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

GB/T 5226.31-2017

**Electrical safety of machinery -- Electrical equipment of
machines -- Part 31: Particular safety and EMC requirements for
sewing machines, units and systems**

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Table of Contents

Foreword

Introduction

1 Scope

2 Normative references

Foreword

GB/T 5226 "mechanical and electrical safety mechanical and electrical equipment" to be divided into sections published, has released the following sections.

--- Part 1. General technical conditions;

--- Part 6. Construction machinery and technical conditions;

--- Part 11. Technical conditions for high-voltage equipment with voltage higher than 1000Va.c. Or 1500Vd.c. But not exceeding 36kV;

--- Part 31. Particular safety and EMC requirements for sewing machines, sewing units and sewing systems;

--- Part 32. General technical requirements for lifting machinery;

--- Part 33. Semiconductor equipment technical conditions.

This section GB/T 5226 Part 31.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB 5226.4-2005 "Safety of machinery - Electrical equipment - Part 31. Sewing machines, sewing units and sewing systems

System of special safety and EMC requirements, "compared with the GB 5226.4-2005 main technical changes are as follows.

--- Modify the terms and definitions in Chapter 3 of the entry description;

--- And GB 5226.1-2008 headings and subheadings corresponding to the order;

--- To comply with the relevant IEC standards Appendix AA was modified;

--- Removed 5.1 "to replace the first sentence of the third paragraph, you can use the middle line";

--- Removed 5.3.3.1 Overview of the supplementary content;

- Removed "6.4 PELV protection";
- Removed "9.1.4 control device connection";
- Deleted 9.2.5.2 "Sewing units and sewing systems with short sewing cycles, such as automatic stitching, keyholes, studs, etc.";
- Removed the "control interface" and "electronic equipment" content;
- Modify the general requirements of the 9.4.1 supplement;
- Increased 18.4 withstand voltage test surge protection device content;
- Added Appendix AA.4 performance criteria to increase performance criteria C;
- Deleted Table AA.2 radio frequency electromagnetic field pulse modulation immunity requirements, an increase of frequency magnetic field immunity;
- Deleted Table AA.4 process, measurement and control lines, long control bus port immunity;
- Removed Table AA.5 DC power input/output port immunity;
- Deleted table AA.7 ground port immunity;
- The original table AA.6 AC power input/output port immunity to Table AA.4, and increase the voltage sag, voltage interruption, surge (Impact) immunity requirements;
- Modify Appendix BB content.

This section uses the translation method identical with IEC 60204-31.2013 "Safety of machinery - Electrical equipment - Part 31. Sewing machines,

Special safety and EMC requirements for sewing units and sewing systems "(4th edition, English version).

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

- GB 4824-2013 Industrial, Scientific and Medical (ISM) RF equipment harassment characteristics limits and measurement methods (IEC / CISPR11.2010)
- GB/T 4798.3-2007 Environmental conditions for the application of electrical and electronic products Part 3. There is a fixed use of climate protection sites (IEC 60721-3-3.2002, MOD)
- GB/T 14048.1-2012 low-voltage switchgear and control equipment Part 1. General (IEC 60947-1.2011,

MOD)

--- GB/T 15092.1-2010 Appliance switches Part 1. General requirements (IEC 61058-1.2008, IDT)

--- GB/T 16895.21-2011 low voltage electrical installations - Part 4-41. Safety protection Shock protection (IEC 60364-4-41.2005, IDT)

--- GB 17625.1-2012 electromagnetic compatibility limit harmonic current emission limit (equipment input current per phase $\leq 16\text{A}$) (IEC 61000-3-2.2009, IDT)

--- GB/T 17625.2-2007 Electromagnetic compatibility limit for each phase rated current $\leq 16\text{A}$ and unconditional access to the equipment in the public

Voltage variations, voltage fluctuations and flicker limitations in low-voltage power supply systems (IEC 61000-3-3.2005, IDT)

Electromagnetic compatibility test and measurement techniques Electrostatic discharge immunity test (IEC 61000-4-2).

2001, IDT)

--- GB/T 17626.3-2006 Electromagnetic compatibility test and measurement techniques RF electromagnetic field radiation immunity test

(IEC 61000-4-3.2002, IDT)

--- GB/T 17626.4-2008 Electromagnetic compatibility test and measurement techniques Fast transient impulse group immunity test

(IEC 61000-4-4.2004, IDT)

--- GB/T 17626.6-2008 electromagnetic compatibility test and measurement techniques RF field induced conduction disturbances immunity

(IEC 61000-4-6.2006, IDT)

--- GB/T 17626.11-2008 electromagnetic compatibility test and measurement techniques voltage sag, short-term interruption and voltage changes of resistance

Scramble test (IEC 61000-4-11.2004, IDT)

--- GB/T 19212.1-2008 Safety of power transformers, power supplies, reactors and similar products - Part 1. General requirements and

Test (IEC 61558-1.2005, IDT)

This section made the following editorial changes.

--- Standard name changed to "mechanical and electrical safety machinery and electrical equipment Part 31. Sewing machines, sewing units and sewing system special

Special safety and EMC requirements. "

This part is proposed by China Machinery Industry Federation.

This part of the National Industrial Machinery Electrical System Standardization Technical Committee (SAC/TC231) centralized.

This part is drafted by Beijing Dahao Technology Co., Ltd., Beijing Machine Tool Research Institute, China Sewing Machinery Association, Shanghai Sewing

Machine Research Institute, Shanghai Bao Maxi Electronic Technology Co., Ltd., Mianyang, Sichuan Province, Southwest Institute of Automation, Xi'an Standard Industrial Co., Ltd.

Division, Zhong Jie Sewing Machine Co., Ltd., Zhejiang Qi Electronic Technology Co., Ltd., Zhejiang New Jack Sewing Machine Co., Ltd. participated in the drafting.

Introduction

This section is the modification and addition of the corresponding provisions of GB 5226.1-2008, this section should be used in conjunction with GB 5226.1-2008.

This section applies to the sewing machine, sewing unit and sewing system electrical equipment, special safety and EMC requirements.

Special provisions in GB 5226.1 that are not mentioned in this section should be used as reasonably as possible. This section in the "add" "modify"

Or "Replacement" is a modification of the relevant section of GB 5226.1.

Appendices to GB 5226.1 supplements are numbered Appendix AA and Appendix BB.

Mechanical Electrical Safety Mechanical Electrical Equipment

Part 31. Sewing machines, sewing units and sewing

System specific safety and EMC requirements

1 Scope

GB 5226.1-2008 Chapter 1 is replaced by the following.

This section applies to industrial purpose designed sewing machine, sewing unit and sewing system of electrical and electronic equipment.

Note. For domestic or similar sewing machines, see IEC 60335-2-28.

The equipment referred to in this section begins with the power lead-in to the mechanical and electrical equipment (see 5.1). This section applies to electrical equipment or electricity