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

GB 40159-2021

En-masse conveyors - Safety rules

埋刮板输送机 安全规范

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. Please note that some of the contents of this document may involve patents. Publication of this document The agency is not responsible for identifying these patents. This standard was proposed and managed by the Ministry of Industry and Information Technology of the People's Republic of China. Safety Code for Buried Scraper Conveyor

1 Scope

GB 40159-2021 is the Chinese national standard on en-masse conveyors - safety rules, in the field of materials handling equipment. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 30 April 2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2022. Classification: ICS 53.040.01, CCS J81. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the safety of buried scraper conveyors (hereinafter referred to as "conveyors") in terms of design, manufacture, installation, use, inspection, and maintenance Claim. This standard applies to buried scraper conveyors that can continuously transport bulk materials with a particle size of no more than 100mm. This standard does not apply to conveyors that are highly corrosive, or have a bulk density greater than 1.8t/m³, or have special physical properties. It is not suitable for conveyors used in explosive gas or combustible dust environment.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article. For undated reference documents, the latest version (including all amendments) is applicable to this document.

GB 4053 (all parts) Safety requirements for fixed steel ladders and platforms

GB 5083 General Principles for Safety and Hygiene Design of Production Equipment

GB/T 10596 buried scraper conveyor

GB/T 23821 Safety distance for machinery to prevent the upper and lower limbs from touching the danger zone

GB/T 25295 Safety Design Guidelines for Electrical Equipment

GB 50168 Electrical installation engineering cable line construction and acceptance standard

GB 50169 Code for construction and acceptance of grounding devices for electrical installations

GB 50170 Construction and acceptance standards for rotating electrical machines in electrical installations

GB 50254 Specification for Construction and Acceptance of Low-Voltage Electrical Apparatus for Electrical Installation Engineering

GB 50255 Code for Construction and Acceptance of Power AC Equipment for Electrical Installation Engineering

GB 50270 Code for Construction and Acceptance of Transportation Equipment Installation Engineering

3.1.1 Basic requirements

3.1.1.1 The design and manufacture of the conveyor shall meet the requirements of GB/T 10596 and GB 5083.

3.1.1.2 The electrical installations of the conveyor shall meet the requirements of GB/T 25295.

3.1.1.3 The conveyor should not leak during the process of conveying materials.

3.1.1.4 When personnel may touch the hot outer wall of the conveyor for conveying hot materials, protective railings or insulation layers shall be provided, which shall be in accordance with GB 4053 and GB/T 23821 regulations, and set up safety warning signs.

3.1.1.5 The hot material conveyor should be equipped with a cooling device, which should meet the relevant regulations of GB/T 10596.

3.1.1.6 Thermal expansion should be considered for hot material conveyors. When the thermal expansion displacement is greater than 5mm, expansion joints should be installed.
Air tight conveyor The tightness should meet the relevant regulations of GB/T 10596.

3.1.1.7 The conveyor shall indicate the running direction of the scraper chain.

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