INTERNATIONAL STANDARD

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Conveyor belts — Determination of elastic and permanent elongation and calculation of elastic modulus

Courroies transporteuses — Détermination de l'allongement élastique et rémanent et calcul du module d'élasticité

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 41 *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*.

This third edition cancels and replaces the second edition (ISO 9856:2003), of which it constitutes a minor revision. It also incorporates the amendment ISO 9856:2003/Amd 1:2012.

The normative references have been updated.

Introduction

This International Standard is used in a number of situations where the permanent elongation of the conveyor belt after mechanical conditioning is of some practical relevance and in particular in the implementation of ISO 3870 and the application of ISO 5293.

Conveyor belts — Determination of elastic and permanent elongation and calculation of elastic modulus

1 Scope

This International Standard specifies a method for determining the elastic and permanent elongation of a conveyor belt and the calculation of the elastic modulus.

It is not applicable or valid for light conveyor belts as described in ISO 21183-1.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 282, *Conveyor belts — Sampling*

ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

ISO 18573, *Conveyor belts — Test atmospheres and conditioning periods*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
tensile strength
greatest measured force during the tensile test divided by the width of the test piece

Note 1 to entry: It is expressed in newtons per millimetre.

Note 2 to entry: See ISO 283 for tensile test.

3.2
nominal tensile strength
T
specified minimum value of the *tensile strength* (3.1)

Note 1 to entry: It is expressed in newtons per millimetre.

3.3
upper reference force
F_U
force equivalent to 10 % of T (3.2)

Note 1 to entry: It is expressed in newtons per millimetre.

3.4
lower reference force
F_L
force equivalent to 2 % of T (3.2)

Note 1 to entry: It is expressed in newtons per millimetre.