
- [4] ISO 3691-6 Industrial trucks - Safety requirements and verification - Part 6: Burden and personnel carriers
- [5] ISO/TS 3691-7 Industrial trucks - Safety requirements and verification - Part 7: Regional requirements for countries within the European Community
- [6] ISO/TS 3691-8 Industrial trucks - Safety requirements and verification - Part 8: Regional requirements for countries outside the European Community

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