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

GB/T 18737.3-2022

**Textile machinery and accessories - Beams for winding - Part 3:
Weaver's beams**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules for Standardization Documents" drafting.

This document is the third part of GB/T 18737 "Textile Machinery and Accessories Warp Beam". GB/T 18737 has issued the following parts.

- Part 1. Vocabulary;
- Part 2. Warp beams;
- Part 3. Weaving shaft;
- Part 4. Quality grades of beams, warp beams and segmented warp beam side discs;
- Part 6. Warp beams for looms and crochet machines;
- Part 7. Shafts for sliver, roving and yarn dyeing;
- Part 8. Definition and measurement method of run-out tolerance;
- Part 9. Shafts for fabric dyeing.

This document is modified to adopt ISO 8116-3.2008 "Textile machinery and accessories warp beams - Part 3. Weaving beams".

The technical differences between this document and ISO 8116-3.2008 and their reasons are as follows.

--- Regarding the normative reference documents, this document has made adjustments with technical differences to adapt to the technical conditions of our country, specific adjustments

as follows.

- * Replace ISO 286-2 with GB/T 1800.2, which adopts the international standard;
- * Replaced ISO 8116-4.1995 with GB/T 18737.4, which is equivalent to the international standard;
- * Replace ISO 8116-8 with GB/T 18737.8-2009;
- * Replace ISO 109 with FZ/T 90034-1992.

---Increase the shaft core diameter dia. d_2 =dia. 156mm, dia. 178mm, dia. 191mm, dia. 270mm; increase the shaft extension diameter dia. d_3 =

dia. 60mm; add the shaft extension width including shoulder l_3 =50mm, 60mm, 70mm, 80mm, 100mm, 120mm,

150mm, 260mm; increased shoulder width l_5 = 80mm, 100mm; deleted in the case of special design of the end cover (such as

square shaft), the size w should be 5mm or 50mm, and the shoulder width w =25mm, 35mm, 60mm,

80mm; increase the transmission pin hole diameter dia. d_4 =dia. 25mm; increase the transmission pin hole distribution circle diameter dia. d_5 =dia. 105mm,

dia. 138mm, dia. 150mm; increase the drive pin hole diameter dia. d_4 , drive pin hole distribution circle diameter dia. d_5 and shaft core diameter dia. d_2

Reasonable matching (see Table 1);

---Change the shaft core diameter dia. d_2 =dia. 269mm to dia. 270mm (see Table 2);

---Added A-type and B-type side plate diameters dia. d_1 =dia. 914mm, dia. 930mm, dia. 940mm, dia. 1000mm, dia. 1100mm,

dia. 1250mm, change the diameter of the side plate dia. d_1 ≤dia. 1000mm and the diameter of the shaft core dia. d_2 is changed to dia. 150mm, dia. 156mm,

dia. 178mm, dia. 191mm, dia. 216mm, changed the diameter of the side plate diameter dia. d_1 =dia. 1100, dia. 1250mm to adapt the shaft core diameter

dia. d_2 is dia. 216mm, dia. 270mm; the diameter of C-shaped side plate is added dia. d_1 =dia. 600mm, dia. 940mm, dia. 1100mm, side

The disk diameter dia. d_1 =dia. 269mm is changed to dia. 270mm, and the diameter of the side disk diameter dia. d_1 ≥dia. 940mm is changed to the adapted shaft core diameter

dia. d_2 is dia. 216mm, dia. 270mm (see Table 3);

---Change the thread depth from 1.050.10 mm to 1.50.10 mm, modify the thread pitch to p , and modify the thread width to k (see

Figure 4);

---Change thread type 1, shaft core diameter dia. d2 increased to dia. 156mm, dia. 178mm, dia. 191mm, dia. 270mm, increased thread

Distance $p=6\text{mm}$, 7mm , 12mm , increased thread width $k=3.2\text{mm}$, 3.7mm , 3.7mm , modified thread tolerance 0.2 0

It is 0.15 0; the major diameter of the shaft core thread is changed dia. $d_6=(\text{dia. } d_2-0.2)\text{ mm}$, and the minor diameter of the side plate thread is changed dia. $d_7=(\text{dia. } d_2-$

2.55) mm; added "Note. The tooth width of the side plate 1 is equal to the groove width of the shaft core 2, and the manufacturer is suitable for production" (see Table 4);

---Change the thread type 2, the shaft core diameter dia. d2 is increased to dia. 156mm, dia. 178mm, dia. 191mm, dia. 270mm, and the shaft is changed

The major diameter of the core thread dia. $d_6=(\text{dia. } d_2-0.1)\text{mm}$, and the minor diameter of the side plate thread dia. $d_7=(\text{dia. } d_2-0.8)\text{mm}$ (see Table 5);

---Increased the allowable circular runout tolerance of the side plate, dia. $d_1 \leq 600\text{mm}$, T_a increased from 0.5mm to 0.25mm; $600\text{mm} < \text{dia. } d_1 \leq$

800mm, T_a is increased from 0.75mm to 0.5mm; $800\text{mm} < \text{dia. } d_1 \leq 1000\text{mm}$, T_a is increased from 1.0mm to

0.75mm; $1000\text{mm} < \text{dia. } d_1 \leq 1250\text{mm}$, T_a increased from 1.25mm to 1.0mm; dia. $d_1 > 1250\text{mm}$, T_a

Increased from 1.5mm to 1.25mm (see Table 6).

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

GB/T 18737 "Textile Machinery and Accessories Warp Axis" adopts the ISO 8116 international standard and is currently planned to be divided into 9 parts.

--- Part 1.Vocabulary. The purpose is to provide requirements for the basic vocabulary and type classification of warp beams.

--- Part 2.Warp beams. The purpose is to check the main dimensions, mechanical strength, shape and position tolerances of warp beams, as well as the

Requirements are put forward for the transmission structure and marking of the shaftless warping beam.

--- Part 3.Shaft of weaving. The purpose is to check the type and main dimensions of the weaving beam, mechanical strength, thread profile, edge disc runout tolerance,

Shaft core radial run-out tolerance, other specifications and marking requirements.

--- Part 4. Quality grades of warp beams, warp beams and segmented warp beam side discs. The purpose is to compare the principles and practical methods of grading side discs.

required by the law.

--- Part 5. Segmented warp beams for warp knitting machines. The purpose is to use the basic terms and marks of segmented warping beams, segmented warping beams for warp knitting machines

The main dimension of the warp axis and the maximum value of the shape and position tolerance of the main elements are required.

--- Part 6. Warp beams for looms and crochet machines. The purpose is to explain the basic terms and main dimensions of warp beams used in ribbon looms and crochet machines

As well as requirements for shape and position tolerances.

--- Part 7. Shafts for sliver, roving and yarn dyeing. The purpose is to dye slivers, rovings and yarns in the form of porous shafts,

The terms and marks, and the main dimensions of the transmission structure set forth requirements.

--- Part 8. Definition and measurement method of run-out tolerance. The purpose is to determine the geometrical tolerances (side

The round runout of the disc end face and the full runout of the shaft tube) and the measurement method put forward requirements.

--- Part 9. Shafts for fabric dyeing. The purpose is to provide requirements for the type, terminology, main dimensions and markings of the shafts used for fabric dyeing.

Textile machinery and accessories warp beams part 3. weaving beams

1 Scope

This document specifies the type and main dimensions of the weaving shaft, mechanical strength, thread profile, side plate circular runout tolerance, shaft core radial full runout tolerance

Poor, other specifications, and markings.

This document applies to the production, inspection and sale of beams for weaving preparation and weaving.