

ICS 53.020.20
CCS J 80



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

GB/T 34529-2017

**Cranes and hoists -- Selection of wire ropes, drums and
sheaves**

起重机和葫芦 钢丝绳、卷筒和滑轮的选择

(English Translation)

Issued on: October 14, 2017

Implemented on: May 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

Table of Contents

Preface
1 Scope
2 Normative references
3 Terms and definitions
4 Agency level of work
5 Rope selection
5.1 Type and structure
5.2 Safety factor Z_p
5.3 Minimum breaking force
5.4 Diameter
6 Reel and pulley
6.1 Pulley material
6.2 Calculation of the minimum diameter of drum and pulley
7 Special conditions
8 Care and maintenance, inspection and scrap
Appendix A (Normative) Applicable cranes and hoist
Appendix B (informative) Other wire rope-related design and rope selection factor
References

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method identical with ISO 16625:2013 "Crane rope, reel and pulley options" (in English).

The documents of our country that are consistent with the corresponding international documents that are normative references in this standard are as follows.

- GB/T 5972-2016 Crane rope maintenance, inspection and scrap (ISO 4309:2010, IDT)
- GB/T 6974.1-2008 Crane terminology Part 1. General terms (ISO 4306-1:2007, IDT)
- GB/T 8706-2006 Rope terminology, marking and classification (ISO 17893:2004, IDT)
- GB/T 20118-2006 General purpose wire rope (ISO/DIS2408.2002, MOD)
- GB/T 20863.1-2007 Hoisting machinery classification Part 1. General (ISO 4301-1:1986,

IDT) this standard is proposed by the China Machinery Industry Federation.

This standard by the National Standardization Technical Committee crane (SAC/TC227) centralized.

1 Scope

This standard specifies the different agencies work level, type of wire rope, wire rope use and winding the case of the minimum safety factor Z_p , and how to use these coefficients to determine the minimum breaking force of the rope.

This standard specifies the work of different agencies, wire rope type and wire rope applications, reel and pulley selection coefficient, and How to use these coefficients to determine the diameter of the drum and pulley.

Appendix A lists the applicable crane and hoist this standard.

Appendix B shows the selection of wire rope and related equipment, may need to consider in addition to the above factors other factors.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 2408 General purpose wire rope minimum requirements (Steelwire for the generalpurposes-Minimumrequire-ments ISO 4301-1:1986 cranes and lifting machinery grading - Part 1. General (Cranesandliftingappliance-Classification-Part 1: General) ISO 4306-1 Crane Terminology Part 1. General (Cranes-Vocabulary-Part 1: General) ISO 4309 Crane rope maintenance,, inspection and scrap (Cranes-Wireropes-Careandmainte-nance, inspectionanddiscard) ISO 10425 oil and gas industry, the minimum requirements and acceptance of steel wire rope conditions (Steelwireropesforthe petroleumand naturalgasindustries-Minimumrequirementsandtermsofacceptance) ISO 17893 wire rope terminology, marking and classification (Steelwireropes-Vocabulary, designationandclassifica-tion)

3 Terms and definitions

Terms and definitions defined in ISO 4306-1 and ISO 17893 apply to this document.

Note 1: This document refers to "single-layer strands" and "parallel-twisted solid wires" as defined in ISO 17893 as "standard strands" and " Rope "distinction.

Note 2: Single-layer strands and parallel-twisted solid wire ropes are sometimes collectively referred to as "non-resistive rotating ropes."

4 Agency level of work

When determining the minimum safety factor, minimum reel and pulley size, the organization's working level (M4, M5, etc.) should be considered.

The working level of the organization takes into account the load status (light, medium, heavy, etc.) and the level of use of the organization (based on the total time of use), see ISO 4301-1.

NOTE Other parts of ISO 4301 (eg ISO 4301-2, including mobile cranes) Depending on the purpose of the rope (lifting, luffing, etc.) and the working condition of the crane, Specifies the classification of a particular type of crane and associated crane.