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

GB/T 19401-2025

Replacing GB/T 19401-2003

Specifications of passenger ski-tows

客运拖牵索道技术规范

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents". Drafting.

This document replaces GB/T 19401-2003 "Technical Specification for Passenger Towed Ropeways". Compared with GB/T 19401-2003, the main differences are in the structural design.

Aside from integration and editorial changes, the main technical changes are as follows.

- The scope has been changed (see Chapter 1, Chapter 1 of the 2003 edition);
- The definitions of the terms "tow puller," "tow cable," "high-level tow ropeway," and "low-level tow ropeway" have been changed, and the term "tow cable" has been deleted.
- "Path", "Trailer Spacing", "Braking Distance", "Wire Rope Catch", "Maximum Slope", "Horizontal Length", "Elevation Difference", "Slope Length", "Support" "Frame", "Supporting Sheave", "Supporting Sheave Assembly", "Pressure Sheave Assembly", "Wire Rope Splice", "Support Gripper", "Drive Wheel", "Circuit Wheel" and their fixed The definition has been expanded to include the terms "passenger tow ropeway" and "tow ropeway" and their definitions (see Chapter 3, Chapter 3 of the 2003 edition).
- The restriction on the reverse slope of the high-level tow ropeway has been changed (see 4.2.2.1.2, 4.1.1 in the 2003 version);
- The width requirements for two-person towing tracks have been changed, and width

requirements for sections crossing bridges and ditches have been added (see 4.2.4, 2003 version). 4.2.1);

- Increased safety width requirements for tow ropes and tow cableway facilities; increased clearance requirements between tow ropes and buildings; increased [other requirements].

The distance requirements between the cableway and slopes with a height greater than 1m have been revised, and the spacing requirements for parallel cableways have been changed (see 4.3.1, 4.2 in the 2003 version).

- The ground clearance requirement for the towing cable of the pole-type towing cableway has been changed (see 4.3.2.3, 4.3.1 in the 2003 version);

- Increased vertical clearance requirements for low-position tow ropeways (see 4.3.3);

- The rope adjustment requirement has been removed (see 4.3.3 in the 2003 edition);

- The horizontal clearance requirements between the ascending support and the towing cable have been changed (see 4.3.4.1, 4.3.2 in the 2003 version);

- The spacing requirements for the tow bar of the high-level tow ropeway have been changed, and the spacing requirements for the low-level tow ropeway have been added (see 4.5, 2003 edition). 4.4);

- The requirement for liquid fuels has been removed (see 4.6.1 in the 2003 edition);

- Added regulations regarding the transportation of emergency sleds (see 4.7);

- Hazard identification requirements have been added (see 4.8);

- The requirements for the limit switches of the counterweight tensioning system have been changed (see 5.6.3.5, 5.9.3 in the 2003 version);

- The configuration requirements for brakes and anti-reverse devices have been changed (see 5.8.1, 5.5 in the 2003 edition);

- The distinction between intermediate stations and terminals in the disembarkation area has been removed from the configuration of automatic parking systems (see 5.11.2 in the 2003 version);

- Added requirements regarding the slope of the drop-off area (see 5.12.3, 4.7.2 of the 2003 version);

- Added station building requirements (see 5.14);

- The requirements for support ladders and portable ladders have been changed, and the content related to rope adjustment has been removed (see 6.1, 2003 version 6.1);

- The runtime wind pressure parameter requirements have been changed (see 6.2.2.1, 2003 version 6.2.1);

- Added requirements for towing cable selection (see 6.3.1);
- The requirements for connector augmentation have been changed (see 6.3.3.2, 7.1.2 in the 2003 version);
- Added requirement for inspection after towing device relocation (see 6.4.6.3, 7.2.6 in the 2003 version);
- The requirements for limiting voltage have been changed (see 7.1.4, 8.1.4 in the 2003 version);
- The adoption specification has been removed (see 8.1.1 in the 2003 version);
- Added some markers (see 8.1.2, 9.1 in the 2003 version);
- The cable requirement has been removed (see 8.1.5 in the 2003 edition);
- Change "Operation" to "Run Management" (see 8.2, 9.2 in the 2003 version);
- Change "Records" to "Technical Archives" (see 8.5, 9.5 in the 2003 edition);
- Added Inspection, Testing and Experimentation (see Chapter 9).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Cableways and Amusement Facilities (SAC/TC250).

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This document was first published in 2003, and this is its first revision.

1 Scope

This document specifies the general requirements for passenger towed ropeways, as well as the drive station and detour station, line structures and installations, electrical design and safety.

Safety technical requirements for installation, operation, and maintenance.

This document applies to the design, manufacture, installation, modification, repair,

inspection, testing, use and management of passenger towed ropeways.

2 Normative references

GB/T 9075

GB/T 12738

3 Terms and Definitions

The terms and definitions defined in GB/T 12738 and the following terms and definitions apply to this document.

3.1 Passenger ski-tow

A cableway that uses ropes to pull passengers on a tow rope, or those wearing skiing equipment or other special equipment, along a tow rope track.

3.2 towing rope

The moving cable that pulls and supports the tow rope.

3.3 tow-hanger

A tow ropeway is a device consisting of a gripper and components for pulling passengers.

3.4 tow track

Passengers are pulled along the ground route by means of devices such as tow ropes.

3.5 high-level ski-tow

A towing cableway with a towing cable height of 2m or more above the towing cableway.

3.6 low-level ski-tow

A towing cableway where the height of the towing cable from the towing cable is less than 2m.

3.7 Reverse turn limiter

A device that prevents the towed cableway from moving in the opposite direction.