

JB

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PEOPLE'S REPUBLIC OF CHINA**

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Manual monorail trolleys

手动单轨小车

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1 Scope

This standard specifies the terms and definitions, types and basic parameters, technical requirements, test methods, inspection rules, markings, packaging, transportation, storage of manual trolleys.

This standard applies to the manual trolleys, which have a rated load of 0.25 t

~ 50 t AND are driven by hand zipper, as well as the manual trolleys, which have a rated load of 0.25 t ~ 10 t AND driven by hand-pushed lifting heavy objects, running on the lower flange of the horizontally installed rails, such as I- beams (hereinafter referred to as trolley).

2 Normative references

The following documents are indispensable for the application of this document.

For dated reference documents, only the dated version applies to this document.

For undated reference documents, the latest version (including all amendments) is applicable to this document.

GB/T 9286 Paints and varnishes - Cross cut test for films

GB/T 13306 Plate

GB/T 13384 General specifications for packing of mechanical and electrical product

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Rated capacity

The sum of the weight that the monorail trolley can carry AND the mass of the lifting device.

3.2 Running height

The vertical distance, FROM the contact point between the working plane of the monorail trolley's wheel and the running I-beam track TO the standing plane of the operator.

3.3 Minimum turning radius

The minimum radius of curvature on the inner side of the lower flange of the I-beam and other curved sections, where the monorail trolley is running.

3.4 Passage space

The vertical distance, FROM the contact point between the working plane of the monorail trolley's wheel and the running I-beam track TO the top of the lifting ring.

3.5 Overturn

A phenomenon in which the working plane of a monorail trolley's wheel deviates from the running I-beam or other track, thereby making it unable to operate normally.

3.6 Hand pull

The pulling force, which is required to operate the monorail trolley at a uniform speed, by applying to the hand-chain.

Note: For the hand pull of the monorail trolley, which has the hand-chain of combined structure, it refers to the pulling force on a single body, when the hand-chains on the two bodies are simultaneously pulled, with the same force, to drive the whole machine to run.

4.1 Types

The types of monorail trolleys are divided into the following two types, according to the driving mode:

equipped with an anti-overturning device.

5.6.2

The hand-chain trolley shall be equipped with a chain stop device, to prevent the hand chain from falling out of the ring groove of the hand sprocket wheel.

6.1 Test load

The test load can adopt the direct loading method by heavy objects, OR hydraulic pressure, OR other loading methods that can generate the test load.

When loaded by the heavy object method, the allowable deviation of the test load is $\pm 1\%$. When hydraulic pressure OR other loading methods, that can generate test loads, are used, the allowable deviation of the test load is 0 ~

10%. The heavy object loading method shall be adopted as the basis for arbitration.

6.2 Visual inspection

The visual inspection shall include whether the specifications and/or status of all important components meet the requirements, such as:

- Wheels, hand chain;

- All protective devices, including anti-overturning devices, chain stop devices, etc.

6.3.1 Operating performance test under no-load

The monorail trolley runs, in a reciprocated manner, on a straight line AND the minimum turning radius as specified in Table 1 or Table 2, under no-load conditions. The cumulative running length shall not be less than that specified in Table 3.

6.3.2 Operating performance test under dynamic load

The test load specified in Table 3 is applied to the lifting ring of the monorail trolley. The monorail trolley is driven to reciprocate on the straight-line track, by pulling the hand chain OR pushing a heavy object. The cumulative running length shall not be less than that specified in Table 3.

6.3.3 Operating performance test along curve

A test load of rated capacity is applied to the lifting ring of the monorail trolley.

The monorail trolley is driven to reciprocate on the track, which has the minimum turning radius as given in Table 1 or Table 2, by pulling the hand chain

OR pushing a heavy object. The cumulative running length shall not be less than 4 m.

6.3.4 Determination of hand pull

When measuring the hand pull, the track, on which the tested hand-chain trolley runs, shall meet the following requirements:

- The slope does not exceed 3/1000;
- The track surface shall be flat AND free of oxide scale, rust, dirt and other debris.

The hand pull is measured by the heavy weight method. The measurement method is as follows: Apply a test load of rated capacity to the hand-chain trolley.

Tighten the hand chain on one side. Hang a heavy weight on the other hand chain. Instantly loosen the tightened hand chain. If the hand-chain trolley is running, the weight of the heavy weight, which is hung at this time, is regarded as the hand pull as measured this time.

When the hand-chain trolley moves in the reverse direction, measure the hand pull again. The average of the two hand pulls is the hand pull of the tested hand-chain trolley.

For the hand-chain trolley of combined structure, it is allowed to test the hand pull of one body, after disassembly. At this time, the test load is one-half of the test load of the whole machine.