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

GB/T 26118.2-2010

**Safety of machinery -- Assessment and reduction of risks
arising from radiation emitted by machinery -- Part 2: Radiation
emission measurement procedure**

(English Translation)

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Foreword

GB/T 26118 Safety of Machinery - Assessment and Reduction of Risks Arising from Radiation

Emitted by Machinery consists of the following three parts:

---Part 1: General Principles;

---Part 2: Radiation Emission Measurement Procedure;

---Part 3: Reduction of Radiation by Attenuation or Screening.

This is Part 2 of GB/T 26118.

This Part was drafted in accordance with the rules provided in GB/T 1.1-2009.

This Part identically adopts the European Standard EN 12198-2:2002 Safety of Machinery - Assessment and Reduction of Risks Arising from Radiation Emitted by Machinery - Part 2: Radiation Emission Measurement Procedure (English version).

This Part identically translates EN 12198-2:2002. For ease of use, this Part makes the following

editorial modifications:

---"this Part" is used to replace "this European Standard";

- The EN Foreword is deleted, and the Foreword is re-written;
- The introduction of Normative References is modified in accordance with GB/T 1.1-2009, and the standards cited in EN 12198-2:2002 are modified into the corresponding national standards;
- The normative reference EN 1070 is deleted;
- "(see EN 292-1:1991, 1.5.10 of Appendix A)" is deleted from Chapter 4;
- Appendix ZA is deleted.

In this Part, Appendix A is informative.

This Part was proposed by and shall be under the jurisdiction of National Technical Committee

208 on Mechanical Safety of Standardization Administration of China (SAC/TC 208).

The drafting organizations of this Part: Regio Packaging Food Machinery Co., Ltd.; Shenzhen

Center Testing International Group Co., Ltd.; China Machinery Productivity Promotion Center;

Optomechanical and Electrical Engineering Research Institute of Nanjing Forestry University.

1 Scope

This Part of GB/T 26118 defines basic technology and specifies general procedures for making

and reporting measurements of quantities related to radiation emitted by machinery. It covers

the different radiation emissions as defined in GB/T 26118.1.

This Part applies to machinery as defined in 3.1 of GB/T 15706.1-2007.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all

the

modifications) is applicable to this document.

GB/T 4365-2003 Electrotechnical Terminology - Electromagnetic Compatibility (IEC 60050-161:1990, IDT)

GB/T 2900.60-2002 Electrotechnical Terminology - Electromagnetism (IEC 60050-121:1998,

EQV)

GB/T 2900.61-2008 Electrotechnical Terminology - Physics and Chemistry (IEC 60050-111:1996, MOD)

GB 23821-2009 Safety of Machinery - Safety Distances to Prevent Hazard Zones being Reached by Upper and Lower Limbs (ISO 13857:2008, IDT)

GB/T 26118.1-2010 Safety of Machinery - Assessment and Reduction of Risks Arising from Radiation Emitted by Machinery - Part 1: General Principles

IEC 60050-881:1983 International Electrotechnical Vocabulary - Chapter 881: Radiology and

Radiological Physics

3 Terms and Definitions

What is defined in GB/T 15706.1 and GB/T 26118.1-2010, and the following terms and definitions are applicable to this document.

emissions.

6.3.3 Measurement points

---Requirements for classification

Sufficient points (in number and location) shall be specified as measurement points in order to adequately characterize the radiation fields around the machine (and particularly those where operators or other people may be exposed):

a) measurement shall be made at the distance or points specified in Appendix B of GB/T 26118.1-2010; and

b) if the location of the maximum radiation emission is at a greater distance from the

accessible surface than the measurement distance specified in Appendix B of GB/T 26118.1-2010, then measurement shall be made at the point where the maximum emission occurs; and

c) if there are openings in the housing in which operators may insert parts of their body then measurements shall be made inside the accessible zone (see GB 23821); and

d) if operators must view into the housing through windows or installed optical devices then measurements of the radiation intensity at the eye position shall be made.

---Additional requirements

If relevant, additional measurements shall be made at the following points:

λ at operator working positions or positions where people may be in the radiation field around the machine;

λ at points where radiation leakage may occur (e.g., penetrations through shields, joints

etc.), inside covers which are removed for maintenance and at service openings which are specified in a "C" type standard or;

λ on the surface of the machine housing;

or,

λ at the nearest distance of approach of the detector due to it having a large sensitive volume or an integral spacing device;

λ at the location of one or more iso flux density lines.

All measurement points shall be specified, so that they are uniquely identified.

In case of particular difficulties, measurements can be supplemented by detailed theoretical predictions.

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