

CCS J 53



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

GB/T 41093-2021

Machine tools safety - Turning machines

Issued on: December 31, 2021

Implemented on: July 1, 2022

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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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 of Standardization Documents"

drafted:

This document uses the redrafting method to modify the adoption of ISO 23125:2015 "Machine Safety Lathes":

Compared with ISO 23125:2015, the structure of this document has been adjusted as follows:

--- Added "3:3:1 Classification of Operation Modes", and changed "3:3:1, 3:3:2, 3:3:3, 3:3:4" of the original international standard to this document respectively

"3:3:2, 3:3:3, 3:3:4, 3:3:5": After the modification, there is no suspension segment, which conforms to the standard writing regulations:

--- Added "3:4:1 Lathe Type", and changed "3:4:1, 3:4:2, 3:4:3, 3:4:4, 3:4:5, 3:4:6" of the original international standard to this

"3:4:2, 3:4:3, 3:4:4, 3:4:5, 3:4:6, 3:4:7" of the file: After the modification, there is no suspension segment, which conforms to the standard writing regulations:

--- Added "5:2:4:4:1" article number, and changed "5:2:4:4:1, 5:2:4:4:2" in the original international standard to "5:2:4:4:2,

5:2:4:4:3": There is no suspension section after the modification, which is in line with the standards for writing:

The technical differences between this document and ISO 23125:2015 and their reasons are as follows:

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

The situation is reflected in Chapter 2 "Normative References", and the specific

adjustments are as follows:

- * Replace ISO 4413:2010 with GB/T 3766-2015 which has been modified to adopt international standards;
- * Replace IEC 60204-1:2009 with GB/T 5226:1-2019 which is equivalent to adopting international standards;
- * Replace ISO 14120:2002 with GB/T 8196-2018 which is equivalent to the international standard;
- * Replace ISO 4871:1996 with GB/T 14574-2000 which is equivalent to international standard;
- * Replace ISO 13850:2006 with GB/T 16754-2021 which is equivalent to the international standard;
- * Replace ISO 13849-1:2006 with GB/T 16855:1-2018 which is equivalent to the international standard;
- * Replace ISO 13849-2:2003 with GB/T 16855:2-2015 which is equivalent to the international standard;
- * Replace ISO 447:1984 with GB/T 17161-1997 which is equivalent to adopting international standards;
- * Replace ISO 13856-2:2005 with GB/T 17454:2-2017 which is equivalent to the international standard;
- * Replace ISO 14122-1:2001 with GB/T 17888:1-2020 which is equivalent to adopting international standards;
- * Replace ISO 14122-2:2001 with GB/T 17888:2-2020 which is equivalent to the international standard;
- * Replace ISO 14122-3:2001 with GB/T 17888:3-2020 which is equivalent to adopting international standards;
- * Replace ISO 14122-4:2004 with GB/T 17888:4-2020 which is equivalent to adopting international standards;
- * Replace ISO 15534-1:2000 with non-equivalent GB/T 18717:1-2002 which adopts international standards;
- * Replace ISO 15534-2:2000 with the non-equivalent GB/T 18717:2-2002 which adopts international standards;
- * Replace ISO 14118:2000 with GB/T 19670-2005, which has been modified to adopt international standards;

* Replace ISO 13851:2002 with GB/T 19671-2005, which has been modified to adopt international standards;

* Replace ISO 14159:2002 with GB/T 19891-2005, which has been modified to adopt international standards;

* Replace EN1837:1999 with GB/T 28780-2012;

--- Deleted "EN954-1:1996" in the normative reference document, and added the "document number and content" of the document in the text

Deleted together [see Chapter 2, Chapter 3, 5:1:1, 5:8b)1), 5:11a), 5:11b)], because EN954-1:1996 is no longer applicable, now

The line GB/T 16855:1-2018 has covered its content;

--- Modify "EN954-1:1996, 3:2" to "GB/T 16855:1-2018, 3:1:2" (see 3:1:10), because EN954-1:1996

No longer applicable, the current GB/T 16855:1-2018 has covered its content;

--- Deleted "IEC 60529" in the normative reference document, because the number of the document in the main text is incorrect, which is inconsistent with its expression [(see 5:3a)2)];

--- References ISO 13732-1 and EN13478 moved into Chapter 2 Normative references:

The following editorial changes have been made to this document:

--- Modified the file name:

--- Change the "X" in the original international standard to "*" in this document and add a note (see 5:16), which is in line with our customs after the change:

--- Deleted the original international standard "Source: Reference [33]" (see Figure B:2 below): The content of this article is therefore irrelevant to this document:

--- Change "MTTFd and B10d" in the original international standard to "MTTFD and B10D" in this document respectively (see Appendix F): after change

Keep consistent with the symbols in the GB/T 16855:1-2018 standard:

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies requirements and methods for eliminating hazards or reducing risks in the design of the following types of metal cutting lathes and turning centers:

--- Class 1: Manually controlled lathes without numerical control functions:

--- Category 2: Manually controlled lathes with limited numerical control functions:

--- Category 3: CNC lathes and turning centers:

--- Category 4: single- or multi-spindle automatic lathes:

Note 1: See 3:4 for more detailed information on the classification of machine tools, and see 3:3 for the mandatory configuration and optional configuration of the operating mode:

Note 2: The requirements of this document generally apply to all types of lathes: If certain requirements only apply to a certain type of lathe, which type of lathe has been clearly indicated:

Note 3: Hazards from other metal cutting processes (such as grinding and laser processing) are described in other standards (see References):

The important risk factors listed in Chapter 4 of this document also apply to auxiliary equipment integrated with the machine tool (such as workpieces, tools and workpieces):

clamping devices, handling equipment and chip removal devices):

This document also applies to machine tools or turning cells integrated into automatic production lines, since the dangers and risks arising in this situation are different from the unique

The machine in the standing state is similar:

This document contains information about safety that is essential for the manufacturer to provide the user: See Figure 2 in GB/T 15706-2012,

Illustrate the responsibilities between the manufacturer and the user regarding operational safety:

It is the user's responsibility to detect certain hazards (eg fire and explosion) and minimize the critical risk factors associated with them (eg centralized control

whether the exhaust system is working properly):

Where other processing (milling, grinding, etc.) is involved, this document only mentions the basic content of safety requirements; see references for more details:

This document applies to machines manufactured after the release date:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations

documents, only the version corresponding to that date applies to this document; for