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**Steel cord conveyor belts — Cord-to-coating bond test — Initial test and after thermal treatment**

*Courroies transporteuses à câbles d'acier — Adhérence des câbles dans l'enrobage — Essais à l'état original et après traitement thermique*



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## Foreword

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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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

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 7623:1996), which has been technically revised.

# Steel cord conveyor belts — Cord-to-coating bond test — Initial test and after thermal treatment

## 1 Scope

This International Standard specifies a method for determining the bond strength of metal cords to their surrounding coating, either in the initial state or after thermal treatment.

It applies exclusively to metal-carcass conveyor belts.

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

ISO 7622-2, *Steel cord conveyor belts — Longitudinal traction test — Part 2: Measurement of tensile strength*

## 3 Principle

Measurement of the force required to tear one of the steel warp cords out of the carcass by applying tensile stress along the axis of the cord.

## 4 Apparatus

**4.1 Dynamometric tensile testing machine with jaws**, in accordance with that described in ISO 7622-2.

**4.2 Press**, having two heated platens, temperature controlled to  $145\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$ , and capable of applying a pressure on the specimen (see [Clause 6](#)) of between 1 MPa and 5 MPa.

## 5 Test conditions

Unless otherwise specified and cited in the test report, the tests shall be carried out at a temperature of  $23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$  and at a relative humidity of  $(50 \pm 5)\%$ , in accordance with ISO 18573, Atmosphere B.

**5.1 Test in the initial state**, carry out the test described in [Clause 8](#) at least five days after manufacture of the belt.

**5.2 Test after thermal treatment**, carry out the test described in [Clause 8](#) after thermal treatment of a sample of the belt by heating it between the two platens of the press ([4.2](#)) for  $150\text{ min} \pm 1\text{ min}$ , at a temperature of  $145\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$  and at a surface pressure of about 1 MPa but not exceeding 5 MPa.

If different temperatures or pressures or the duration of their application are used, details should be specified in the test report.

**NOTE** An adequate surface pressure can be obtained using spacers of a thickness of the belt test piece minus  $1\text{ mm} \pm 0,5\text{ mm}$  between the platens of the press.