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

GB/T 39819-2021

**Conveyor belts - Determination of minimum transition distance
on three idler rollers**

Issued on: March 9, 2021

Implemented on: October 1, 2021

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

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this standard is equivalent to ISO 5293.2004

"Determination of the Minimum Transition Distance of Three Rollers of Conveyor Belts".

This standard incorporates the amendments of ISO 5293.2004/Cor1.2008, and the clauses related to these amendments have been passed on the outside of it.

The vertical double line (||) of the margin position is marked.

The Chinese documents that have a consistent correspondence relationship with the normatively cited international documents in this standard are as follows.

---GB/T 15902-2017 Measurement of elastic elongation and permanent elongation of conveyor belt and calculation of elastic modulus (ISO

9856.2003, IDT).

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

This standard is under the jurisdiction of the National Belt Wheel and Belt Standardization Technical Committee Conveyor Belt Subcommittee (SAC/TC428/SC1).

Drafting organizations of this standard. Zhejiang Sanwei Rubber Products Co., Ltd., Zhongnan Rubber Group Co., Ltd., Baoding Huayue Tape

Limited company, Qingdao University of Science and Technology.

1 Scope

This standard specifies the calculation formula for the transition distance of the conveyor belt and specifies its application and derivation.

This standard does not apply to light conveyor belts specified in ISO 21183-1 [1].

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

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

ISO 1537 Continuous Mechanical Handling Equipment for Loose Materials Trough Belt Conveyors (Except Lightweight Conveyors) Rollers

[Continuous mechanical handling equipment for loose bulk materials-Troughed belt conveyors (other than portable conveyors)-Idlers]

ISO 9856 Measurement of elastic elongation and permanent elongation of conveyor belts and calculation of elastic modulus (Conveyor belts-Determination of elastic and permanent elongation and calculation of elastic modulus)

3 Calculation of the minimum transition distance

The calculation formula of the transition distance is as follows, and its derivation is shown in Appendix A.

$L_1 =$

$\sin \lambda$

ΔT

$(1 - \cos \lambda)$

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