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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 25431.3-2025

Replacing GB 25431.3-2010

Extruders and extrusion lines of rubber and plastics - Part 3: Safety requirements for haul-offs

橡胶塑料挤出机和挤出生产线 第3部分：牵引装置的安全要求

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents". Drafting.

This document is Part 3 of GB/T 25431 "Rubber and Plastics Extruders and Extrusion Lines". GB/T 25431 has been published as follows. Part 2.

- Part 1: Safety Requirements for Extruders;

- Part 2: Safety Requirements for Die-face Pelletizers;

- Part 3: Safety requirements for traction devices.

This document replaces GB 25431.3-2010 "Rubber and Plastic Extruders and Extrusion Lines - Part 3: Safety Requirements for Traction Devices".

Compared with GB 25431.3-2010, the main technical changes in the "Requirements" standard, apart from structural adjustments and editorial modifications, are as follows.

- The file range has been changed (see Chapter 1, Chapter 1 of the 2010 edition);

- The term "belt winch traction device" has been changed to "wheel tire traction device," and the definition has been revised (see 3.5, 2010 edition).

3.5) The terms "traction device", "tracked traction device", "belt traction device", "winch traction device" and "traction device" have been changed.

Definition of "roller conveyor traction device" (see 3.1, 3.2, 3.3, 3.4 and 3.6, 3.1, 3.2, 3.3, 3.4 and 3.6 in the 2010 edition);

- Chapter 4, "List of Major Hazards," from the 2010 edition has been deleted. Major hazard areas and major hazards are now listed in Appendix A (see Appendix).

(Record A, Chapter 4 of the 2010 edition)

- The "General Provisions" section has been changed to "General Requirements," and the corresponding technical requirements have been revised (see 4.1, 5.1.1 in the 2010 edition);

- The term "inlet area" has been changed to "feeding area," and the corresponding technical requirements have been modified (see 4.2.1, 5.1.2 in the 2010 version);

- The requirements for the interlocking protective devices with protective locking in the conveyor belt have been changed (see 4.2.2, 5.1.3 in the 2010 version);

- The requirements for interlocking protection devices with protective locking in the drive and power transmission areas have been changed (see 4.2.3, 5.1.4 of the 2010 version);

- Change "Exit Area" to "Discharge Area" and modify the description of the protection clause for "Discharge Area" (see 4.2.4, 5.1.5 in the 2010 version);

- Changed "fall/uncontrollable fall due to gravity" to "fall caused by gravity/uncontrolled descent", and modified the relevant technology.

Requirements (see 4.2.5, 5.1.8 of the 2010 edition);

- Added the additional requirement of full-body accessibility (see 4.2.6);

- Changed "Perform pneumatic and mechanical commissioning operations in hazardous areas" to "Start-up and machine setup operations in hazardous areas," and modified the relevant...

Technical specifications (see 4.2.7, 5.1.6 of the 2010 edition);

- The safety requirement for "moving wheels that change the position of the machine" has been removed; the related technical requirements are already included in the fixed protection of each hazardous area.

The device terms (see 5.1.7 of the 2010 edition);

- Changed "Electrical Hazards" to "Electrical Hazards and Electromagnetic Interference Hazards" and amended the relevant safety technical clauses (see 4.3, 2010). (5.2 of the 2018 edition)

- The hazards caused by malfunctions of safety-related components in the control system have been modified (see 4.4, 5.4 in the 2010 version);

- The thermal hazard has been changed (see 4.6, 5.5 in the 2010 edition);

- The noise hazard has been changed (see 4.7, 5.6 in the 2010 version);

- The verification of security requirements and/or protection/risk mitigation measures has been changed (see Chapter 5, Chapter 6 of the 2010 edition);

- Appendix B, Noise Test Procedure, has been added (see Appendix B).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Petroleum and Chemical Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Rubber and Plastics Machinery (SAC/TC71).

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The release history of this document and the document it replaces is as follows.

- First published in 2010 as GB 25431.3-2010;

- This is the first revision.

Introduction

The safety standard system in the mechanical field consists of the following categories of standards.

- Class A standards (basic safety standards) provide basic concepts, design principles, and general characteristics applicable to all machinery.

- Class B standards (general safety standards) refer to a type of safety device that relates to a specific safety feature of machinery or has a wide range of applications.

- Category B1, safety characteristic standards (such as safety distance, surface temperature, noise);

- Class B2, safety device (such as two-hand operating device, interlocking device, pressure-sensitive device, protective device) standard.

- Class C standards (machinery product safety standards) are standards that specify detailed safety requirements for a particular machine or a group of machines.

According to the classification of GB/T 15706, this document belongs to Class C standards.

This document is particularly relevant to the following stakeholders related to machinery safety.

- Machine manufacturer;

- Health and Safety Agency.

Other stakeholders affected by the level of mechanical safety include.

- Machine users;

- Machine owner;

- Service provider;

- Consumer (when the machine is scheduled to be used by the consumer).

All of the aforementioned stakeholders may participate in the drafting of this document.

The scope of the machinery involved, as well as the hazards, hazardous conditions, and hazardous events covered, is given in the scope of this document.