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Fishing nets — Determination of elongation of netting yarns

Filets de pêche — Détermination de l'allongement des fils pour filets

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

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.

International Standard ISO 3790 was drawn up by Technical Committee ISO/TC 38, *Textiles*, and was circulated to the Member Bodies in June 1975.

It has been approved by the Member Bodies of the following countries :

Belgium	Ireland	Spain
Brazil	Israel	Sweden
Canada	Italy	Switzerland
Czechoslovakia	Japan	Thailand
Denmark	Netherlands	Turkey
France	New Zealand	United Kingdom
Germany	Poland	U.S.S.R.
Hungary	Romania	Yugoslavia
India	South Africa, Rep. of	

No Member Body expressed disapproval of the document.

Fishing nets — Determination of elongation of netting yarns

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method of determining the elongation of netting yarns, from packages or from netting, in their final physical state.

Tests may be carried out in both the dry and wet states but tests in the wet state are considered to be particularly appropriate in indicating the behaviour of the yarn in use.

2 REFERENCES

ISO 139, *Textiles — Standard atmospheres for conditioning and testing*.

ISO 858, *Fishing nets — Designation of netting yarns in the Tex system*.

ISO 1805, *Fishing nets — Determination of breaking load and knot breaking load of netting yarns*.

ISO 1806, *Fishing nets — Determination of mesh breaking load of netting*.

3 DEFINITIONS

3.1 knot breaking load : The breaking load, equal to the maximum load observed during a breaking test on netting yarn with a weaver's knot.

Distinction is made between

- the dry knot breaking load;
- the wet knot breaking load.

3.2 elongation : The increase in length of a specimen during a tensile test, expressed as a percentage of the nominal gauge length.

3.3 elongation at half the knot breaking load : The elongation after applying a pre-tension, produced on a specimen at half the knot breaking load (see 3.1).

3.4 load/elongation curve : A graphical representation, showing the relationship between the change in length of the pre-tensioned specimen and the magnitude of the applied stress.

3.5 duration of testing : The time in seconds taken to reach half the knot breaking load, measured from the moment of application of the force, after application of pre-tension.

3.6 pre-tension : The tension applied to straighten the specimen (see 8.4).

3.7 nominal gauge length : The length of specimen between the faces of the upper and lower grips of the testing machine, after application of pre-tension.

4 PRINCIPLE

A prescribed length of netting yarn in the dry or wet state without knot is extended under increasing tensile load until that load reaches half the value of the corresponding dry or wet knot breaking load. The test is performed using a suitable apparatus that records the amount of elongation.

5 APPARATUS

5.1 Tensile testing machine.

Either of the following types may be used :

- a) constant rate of elongation machine;
- b) constant rate of traverse machine.

Preference should be given to a constant rate of elongation machine, which shall always be used for arbitration purposes.

5.1.1 The testing machine shall include a pair of flat grips to hold the specimen without slipping or damage, to ensure an accurate specimen length and to allow the application of a pre-tension (see the figure).

5.1.2 The testing machine shall be capable of operating with a starting distance between grips of 500 mm.

5.1.3 The testing machine shall include facilities for producing different speeds of traverse in order to test specimens in the specified time for testing.

5.1.4 The testing machine shall be equipped with an autographic recorder for the load/elongation curve. The dynamic response of any recorder must be sufficiently rapid that it will accurately record the steepest part of the load/elongation curve.