



BSI Standards Publication

Fibre ropes — Electrostatic surface potential measuring method

National foreword

This British Standard is the UK implementation of ISO 20615:2018.

The UK participation in its preparation was entrusted to Technical Committees TCI/024, Physical Testing of Textiles, and GEL/101, Electrostatics.

A list of organizations represented on these committees can be obtained on request to their respective secretaries.

Attention is drawn to the fact that during the development of this International Standard, the UK committees voted against its approval. The reason for this vote is that the test method described has not been adequately validated by acceptable inter-laboratory trials.

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Fibre ropes — Electrostatic surface potential measuring method

*Cordages en fibres — Méthode de mesure du potentiel
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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Test atmosphere	1
6 Apparatus	2
6.1 Apparatus for tribocharging and measuring surface potential	2
7 Preparation of specimens	4
7.1 Specimen diameter	4
7.2 Cutting	4
7.3 Splicing rope specimen	4
7.4 Conditioning of specimen	5
8 Testing procedure	5
8.1 Rope specimen setting	5
8.2 Measurement of surface potential generated by tribocharging	5
9 Test report	6
Annex A (normative) Verification procedure and correction factor	7
Annex B (informative) Example of test results	10
Annex C (informative) Information on the effect of parameters	12
Annex D (informative) Interlaboratory test	14
Bibliography	17

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 of the voluntary nature of standards, 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 www.iso.org/iso/foreword.html.

This document was prepared jointly by Technical Committee ISO/TC 38, *Textiles*, and Technical Committee IEC/TC 101, *Electrostatics*. The draft was circulated for voting to the national bodies of both ISO and IEC.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Heavy duty ropes can be made from metal wire or synthetic fibre or a combination of these two. Historically, fibre ropes were commonly made of natural fibres such as cotton, flax, etc. Recently, synthetic fibres have been used to make heavy duty ropes. Synthetic fibre ropes are lighter and stronger than steel wire ropes and natural fibre ropes.

However, synthetic fibre can acquire electrostatic charge more easily compared to metal wire ropes or natural fibre ropes.

To overcome this disadvantage, different methods have been applied to the manufacture of synthetic fibre ropes, such as combining them with steel wire or blending with conductive yarn, etc. The development of such ropes has taken place without a standard procedure for evaluating their electrostatic propensity.

This document describes a test method that is used to determine tribocharging of fibre ropes by a specified charging mechanism.

This testing method may not be representative of all possible charging mechanisms that are found in use.

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