



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

GB/T 5754.2-2017

**Steel cord conveyor belts -- Longitudinal traction test -- Part 2:
Measurement of tensile strength**

Issued on: September 29, 2017

Implemented on: April 1, 2018

Issued by: AQSIQ; SAC

Table of Contents

Foreword

introduction

1 Scope

2 Normative references

3 Principle

4 device

5 sample

5.1 General requirements

5.2 Type A specimen

1 --- warp wire rope;

2 --- sample width;

3 --- sample thickness;

5.3 Type B specimen

5.4 Type C specimen

1 --- at the cutting point of the warp wire rope;

6 Condition adjustment of the sample

7 procedures

8 results expression

9 test report

Foreword

GB/T 5754 "Longitudinal Tensile Test of Steel Cord Conveyor Belt" is divided into two parts.

--- Part 1. Determination of elongation;

--- Part 2. Determination of tensile strength.

This part is the second part of GB/T 5754.

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

This part replaces GB/T 5754.2-2005 "Wire rope conveyor belt longitudinal tensile test - Part 2.

Ding, compared with GB/T 5754.2-2005, the main technical changes are as follows.

--- Added introduction (see introduction);

- Revised the normative reference document (see Chapter 2, Chapter 2 of the.2005 edition);
- Revised the requirements of the tensile testing machine [see d in Chapter 4), d) in Chapter 4 of the.2005 edition];
- Revised the length of the sample (see 5.1, 5.1 of the.2005 edition);
- Added type C specimens (see 5.4 and Figure 4);
- Increased state adjustment of the sample (see Chapter 6);
- Removed the note in the program (see Chapter 7, Chapter 6 of the.2005 edition);
- The content of the note in the result expression is modified to a clause (see Chapter 8, Chapter 7 of the.2005 edition);
- Revised what should be included in the test report (see Chapter 9, Chapter 8 of the.2005 edition).

This part uses the translation method equivalent to the international standard ISO 7622-2.2015 "wire rope conveyor belt longitudinal tensile test part 2

Minute. Determination of tensile strength" (English version).

The documents of our country that have a consistent correspondence with the international documents referenced in this part are as follows.

---GB/T 30691-2014 Conveyor belt test environment and state adjustment time (ISO 18573.2012, IDT)

This part was proposed by the China Petroleum and Chemical Industry Federation.

This part is under the jurisdiction of the National Technical Committee for the Belt and Belt Standardization Technical Committee (SAC/TC428/SC1).

This section was drafted. Zhejiang Shuangjian Rubber Co., Ltd., Qingdao Shinkansen Technical Consulting Co., Ltd., Qingdao University of Science and Technology, Baoding Huayue Tape Co., Ltd.

introduction

This test method is to verify the tensile strength of the belt core wire rope by a destructive test. Because it is a destructive test, so

This test is only used when a litigation event occurs or if there is no certificate issued by the manufacturer with the core.

Longitudinal tensile test of steel cord conveyor belt

Part 2. Determination of tensile strength

1 Scope

This part of GB/T 5754 specifies the method for determining the longitudinal tensile strength of steel cord conveyor belts.

This section applies only to steel cord conveyor belts.

Note. The method for determining the elongation is specified in GB/T 5754.1.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 18573 conveyor belt test environment and condition adjustment time
(Conveyorbelts-Testatmospheresandcondi-

Tioningperiods)

3 Principle

The sample is prepared so that only one wire rope is subjected to tensile force during the tensile test, and the test is performed until the sample is broken.

4 device

The tensile testing machine shall meet the following requirements.

a) The force that can be applied by the test machine is adapted to the strength of the sample. The test machine load capacity should be such that the maximum test load is the test machine load

15% to 85% of the ability;

b) The speed of the gripper should be adjustable to (100 +/- 10) mm/min and kept constant;

c) the gripper spacing can be adjusted to not less than 250mm;

d) The form of the holder ensures that the sample is clamped so that it does not slip at all during the test. For this reason, it is recommended to use toothed

A partial-toothed gripper (see Fig. 1) with a partial length of not less than 80 mm is allowed for a small amount of sliding of the rubber.

Description.

1---The tooth is enlarged.

Figure 1 holder

5.1 General requirements

Cut three samples that meet the following dimensions.

a) Length (in the longitudinal direction of the belt). The length is given in Table 1.

Table 1 Wire rope diameter and length in millimeters

Wire rope diameter ϕ length

0~3.9 500

4.0~5.9 700

6.0~8.4 900

8.5~10.4 1200

10.5~13.0 1400

13.1~15.0 1500

b) Width. Contains 5 warp wire ropes.

c) Thickness. The thickness of the belt, including the upper and lower cover layers (the ends can be ground to make it better clamped in the holder). If the belt is too

The thickness is such that the sample cannot be pinched and a portion of the cover layer can be stripped.

d) The specimen shall be cut parallel to the axis of the belt at not less than 50 mm from the edge of the belt.

e) One of the three types (A, B and C) can be used.

5.2 Type A specimen

The preparation method of the type A sample shown in Fig. 2 is as follows.

a) strip the cover layer and possibly the transverse members on a 50 mm long section in the middle of the sample so that the five warp wires are exposed on both sides;

b) Cut 4 wire ropes on both sides of the central wire rope with suitable tools (such as shears) (be careful not to damage the central wire rope);

c) Cut off the residual rubber of the exposed part of the central wire rope with a knife so that the wire rope is completely separated from its coating.