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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Textiles — Yarns from packages — Method of test for breaking strength of yarn by the skein method

*Textiles — Fils sur enroulements — Détermination de la résistance de rupture d'un fil par la
méthode de l'échevette*

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6939 was prepared by Technical Committee ISO/TC 38, *Textiles*.

This second edition cancels and replaces the first edition (ISO 6939 : 1982), of which it constitutes a minor revision.

Annex A forms an integral part of this International Standard.

Introduction

The skein method of testing yarn strength was developed very early in the history of textile testing. Within recent decades the skein method has been supplanted to a large extent by the single strand method, especially since the development of automatic single strand strength testing machines. However, the skein test is still widely used in some countries for some types of yarn.

This method is not intended to substitute for the measurement of breaking strength by the single strand method (ISO 2062). It is intended to provide an additional method for measurement of yarn strength since the single strand method is costly, time consuming and relatively difficult to control precisely in industrial situations. It is particularly important when yarn is received as raw material that breaking strength be determined quickly. This method provides a means of comparative measurement of yarn strength which can be very useful in plants which spin yarn and manufacture fabrics.

This method is not recommended as a reference test method. The skein method is essentially comparative when tests are made on similar yarns. It is useful in control programmes in which yarns made from the same fibre are tested periodically and it is important that test conditions are as near identical as possible.

Results from tests between laboratories have shown that a correlation exists between the tenacity of yarn measured by the skein method and tenacity measured by the single strand method. It should be noted that the tenacity of a yarn measured in skein form is always less than tenacity obtained by the single strand method. The average skein strength depends not only on the strength of individual yarns, but also on breaking elongation, coefficient of variation of breaking elongation, the initial modulus of each strand, and yarn-to-yarn cohesion.

Details of a sampling procedure are given in annex A.