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Foreword

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This document was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*.

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Introduction

The purpose of this document is to provide a method of testing that will assist conveyor belt users in assessing the degree of risk which can be anticipated from the hazard caused when a conveyor belt stalls and the drive mechanism of the conveyor system continues to operate, causing localized heating of the conveyor belt through contact with the driving drum or other frictional heat source.

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Conveyor belts — Drum friction testing

1 Scope

This document specifies a method of testing to determine the propensity of a conveyor belt to generate heat flame or glow when held stationary, under a given tension, in surface contact around a rotating driven steel drum.

It describes means of varying the conveyor belt tension.

NOTE For conveyor belts containing steel reinforcement, it may not be possible to conduct this test in full due to the inability of the conveyor belt to comply with the requirements of 7.2. In this case, premature termination according to 7.3 can be necessary.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 65, *Carbon steel tubes suitable for screwing in accordance with ISO 7-1*

ISO 7590, *Steel cord conveyor belts — Methods for the determination of total thickness and cover thickness*

ISO 9329-1, *Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 1: Unalloyed steels with specified room temperature properties*

ISO 9330-1, *Welded steel tubes for pressure purposes — Technical delivery conditions — Part 1: Unalloyed steel tubes with specified room temperature properties*

EN 60584-1, *Thermocouples — Part 1: EMF specifications and tolerances*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Principle

A test piece of conveyor belt, suitably mounted and tensioned, is wrapped halfway around a rotating steel drum, simulating a stalled belt. The test is continued at specified tensions for a given time period, or until the belt parts or breaks. The presence, or absence, of flame or glow is noted and reported and the maximum temperature of the drum is recorded. The test is conducted in still air and/or in moving air. Two options on arc of contact are given. The reduced arc of contact test (135° of contact) with increased initial load is considered equivalent to the 180° arc of contact test.

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