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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by the Japan Society of Industrial Machinery Manufacturers (JSIM) /Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS B 8803**:1990 is replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

Rollers for belt conveyor

Introduction

This Japanese Industrial Standard has been prepared based on the first edition of ISO 1537 published in 1975 by modifying some of the technical contents, while also adding the specifications conventionally used in Japan which were given in the previous edition of JIS B 8803.

The portions given continuous sidelines or dotted underlines are the matters in which the contents of the corresponding International Standard have been modified, or the matters not specified in the corresponding International Standard. A list of modifications with explanations is given in Annex JA.

1 Scope

This Standard specifies the rollers (hereafter referred to as “rollers for belt conveyor”) used for carrier side and return side of stationary type rubber belt conveyor to be used mainly for transportation of bulk materials (ore, soil and sand, coal, cement, cereals, etc.) and also roller stands.

NOTE 1 This Standard is to specify mainly the classification and dimensions of rollers for belt conveyor and its provisions are not intended to be used for assessing the conformity of the products.

NOTE 2 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 1537 : 1975 *Continuous mechanical handling equipment for loose bulk materials — Troughed belt conveyors (other than portable conveyors) — Idlers* (MOD)

The symbols which denote the degree of correspondence in the contents between **JIS** and the corresponding International Standard are IDT (identical), MOD (modified) and NEQ (not equivalent) according to **ISO/IEC Guide 21**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. For standards with the indication of the year, the edition of the indicated year shall be applied and not any revisions (including amendments) made thereafter. For those without, the most recent edition of the standards (including amendments) indicated below shall be applied.

JIS B 0140 *Glossary of terms relating to conveyors — Kinds of conveyors*

JIS B 0141	<i>Glossary of terms relating to conveyors — Conveyor parts, accessories and others</i>
JIS B 1001	<i>Diameter of clearance holes and counterbores for bolts and screws</i>
JIS B 1180	<i>Hexagon head bolts and hexagon head screws</i>
JIS B 1521	<i>Rolling bearings — Deep groove ball bearings</i>
JIS G 3101 : 1995	<i>Rolled steels for general structure</i>
JIS G 3444	<i>Carbon steel tubes for general structural purposes</i>
JIS G 3445	<i>Carbon steel tubes for machine structural purposes</i>
JIS G 3452	<i>Carbon steel pipes for ordinary piping</i>
JIS G 3454	<i>Carbon steel pipes for pressure service</i>
ISO 4200	<i>Plain end steel tubes, welded and seamless — General tables of dimensions and masses per unit length</i>

3 Terms and definitions

For the purpose of this Standard, the terms and definitions in JIS B 0140 and JIS B 0141 apply.

4 Classification and symbols

4.1 Classification according to function

Rollers and roller stands shall be classified according to function as shown in the following.

- a) Classification and symbols of rollers shall be as specified in table 1.

Table 1 Classification and symbols of rollers

Classification	Symbol
Carrying roller	CR
Return roller	RR

- b) Classification and symbols of roller stands shall be as specified in table 2.

Table 2 Classification and symbols of roller stands

Classification	Symbol
Carrying roller stand	CB
Return roller stand	RB

4.2 Classification according to shape

Rollers shall be classified according to the shape as given in table 3.

Table 3 Division of shape and symbols

Division	Symbol	Shape
I-shaped	I	See 6.1.
J-shaped	J	See 6.2.

5 Quality

5.1 Performance

The roller shall be capable of being rolled smoothly and lightly by a single hand, and, of such a structure that would not easily allow, in the ordinary using condition, any matters such as powder dust, water, etc. to enter the roller bearing part.

5.2 Appearance

The outer finish of rollers shall be good and free from defects injurious to use.

Particularly the surface of the roller shall be smooth and free from crazing, crack, dent or other injurious defects.

6 Dimensions

6.1 I-shaped rollers and roller stands

The dimensions of each part of roller shall be in accordance with tables 5 to 7.

The dimensions of each part of roller stand shall be in accordance with tables 9 to 11.

The symbols used in table 6 correspond to those shown in figure 1.

NOTE : An example of recommended combination of I-shaped roller diameter and the bearing is shown in table 8 for information.

6.2 J-shaped rollers and roller stands

The dimensions of each part of roller shall be in accordance with table 12.

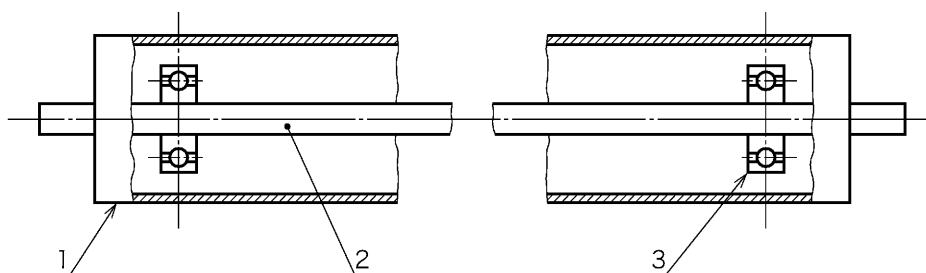
The dimensions of each part of roller stands shall be in accordance with table 13 to 15.

The symbols used in table 12 correspond to those shown in figure 1.

7 Materials

For the materials, those specified in table 4 or any material at least equivalent to these shall be used.

Table 4 Materials



Division	No. of part	Name of part	Material
I-shaped	1	Roller pipe	ISO 4200
J-shaped	1	Roller pipe	JIS G 3444 JIS G 3445 JIS G 3452 JIS G 3454
	2	Spindle	SS400 of JIS G 3101 : 1995
	3	Bearing	JIS B 1521

8 Inspection

The inspection shall be made on the quality, dimensions and material, and the results shall satisfy the requirements in clauses 5 to 7.

The inspection shall be performed by sampling, the system of which shall be as agreed between the parties concerned with delivery.

9 Designation of products

9.1 Rollers

Rollers shall be designated by the number of this Standard, classification symbol,